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**Case study: immediate
implant placement
and temporization**
Dr. Leon Pariente

**Changing paradigms
in implant dentistry**
Dr. Ashok Sethi

**Case planning to
final restoration of a
congenitally missing
mandibular left
second premolar**
Dr. Bart W. Silverman

Company spotlight
Luman Dental, LLC

Practice profile
Dr. Tigran Khachatryan

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Thinking beyond the conventional to maximize solutions

Unfortunately, ridge morphology does not always present with a flat “platform” in which to place a “traditional, flat-top” implant, regardless of implant brand. In my experience, I encounter a clinically significant ridge deficiency approximately 30% of the time. Historically, in order to accommodate these “imperfect” sloped situations, the implant must be placed where one aspect of the platform is seated at the level of the bone while the other side is above the crest. This commonly requires concomitant bone grafting in order to ensure that the implant is completely ensconced within the bony housing. The other alternative is one in which one aspect of the implant is positioned at the bone level while the other is buried deep to the crest requiring bone removal in order to develop the space needed for the restorative components. This results in a longer clinical crown and increased difficulty with hygiene. In addition, there are many bony ridges that need bone augmentation prior to implant placement due to inadequate bone thickness, sometimes necessitating additional surgical sites and healing time to reach the final goal.

Now, in sites that have either sloped ridges or bony concavities that otherwise would have required bone grafting in the past, we are able to plan for and utilize the OsseoSpeed Profile EV implant (ASTRA TECH Implant System, Dentsply Sirona Implants) in combination with three-dimensional planning, which allows the surgeon and restorative team the opportunity to predict surgical site limitations and plan for success. In today’s environment, the use of CBCT for implant treatment planning has become somewhat universal. By continuing to leverage new advancements such as the OsseoSpeed Profile implant with its sloped platform that can be oriented in any direction in order to match the direction and location of the ridge’s slant, we now have an implant that naturally matches the sloping anatomy instead of having to match the anatomy to the implant. Due to this implant characteristic, I am able to streamline the implant process with less secondary bone grafting procedures, resulting in shortened treatment times and decreased costs for the patient.

I have been an avid user of the standard line of OsseoSpeed implants for the past 10 years of my career as an Oral and Maxillofacial Surgeon in Santa Barbara, California. I have had the opportunity to observe the consistent integration and bone support that this implant design offers my patients. As I have progressed to be an OsseoSpeed EV user, both my restorative dentists and I have appreciated the improvement in restorative simplicity. Restoratively, the company also really added simplicity to the Profile implant line, whereby all the indexed components are designed to match the slope and will seat in only one position in the implant. Taking the guesswork out of where to position the abutment helps set restorative dentists up for success. Consequently, referrals have increased, and patient acceptance of proposed care has skyrocketed.

The standards and methods by which we have been providing implant treatment care continue to evolve with the availability of new technologies and innovations. In order to provide our patients with the highest quality outcomes, we must often challenge ourselves to think beyond convention to maximize the solutions available to us.



Marc Bienstock, DDS, MD

Marc Bienstock, DDS, MD, was born in Albuquerque, New Mexico, and raised in Waterford, Connecticut. He moved to Santa Barbara with his wife and two children in 2003 after completing his residency in Oral and Maxillofacial Surgery at Mount Sinai Medical Center in NYC. Dr. Bienstock received his undergraduate B.S. from Union College, graduating with honors in biology in 1993. He then received a Doctorate in Dental Surgery from Columbia University in 1997, followed by a Doctorate in Medicine from the Mount Sinai School of Medicine in 2000. Dr. Bienstock is a Diplomate of the Board of Oral and Maxillofacial Surgeons and belongs to a number of organizations, including AAOMS, CALOMS, and the ADA.

He has devoted his professional career to include all aspects of Oral and Maxillofacial Surgery, with specializations in office-based oral surgery, anesthesia, facial trauma, maxillofacial reconstruction, dental implants, bone grafting, and bone morphogenic protein (BMP). Due to the complex nature of dental rehabilitation utilizing dental implants, Dr. Bienstock remains on the cutting edge of technology. He is involved in multiple implant study groups, where he lectures and is the surgical consultant in the treatment-planning process. Interdisciplinary communication is paramount for exceptional functional and esthetic results, and Dr. Bienstock values the input and expertise of everyone involved in the implant team. In addition, Dr. Bienstock continues to keep abreast of the latest developments in his specialty by continuously exceeding the continuing education requirements of California. His hobbies include skiing, snowboarding, cycling, and hiking.



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A smiling heart for dentistry

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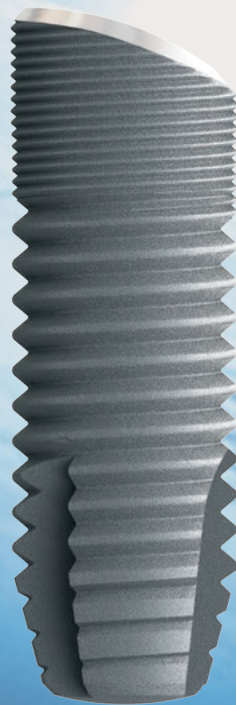
Company spotlight

Luman Dental, LLC

This family-owned business focuses on exceptional customer experience, specialized products, and knowledgeable customer service — at a reasonable price

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**ASTRA TECH
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OsseoSpeed™ Profile EV

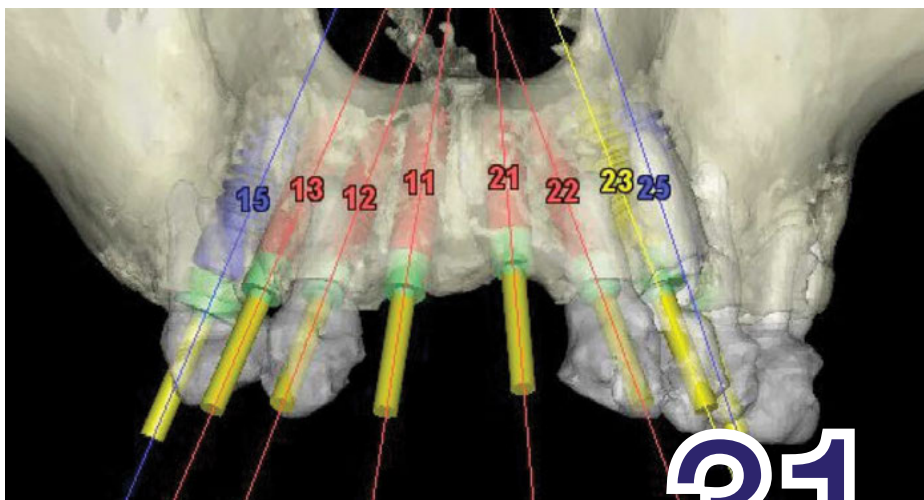
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Advanced Utilization of Small Diameter Implants
Steve Brown, DDS

How to "Fit" Wide Diameter Implants Into Your Implant Practice
Mark Iacobelli, DDS

The Use of ISI Implants for Implant Treatment
William Akop, DDS

What Every Surgeon Should Know About the Maxillary Sinus, But is Afraid to Ask?
Christopher Church, MD

The 1.5 Hour MBA
Howard Farran, DDS - **Keynote Speaker**

Cone Beam CT: Standard of Care for Dental Implants?
Rob Heller, DDS

Using CAD/CAM to Restore OCO Implants
Eric Smith, DDS

Role of Cone Beam CT in Advancing Implantology
VJ Parashar, BDS, DDS, MDSc.

Digging Out of Problems - From Diagnosis to Surgery
Rob D'Orazio, DDS

Biologic Modifiers in Implant Dentistry - Keys to Success in Bone and Tissue Regeneration
Raj Chopra Bsc, DDS

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Tigran Khachatryan, DDS

A smiling heart for dentistry



Dr. Tigran Khachatryan with his staff

What can you tell us about your background?

I was born in Armenia. When I was 9, a war broke out and impoverished the country economically. When I was 13, my family and I were fortunate to be able to immigrate to the United States and start our lives over, knowing almost no English. After 4 years, I graduated from Sammamish High School in Bellevue, Washington, with honors, and at the same time, was involved in a Running Start Program at Bellevue Community College. I received a Cell and Molecular Biology degree from the University

of Washington. As I wanted to continue to stay at home while going to dental school, I studied very hard to be accepted to University of Washington School of Dentistry, one of the hardest schools to get into (at which I received first place in the U.S. clinical exam scores in 2005). My interviewer asked why with my scores I did not want to get a scholarship in a private school like Harvard or Stanford, and I told him I wanted to stay close to my family. I graduated in 2006.

At the same time, I was blessed to marry the best friend of my life. Fresh out of school, with God's help, we were able to open a startup



Dr. Tigran Khachatryan

practice in a very competitive city, Redmond, Washington. We named it "A Smiling Heart Dentistry," where we would work to bring smiles from people's hearts. With patients whom I could count on my hands, I was paying the lease during the first few months

with credit card checks. My wife was my first assistant, front desk person, office manager, and mother of our newborn daughter, Anahit. As we stuck together through hard times, we were blessed with wonderful staff. Together with them, we were able to bring many smiles to our patients' faces. Currently, we have a 14-member strong team.

An interesting part of my family history is that I am the grandson (on my mother's side) of a famous Armenian composer, Stephan Nagdyan, so music and art have played a significant role in my life. I even considered becoming a concert violinist but was happily steered in the healthcare direction by my parents. I still love music and play violin, saxophone, and sometimes piano.

Is your practice limited to implants?

Our practice is a one-stop office, meaning we perform most of the common procedures in dentistry from full-mouth smile makeovers to full-mouth implant reconstruction, internal and lateral sinus lifts, root canals, orthodontics (traditional, ceramic, and Invisalign®), dentures, crown and bridge, TMJ procedures, and soon 1-day crowns through E4D (Planmeca/E4D Technologies).

Why did you decide to focus on implantology?

I enjoy implantology, as it can have a dramatic, positive change in a patient's quality of life. We almost can resurrect patients' teeth.

How long have you been practicing, and what systems do you use?

I have been placing implants since 2009 and have used Ankylos (Dentsply Implants), NobelReplace™, NobelActive™ (Nobel Biocare®), ASTRA TECH, ASTRA TECH Implant System™ EV, and Hiossen.

What training have you undertaken?

I started placing implants through the Ladera Ranch Implant Institute, where we received hands-on experience placing implants on live patients. I was also trained in bone and soft tissue grafting through the same institute. I have had training through Dentsply's STEPPS™ program. I have received several certificates from gIDE — A-Z Restorative Implant Dentistry Series, Edentulous Patient Certificate Series, Esthetic Implant Therapy, A to Z in Implant Dentistry, Advanced Implant Therapy — and Sinus Lift from the Advanced Implant Education Center. I have also completed the implant track from Dr. John C. Kois, giving me immeasurable insight into almost every aspect of implant



A Smiling Heart Dentistry office

If the light that is in us is bright, then
we can brighten up the rest of the world.

dentistry. Currently, I am a clinical and didactic instructor for the Advanced Implant Research and Education Center. I am also a clinical instructor for Restorative Dentistry at the University of Washington School of Dentistry and Lake Washington Institute of Technology.

Who has inspired you?

My parents, especially my father, planted the seed for me to become a healthcare provider in the earlier part of my life. My wife had great faith in me and inspired me to achieve great heights in my dental career, not sparing finances for continuing education and always wanting me to be the best dentist that I can be.

What is the most satisfying aspect of your practice?

Having a wonderful dental team makes our lives so much more enjoyable. With their help, we can take care of our patients. Making a patient smile from the heart is the most rewarding part, even if it does not have to do with dentistry. The patients feel that they are valued and cared for from the warm reception at the beginning to a nice cup of tea at the end.

Professionally, what are you most proud of?

I can't say that I am proud, but I am

grateful to God for the opportunities we have in this country — to be able to get the kind of education that we have and to be able to afford the kind of equipment and technology to give the best possible dental care in one office.

What do you think is unique about your practice?

The most important factor is that we make sure the patient is taken care of from both the emotional and physical aspects. Our team really cares for the patient's well-being. As a Kois Center® graduate, we try to give the very best dentistry possible. I have invested an enormous amount to implement the latest and best equipment.

What has been your biggest challenge?

Time is one of my biggest issues. As I strive to take as much continuing education as possible and stay on top of dental innovations, I notice that I am running short on spending time with my family.

What would you have become if you had not become a dentist?

Before getting into dental school, my biggest decision was to decide if I should pursue a career as a cardiac surgeon.



Dr. Tigran Khachatryan with his wife and two daughters

What is the future of implants and dentistry?

I think it is an amazing field, where we can bring part of a patient's body back and bring back the function of chewing properly, which affects the rest of the body. Perhaps as people become more concerned about their health and what goes into their bodies and as ceramic-fused-to-metal crowns get replaced with full ceramic crowns, titanium implants will increasingly get replaced with ceramic implants.

I believe that in the future, implants will be coated with hydrophobic material to attract blood cells and encourage faster healing. Growth factors most likely will play a big role, either through a platelet rich fibrin (PRF) technique collected from the patient or manufactured with the coating of the growth factors. It will shorten the healing time by half, which will mean instead of waiting 3 months to get the final tooth, the patient might get it in 1.5 months.

What are your top tips for maintaining a successful practice?

In order to be successful, I believe a person has to have inner peace, a great relationship within the immediate family, and a wonderful staff that they love and care for. If the light that is in us is bright, then we can brighten up the rest of the world.

What advice would you give to budding implantologists?

CBCT has made a huge impact on my implant practice. I believe that cone beam is one of the most important technologies needed for safe, successful implant dentistry. With the current 3D scans having lower and lower X-ray doses, they can be utilized much more and give better, safer outcomes. Implants can make a very big difference in a patient's life, but they can also cause serious



Dr. Tigran Khachatryan with his family at the beach

Top favorites

Personal

1. Having a purpose-driven and health-focused life
2. Family, friends, and co-workers

Equipment

1. E4D milling unit
2. i-CAT™
3. DEXIS™ CariVu™
4. NSK electric handpieces
5. Hiossen Crestal Approach Sinus Kit (CAS-KIT)
6. DIAGNOdent

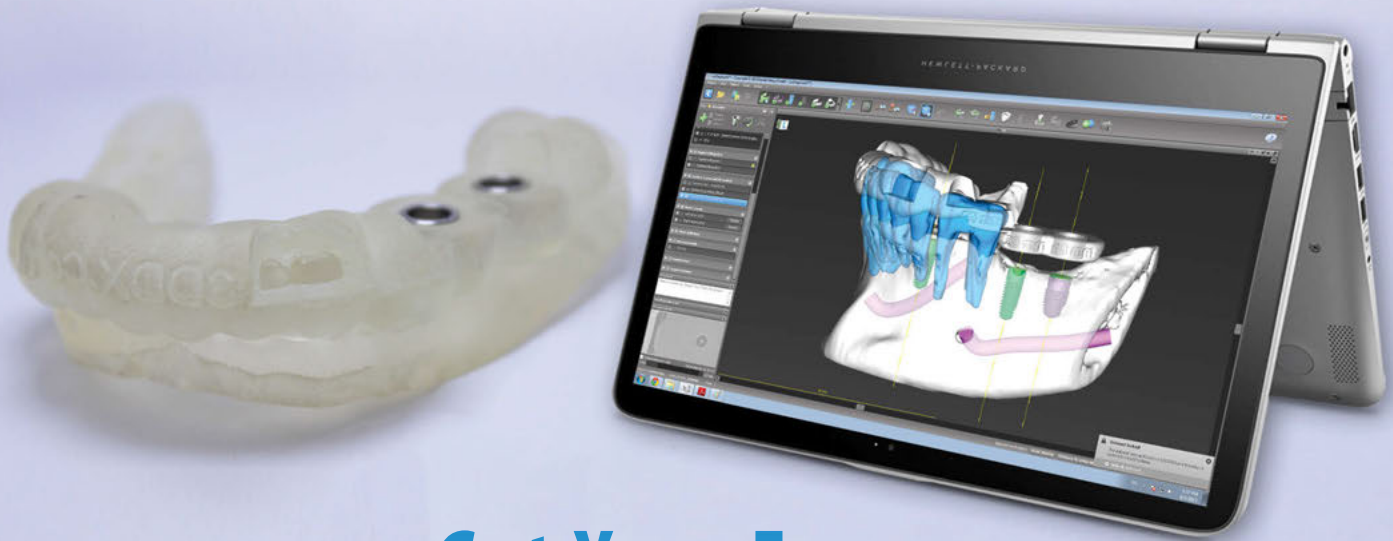
Dentistry

1. Occlusion, which can affect a great deal of the patient's health, toothaches, grinding, headaches, neck issues, posture, TMJ, etc.
2. Continuing education

trauma. So be very careful, and do not rush, especially when working near vital structures, such as nerves.

What are your hobbies, and what do you do in your spare time?

My hobbies include playing sports, (volleyball, soccer, table tennis), spending time with family and friends, traveling, taking walks, and being in wonderful nature. Also, I enjoy doing wood carvings. As a youth, my parents didn't have to buy birthday gifts for friends and family because they wanted to receive my wood creations, and that was very flattering! [IP](#)



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Luman Dental, LLC

This family-owned business focuses on exceptional customer experience, specialized products, and knowledgeable customer service — at a reasonable price

Overview

Luman Dental, founded in 2013, is a small, family-owned business based in Scottsdale, Arizona, and founded on the concept of providing exceptional customer experience through specialized products and knowledgeable customer service and support at a reasonable cost. The company specializes in the supply, implementation, training, and support of cone beam computed tomography (CBCT) equipment and discounted sales of high-quality tissue-grafting biomaterials. Luman Dental focuses on creating long-term business partnerships through superior products, services, customer experience, and ongoing support.

Management and ownership

Jeremy Luman is the founder, co-owner, and primary customer contact for Luman Dental. As the “face” of Luman Dental, Jeremy is the direct sales contact with customers and performs the CBCT installations and training. Jeremy has a variety of skills, experience, and education allowing him to provide unparalleled service to dental practitioners and their staff. He started as an assistant for an endodontic and implantology practice in 2004 and mastered all aspects of the practice, including chairside procedures, front-office billing and insurance, supply logistics, and marketing. During this time, Jeremy also began working with J. Morita CBCT equipment and Maxxeus™ Dental biomaterials. While working in the endodontic practice, Jeremy began to realize a need in the dental community for providing specialized products with knowledgeable customer service and support. Jeremy and his wife, Alisha, then formed Luman Dental, LLC, in 2013. He graduated with a bachelor’s degree with a focus in Biomedical and Health Ethics from Arizona State University.

Alisha Luman is the co-owner and primary back-office contact for Luman Dental. Alisha has been working in the dental field for over 15 years. She began her career as a back-office assistant for 7 years before furthering her education by completing her registered dental hygienist (RDH) degree



Luman Dental owners, Jeremy and Alisha Luman

“Luman Dental has the absolute best service, price, and support. They made purchasing a Morita CBCT very easy. I highly recommend Luman Dental and the Morita CBCT — first-class all the way!”

— Reid Pullen, DDS, Brea, California

from Carrington College. Alisha has been working as an RDH in a private practice for the past 5 years and now focuses on the back-office responsibilities at Luman Dental, including operations, marketing, scheduling, travel, and finance. Alisha shares the same passion for dentistry as her husband, Jeremy and enjoys helping provide dental practitioners with quality products and knowledge to help improve their practices and patient care.

Products, services, and support

Luman Dental, LLC, is a nationwide dealer for small equipment and for the leader in 3D imaging, J. Morita CBCT, a firm that offers superior detail, clarity, and



Luman family

quality manufacturing. CBCT has become increasingly important in treatment planning and diagnosis in implant dentistry, and CBCT scanners are being used for many other beneficial uses, such as in the fields of oral surgery, endodontics, periodontics, and orthodontics.

Luman Dental strongly advocates incorporating CBCT in the specialty dental practice to enhance treatment planning and outcomes. The company advises on the type of CBCT machine that works best for the practice and situation, as well as where to place the machine in existing and newly built offices to accommodate construction needs and safety requirements. CBCT training also provides Luman Dental's personalized instructions, J. Morita product brochures, as well as site evaluation, planning, installation, and training on all J. Morita products, including a wide variety of dental equipment and imaging machines sold by Luman Dental.

In addition, as a nationwide dealer for Maxxeus Dental biomaterials, Luman Dental is able to provide better cost savings on high-quality tissue grafts from Community

Tissue Services, a non-profit tissue bank out of Dayton, Ohio. Maxxeus Dental is registered with the FDA and accredited by the American Association of Tissue Banks. Products include Maxxeus demineralized bone matrix (DBM) putty, resorbable membranes, specialty grafts, bone particulates, and bone augmentation materials. Maxxeus Dental product brochures are also provided.

Additional product and services knowledge

Luman Dental's team has worked directly with both J. Morita CBCT and Maxxeus Dental biomaterials while assisting in an endodontic and implantology practice and

has sold, installed, and provided post-installation support of a variety of CBCT machines nationwide. They are able to offer advice and training on other aspects of the dental practice, including chairside procedures, front-office billing and insurance, software applications, supply logistics, and marketing and continue to attend CE courses for CBCT, RCT, and implants.

Customer service and support

Luman Dental, LLC, offers personalized, professional customer service and support, with direct access throughout the sales process, installation, and post-installation. The firm offers fast and easy referral of financing options and provides competitive rates. Luman Dental has formed many professional relationships within the dental community and is happy to provide fellow doctor referrals for Luman Dental products and services insight and feedback.

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TONY ROBBINS

Being creative with 401k planning

Tony Robbins addresses the question, “Is the 401k game still winnable for the average person?”

We can all remember a time during our formative years when a bully used his/her position, power, or sheer physical presence to push around someone who seemed like an easy target.

At 5'1" my sophomore year of high school, I was the short fat kid who wanted to “change the world” — not a popular thought at that stage of life. Although wrapped in a temporarily small package (I am now 6'7"), I was fiercely protective of anyone who was suffering under the tyranny of these kinds of kids.

The nose guard of our football team was one such buffoon. He was 6'2" and almost 300 pounds. During lunch one afternoon, I witnessed him pouring chocolate milk over the head of my helpless friend while he laughed to the applause of his band of letterman-jacket cronies. Without missing a beat, I got in his face. After a barrage of colorful language that caught him by surprise, I threw the hardest punch I could and ran like hell. Unfortunately, I wasn't very fast!



Peak performance strategist Tony Robbins is a partner and board member of America's Best 401k and a board member and Chief of Investor Psychology for Creative Planning.

To learn more, visit <http://americasbest401k.com/medmark>

Legal Disclosure: Tony Robbins is a board member and Chief of Investor Psychology at Creative Planning, Inc., an SEC Registered Investment Advisor (RIA) with wealth managers serving all 50 states. Mr. Robbins receives compensation for serving in this capacity based on increased business derived by Creative Planning from his services. Accordingly, Mr. Robbins has a financial incentive to refer investors to Creative Planning.

Decades later, I still do not tolerate bullies. The bullies of the financial services industry are those who extract as much value for themselves to the detriment of others. I don't think there is an educated person in America who doesn't think that the system feels set up for those in the know. The rest are left out in the cold.

In 2008, while watching many of my friends and clients lose half of their nest egg to the market crash and real estate crises, it struck a deep chord. Having grown up with very little, I was reminded of the pain. These weren't just statistics to me. I was reminded of nights where my own family went with little or no food. That fearless high school kid in me was kicked into gear. I knew I had to take action.

For decades now, I have been blessed with the incredible gift of “access” — access to some of the most brilliant minds and peak performers in their own fields.

I've had the privilege of coaching Paul Tudor Jones, one of the top 10 traders in financial history, for 22 straight years now. He hasn't lost money in any of those 22 years. As his coach, I have been inside the ropes, and what I have learned from him has been invaluable to my own situation.

In early 2009, I thought, what if I sit down

and get 50 of the top financial minds, from Carl Icahn to Ray Dalio to Warren Buffett to Vanguard founder Jack Bogle, and more? I wanted them to share their own perspectives. And I asked them, “Is the game still winnable for the average person?” — even in a world where 70% of the daily trades are made in microseconds by supercomputers.

The good news is that the answer is yes! And I was able to extract the specific strategies and tools in my No. 1 *The New York Times* bestseller, *MONEY Master the Game*, which we released in paperback in April.

The foundation of winning the game of money is that you MUST know the rules of the game before you blindly throw your money at a bunch of mutual funds your brother-in-law wants to sell you, or before you trust your 401k to get you through your golden years. For example, 67% of investors think they pay no fees in their 401k, when in fact, it's a gravy train for the brokers, plan providers, and mutual funds that are on your plan menu. Heck, the 401k industry didn't have to disclose their fees for over 30 years! Now they offer you 30- to 50-page disclosures that you, and 99.9% of people, have never seen nor read. They are opaque at best, predatory at worst.

I had one singular outcome when I set out to write the book — to help people become the chess player, and stop being the chess piece.

One of the foundational lessons to becoming the chess player is to find a highly qualified advisor who doesn't have conflicts of interest. It's common sense that's not so common. You wouldn't believe the level of abuse and the lengths the major firms go to in order to mask these conflicts in the multi-trillion dollar industry of wealth management.

I have educated millions of people now on the difference between a fiduciary, also called a registered investment advisor (RIA), and a broker. A broker sells and receives compensation for products or funds, while a fiduciary is required by law to put your interests first. I am a firm believer that the advice you receive should be separated from the products or funds you buy. Would you go to a doctor who manufactured and sold his own medicine? Of course, not! But the vast majority of the financial industry isn't legally obligated to put your interests first like a doctor. You heard me right. Well over 90% of financial advisors in this industry are brokers. They don't call themselves brokers, of course. Their titles are financial advisors, wealth managers, etc.

The vast majority of people I meet, both the sophisticated and the unsophisticated, are still unaware of the difference, or they wrongfully assume their advisor is a fiduciary. (Hint: Nearly all name-brand firms are brokers in disguise.) If your financial advisor is with a firm that has its name on a sports stadium, blimp, or race car, there is a high probability that he/she is a broker. They are master marketers, and they make it feel or sound as though they are giving unbiased advice, but we would be naïve to think that their own pockets aren't the priority.

To be sure, many advisors are wonderful and committed people who truly believe they are doing what's best. This is by no means an assault on their character or good intentions. But one can be sincere and sincerely wrong. Most advisors are trained by and work in a system that is hard-wired to make money for the "house" and reward those who produce sales. Compensation drives behavior, so they certainly don't wake up each day seeing the conflicts as an issue.

by my standards. He is, by all accounts, the epitome of excellence in the wealth management world. Peter and his firm, Creative Planning, manage nearly \$20 billion in assets and carry a number of prestigious accolades — including being the only wealth manager in history to have been ranked No. 1 Independent Financial Advisor in America by Barron's 3 years in a row. And they are also now ranked the No. 1 Wealth Management Firm in America by CNBC for the second

**If your financial advisor is with a firm that has its name
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As Upton Sinclair famously said, "It's hard to get a man to understand something when his salary depends on him not understanding it."

Over the past couple of years, I went on countless talk shows and radio shows, wrote articles, and created videos — all with the intent of educating Americans on the damage caused by this broken model where the person you trust with your financial future is rewarded for selling high-commission products and proprietary funds, while layers of hidden fees go unnoticed.

And although we've come a long way in sharing the truth, I've recently learned we have a new problem. And it's even worse!

Nearly a year after the first edition of my book was released, I was introduced to Peter Mallouk — an impressive guy, even

consecutive year. It's great to see a true fiduciary topping the charts. Creative Planning's typical client is the millionaire next door, but they also have an elite group that works the ultra-wealthy (\$10 million or more).

Peter and his team, with a little arm twisting from me, recently went from serving only higher net worth folks to opening up a new division to accept smaller accounts. His team will provide a complimentary second opinion to anyone and help them uncover the layers of conflicts, hidden fees, and proprietary funds in their current scenario. A free second opinion from the No. 1-ranked firm is a no-brainer (www.TheNumberOneFirm.com).

Peter had asked for a meeting with me, knowing my passion for protecting clients and my commitment to real and absolute transparency in the personal financial sector. What he shared with me left me completely disheartened.

After years of trying to educate millions of people on the difference between a broker and a fiduciary and stressing the need for a fiduciary standard, Peter showed me a mountain of evidence that many "fiduciaries" were exploiting a legal loophole to make additional revenue off unsuspecting clients.

How so? It turns out that fiduciaries can moonlight as a broker when it suits their pocket book. You heard me right. Somehow, regulators will allow advisors to be both a fiduciary and a broker through a process called "dual registration." One foot in both camps. Talk about a wolf in sheep's clothing. That's like sitting in your doctor's office and after diagnosing you, the doctor prescribes you a medication that he/she mixes up in



the backroom and sells at a profit! We would never accept such a conflict!

"It gets worse, Tony!" Peter carried on ...

"Some fiduciary advisors are actually receiving additional fees and kickbacks for directing people to specific funds under the guise of 'shareholder services fees' or 'consulting fees.' Or, in some cases, they have been so brazen as to sell proprietary products under different names where they made more money for recommending an inferior product! And although disclosed in fine print, the client is unsuspecting."

I was dumbfounded and disheartened, but I also know that we must empower people with knowledge they need to avoid these land mines.

There are lots of high-quality firms out there, so I asked Peter to give people the criteria they need to first discover if they are working with a broker or not, and then how to make sure the fiduciary they select is operating solely in their best interests.

1. Aside from making sure that the firm is registered with the SEC as a registered investment advisor, the most important criterion is to make sure that that person/firm is not affiliated with a broker dealer (and ask for it in writing.) This is the "dual registration" I explained above. (Tip: If the advisor's website or email says "Securities offered through [...]," you are dealing with a broker.)



2. Make sure your advisor does not offer any proprietary funds. Some firms create their own products/funds to increase revenues and then put those products in their clients' portfolios. In other words, you may be paying a firm to advise you to buy its own products! If you are paying for investment advice, you deserve to expect that the advisor is selling you investments as well.
3. Make sure the registered investment advisor is compensated based on a percentage of your assets under management — and never more than 1.25% in annual advisory fees for comprehensive financial planning. Preferably this number should be 1% or even less if you have substantial assets to invest. Be sure there are no "12b-1" fees, shareholder service fees, consulting fees, or other "pay-to-play" fees.
4. Make sure the registered investment advisor is not compensated for trading stocks or bonds. If you are a

your money is held with a reputable third-party custodian, such as Schwab, TD Ameritrade, or Fidelity, which offers you 24/7 online account access and sends monthly statements directly to you. (Note: A fiduciary using a firm like ones named above to custody your investments is NOT the same as the retail branch of these firms.)

6. When looking at an advisory firm, be sure the firm has educated and credentialed advisors on board. When you go to a doctor, you want to make sure they have the MD credentials to back it up. The Certified Financial Planner designation, CPAs, and attorneys are all good qualifications to have on your financial team.

Since penning this article, I have decided to align myself with Creative Planning by becoming a board member and Chief of Investor Psychology. My mission is to help people from making poor emotional decisions during volatile times and help them connect to their core purpose so that they will take control of this area of life.

After all, we aren't really after "money" per se. We are after the emotion that money gives us. Freedom, security, comfort, contentment, or whatever it is for you. But what if we could tap into the emotion we really want, so that we enjoy the journey to financial freedom and not wait "until" before we give ourselves permission to have an extraordinary life.

Live strong, and live with passion! **IP**

This article originally appeared as a post by Tony Robbins on LinkedIn.

After all, we aren't really after "money" per se.

We are after the emotion that money gives us.

Freedom, security, comfort, contentment,

or whatever it is for you.

2. Make sure your advisor does not offer any proprietary funds. Some firms create their own products/funds to increase revenues and then put those products in their clients' portfolios. In other words, you may be paying a firm to advise you to buy its own products! If you are paying for investment advice, you deserve

bond investor, the most flagrant fouls in this industry are the "markups" charged by the broker and the firm. (Tip: If your advisor says you pay no fees on your bond portfolio, beware! Ask specifically if any bonds are "marked up.")

5. Don't just give an advisor your funds directly. You want to make sure that

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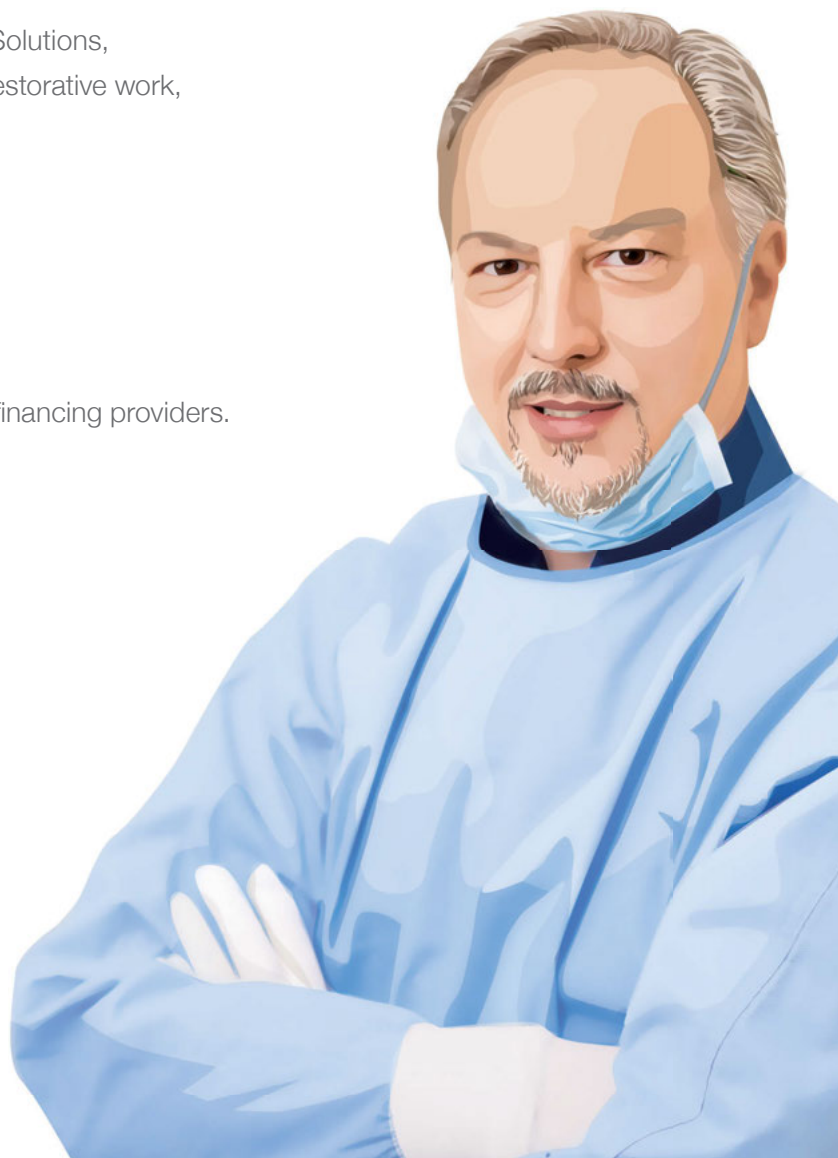
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Isolite features three precision-designed, reliable, award-winning solutions for minimally invasive, easy-to-use dental isolation for total control of the oral environment. These proprietary and patented technologies can benefit every area of dentistry, including implant placement, restorative dentistry, emergency care, oral surgery, and hygiene.

Isolite's value to the dental practice

How does Isolite systems make dentistry safe, easy, and productive?

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- Allows for more procedures to be completed at the same time.
- Protects the dental team from aspiration/ingestion-related legal problems.
- Increased visibility decreases chances of overlooking less visible dental issues.

Isolite Mouthpieces

As the heart of the system, the Mouthpiece obturates the throat, minimizing the chance of debris aspiration and ingestion. The built-in bite block supports the patient's



Sterile Mouthpiece



Isolite Mouthpiece (above) and Isodry non-illuminated dental isolation system (right)

jaw in a comfortable open position and allows the dentist to monitor the patient's airway. The Mouthpiece also retracts the tongue and cheeks, giving the clinician access to both the upper and lower quadrants and shielding these areas from accidental injury by the dentist's instruments. With these areas protected, the dentist can perform procedures, such as implant placement, in an easy and safe way.

Isolite illuminated dental isolation system

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Isodry non-illuminated dental isolation system

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Isolite Systems for fast, easy, and productive implant and restorative procedures

Isolite Systems retracts the tongue and reduces moisture and humidity. Even better, the Mouthpiece obturates the throat and airway and protects the soft tissue, while preventing closure of patient's mouth. Without the risk of dropping a small screw down a patient's throat, the dentist can concentrate on what's most important — performing excellent dentistry. During preparation of an implant site, Isolite Systems provides a controlled field for placing implant screws and other small devices on abutments while protecting the patient's airway. The sterile Mouthpiece offers control over blood and debris, and with the capability for cheek retraction and evacuation, the dentist can concentrate on the tooth or teeth being prepared without stressing about the tongue or cheek getting in the way. In addition, restorative outcomes are improved by keeping the mouth dry and facilitating better impressions. The isolated field and humidity reduction increases resin tooth bond strength, decreases micro-leakage, and reduces volumetric polymerization shrinkage of resin-based composite.

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Trayless implant impression technique for patients with a hyperactive gag reflex

Drs. Stephen G. Alfano, Thomas J. Balshi, Glenn J. Wolfinger, and Stephen F. Balshi, MBE, illustrate a technique that can provide a more comfortable and tolerable patient experience

Abstract

Complex dental impressions can be a challenge for patients with a hyperactive gag reflex. This article presents a technique to provide the dentist with maximum control over the impression material and avoid contact with intraoral areas that may initiate the gag reflex. A tray is not used, and the rigidity of the impression is provided internally by the immediately loaded provisional prosthesis or an intraorally fabricated acrylic bar.

Introduction

Dental patients with hyperactive gag reflex present several challenges in prosthetic dentistry. Routine hygiene procedures and radiographic exams are difficult to complete. Patients may avoid dental appointments¹ due to the apprehension and fear associated with the X-ray sensor, mirror, or impression tray that stimulates their gag reflex. As a result of avoiding dental care, many patients will only visit the dentist for emergency treatment and eventually become edentulous. This results in an increased challenge for the patient as fabrication and eventual wearing of a complete denture is difficult for the patient with hyperactive gag reflex. Many techniques have been presented to manage these patients²⁻⁹; however, success varies with each technique, and no technique has been presented to solve every problem.¹⁰⁻¹²

Patients undergoing full-arch reconstruction with immediately loaded dental implants



Figure 1: Interim prosthesis with guide pins in place

may receive much of their treatment under general anesthesia and avoid many gag initiators during this treatment. This allows for patients with a non-functional hopeless dentition to be restored to function with a fixed prosthesis without having to manage their gag reflex during treatment. Initial treatment consists of diagnostic impressions and jaw relationship records, both of which can be completed with minimal use of fast-setting materials. The challenge to the dentist and patient may arise when making the final impression for a multiple implant restoration. Accuracy of the impression is critical to the long-term success of the restoration.

This article describes an impression technique that minimizes stimulation of the patient's gag reflex. The trayless technique utilizes the patient's interim immediately loaded prosthesis as the internal rigid impression splint.¹³ If the patient does not have an interim prosthesis, or if the prosthesis is unacceptable for any reason, a rigid connector bar is fabricated intraorally using a bis-acryl bite registration material (LuxaBite®; DMG America, Englewood, New Jersey).

Technique (with interim prosthesis)

1. Evaluate the patient, and note which areas intraorally stimulate the gag reflex.
2. Make a jaw relationship record prior to beginning the impression procedure.
3. Verify correct abutment seating and passive fit of the interim prosthesis. If the prosthesis is not passive, or an abutment is not properly seated, an intraoral bar should be fabricated after correcting the abutment placement.
4. Replace the retaining screws with long guide pins (Figure 1). Inject light body fast-set impression material (Aquasil™; Dentsply, York, Pennsylvania) to capture the tissue under the interim prosthesis (Figure 2).
5. Inject heavy body fast-set impression material (Aquasil; Dentsply, York, Pennsylvania) to capture the vestibule and as much of the palate as possible while avoiding areas that stimulate the patient's gag reflex (Figure 3).

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Thomas J. Balshi, DDS, PhD, FACP, is Founder and Prosthodontist at PI Dental Center, Institute for Facial Esthetics in Fort Washington, Pennsylvania.

Glenn J. Wolfinger, DMD, FACP, is a Prosthodontist at PI Dental Center, Institute for Facial Esthetics in Fort Washington, Pennsylvania.

Stephen F. Balshi, MBE, is Director of Biomedical Engineering and Research at PI Dental Center, Institute for Facial Esthetics in Fort Washington, Pennsylvania, and also is President of CM Prosthetics, Inc., in Fort Washington, Pennsylvania.



Figure 2: Placement of light body impression material on intaglio surface of the interim prosthesis

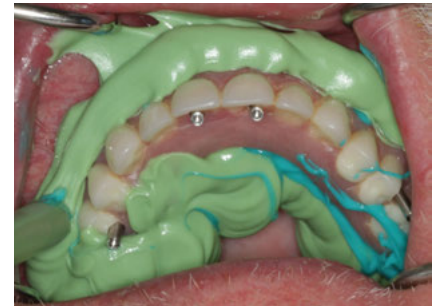


Figure 3: Capturing the vestibular depth with a heavy body impression material



Figure 4: Maintaining access to guide pins during the impression procedure

6. Ensure access to the guide pins is maintained throughout the procedure (Figure 4).
7. Remove the impression and verify enough tissue has been captured to proceed with fabrication (Figure 5).
8. Attach abutment analogs and fabricate master cast. The master cast is considered verified if the prosthesis passively fits the abutments intra-orally and the master cast (Figure 6).
9. Use jaw relationship record to articulate master cast prior to returning the provisional prosthesis to the patient (Figure 7).



Figure 5: Intaglio surface of impression



Figure 6: Master cast with interim prosthesis that serves as cast verification



Figure 7: Articulation of the master cast



Figure 8: Impression copings in place and verified seated visually and radiographically

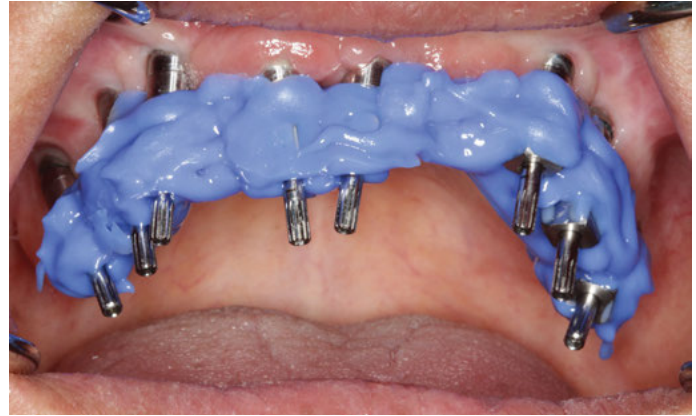


Figure 9: Fabrication of rigid intraoral bar with bis-acryl material



Figure 10: Placement of bite registration material to better capture the vestibule and support the palatal area of the impression



Figure 11: Completed impression

Technique (without interim prosthesis)

1. Evaluate the patient as above.
2. Ensure abutments are properly seated, and secure impression copings (Figure 8).
3. Flow bis-acryl material (LuxaBite; DMG America, Englewood, New Jersey) around impression copings, and ensure intimate contact with the impression copings (Figure 9).
4. Complete impression as described above, and if patient can tolerate the procedure, apply additional bite registration material (O-Bite; DMG America, Englewood, New Jersey) to better capture and support the palate and vestibular extension (Figures 10 and 11).

Discussion

Making an impression without a tray for an implant-retained and supported prosthesis requires a rigid internal framework to ensure accuracy.¹⁴ Ideally, the provisional prosthesis will serve as this support and then be used to articulate the cast during the same appointment. The use of a bis-acryl material to connect the impression copings provides an acceptable alternative if an interim prosthesis is not available. When applying the bis-acryl intraorally, care must be taken to allow the majority of the material to cure around

each impression coping prior to connecting the implants together. This requires placing material around each impression coping and moving from coping to coping while allowing gaps to remain between the sections of material. After these portions of the bar have cured, then the individual sections can be connected much like sectioning a PMMA fabricated bar and then luting together the pieces with a minimal amount of material.

Summary

Prosthetic treatment of the gagging patient can be stressful for both the patient and provider. The trayless technique presented allows for easy control over the amount and placement of impression material and may provide a more comfortable and tolerable procedure than a conventional implant pickup impression. **IP**

REFERENCES

1. Wright SM. Medical history, social habits, and individual experiences of patients who gag with dentures. *J Prosthet Dent.* 1981;45(5):474-478.

2. Hattab FN, Al-Omari MA, Al-Dwairi ZN. Management of a patient's gag reflex in making an irreversible hydrocolloid impression. *J Prosthet Dent.* 1999;81(3):369.
3. Fleece L, Linton P, Dudley B. Rapid elimination of a hyperactive gag reflex. *J Prosthet Dent.* 1988;60(4):415-417.
4. Ren X. Making an impression of a maxillary edentulous patient with gag reflex by pressing caves. *J Prosthet Dent.* 1997;78(5):533.
5. Friedman MH, Weintraub MI. Temporary elimination of gag reflex for dental procedures. *J Prosthet Dent.* 1995;73(3):319.
6. Callison GM. A modified edentulous maxillary custom tray to help prevent gagging. *J Prosthet Dent.* 1989;62(1):48-50.
7. Borkin DW. Impression technique for patients that gag. *J Prosthet Dent.* 1959;9:386-387.
8. Krol AJ. A new approach to the gagging problem. *J Prosthet Dent.* 1963;13(4):611-616.
9. Singh K, Gupta N. Palateless custom bar supported overdenture: a treatment modality to treat patient with severe gag reflex. *Indian J Dent Res.* 2012;23(2):145-148.
10. Conny DJ, Tedesco LA. The gagging problem in prosthodontic treatment. Part I: description and causes. *J Prosthet Dent.* 1983;49(5):601-606.
11. Conny DJ, Tedesco LA. The gagging problem in prosthodontic treatment. Part II: patient management. *J Prosthet Dent.* 1983;49(6):757-761.
12. Bassi GS, Humphris GM, Longman LP. The etiology and management of gagging: a review of the literature. *J Prosthet Dent.* 2004;91(5):459-467.
13. Balshi TJ, Wolfinger GJ, Alfano SG, Caccovean JN, Balshi, SF. Fabricating an accurate implant master cast: A technique report. *J Prosthodont.* 2015;24(8):654-660.
14. Assif D, Marshak B, Schmidt A. Accuracy of implant impression techniques. *Int J Oral Maxillofac Implants.* 1996;11(2):216-222.

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Single implant placement

Dr. Martin Wanendaya presents an award-winning case study that required careful consideration of the soft tissues to ensure a successful result

This patient had worried about her loose “fang” for a number of years, and it had taken two referrals to our practice before she finally attended (Figures 1-9).

Being a teacher to teenagers in an inner-city school, the patient was very aware of her smile. She expressed a concern about turning up to school without a tooth or, even worse, having it fall out during a lesson. Ideally, therefore, the patient was looking for the UR3 to be replaced with a fixed solution. She was expressly against dentures.

The UR3 had been loose for a long time and had now started to become visible when she smiled. Though the patient had had previous periodontal disease, her current periodontal condition was stable in all areas, aside from some pocketing around the UR3 and LR6.



Martin Wanendaya, BDS, DiplImpDent RCS, is a partner at Ten Dental, an award-winning implant referral clinic in London. A tutor for the Royal College of Surgeons Diploma in Implant Dentistry, he is also a director of the popular Implant Restoration Course, and his book on that subject is available from the iTunes® store. For more information visit www.tendental.com or www.tenimplantcentre.co.uk.

Figures 1-9: Patient at initial presentation

An initial radiographic assessment showed extensive bone loss between the UR3 and the UR4 (Figure 10). A periodontal assessment presented probing depths of 6 mm-8 mm on the distal part of the UR3, which was grade 3 mobile. Nevertheless, the patient's other teeth were unaffected by this localized, yet aggressive periodontal issue.

Treatment

Having extensively discussed the complexity of this case with the patient, she

declined bone grafting as a treatment option. Additionally, she refused a temporary denture for the extent of the treatment.

Therefore, the following treatment plan was established:

1. Initial assessment and radiographs
2. Periodontal treatment on the LR6
3. Extract UR3 and Maryland bridge
4. Review periodontal health of LR6 and healing around UR3
5. Diagnostic wax-up and final diagnostic radiographs
6. Final treatment plan
7. Surgery — place implant at UR3 and soft tissue manipulation to bring soft tissue from the palatal to the buccal side of the ridge
8. Expose UR3 implant, and during the exposure, move tissue from the buccal to the palatal aspect of the ridge
9. Provisional crown on UR3, await soft tissue maturation. Further soft tissue surgery, if needed
10. When soft tissue has matured and patient is happy with provisional restoration, make final restoration
11. Long-term maintenance and regular oral hygiene visits

After consent was obtained, the UR3 was removed and replaced with a provisional Maryland bridge. The tooth's removal revealed a significant defect (Figures 12 and 13), and while the patient was shown the extent of this defect (Figures 14-16), she was adamant that she did not want a bone graft. Instead, having seen the long tooth present, she decided she was happy to have an implant crown with pink porcelain.

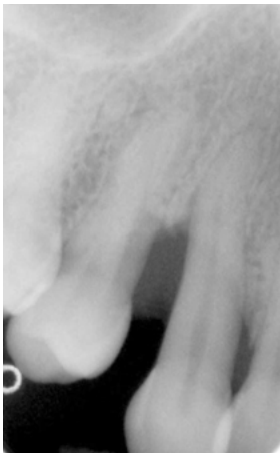


Figure 10: Initial radiograph



Figure 11: There were several key issues to address. A. The very high smile line. B. The UR3 was 5 mm out of the line of the arch. C. A 10 mm recession defect was apparent. D. The UR3 had drifted forward and buccally



Figures 12 and 13: Following extraction of the UR3, the extent of the huge defect was evident



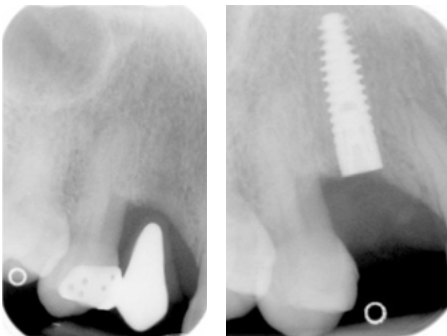
Figures 14-16: The provisional Maryland bridge also served to demonstrate the extent of the defect

After a period of 6 months, where the patient's bony and soft tissue had a chance to heal, the clinical situation was revealed. Unfortunately, it remained the case that the patient still presented a very long tooth (Figure 17).

A 3.5 mm x 14 mm ANKYLOS® C/X implant (Dentsply Implants) was then placed



Figure 17: After 6 months of healing, a very long tooth was still present



Figures 18A-18B: A. Preoperative radiograph. B. Radiograph showing implant placed 1 mm subcrestally

1 mm subcrestally (Figure 18). During placement, a split thickness incision was made, and palatal soft tissue was moved buccally in an attempt to improve the soft tissue defect. An impression was taken at surgery.

From the fixture head impression, an abutment was selected and trimmed (Figure 19), and a temporary crown was fabricated. The metalwork was constructed, and a space for a lateral screw was made palatally (Figure 20).

The implant was then exposed (Figures 21-23) after a period of healing, during which a remote palatal incision was made, and palatal soft tissue was again moved buccally to reduce the soft tissue defect. Careful manipulation of the soft tissue and shaping of the provisional to reduce pressure on the tissue was carried out.

After 8 weeks of soft tissue healing and

further shaping of the provisional, a metalwork pickup impression was taken and sent to the laboratory (Figure 24). The final crown was fabricated with palatal access for a lateral screw (Figure 25).

At the final fit appointment, the crown was fitted with both TempBond™ (Kerr) and a lateral screw for added retention. The patient was ecstatic with the result (Figure 26).

The 2-year review showed stable soft tissue, and the formation of mesial and distal papillae (Figure 30). The final result showed the improvement in the papilla as well as the stability of the soft tissue (Figures 31 and 32).

Reflective summary

The patient is delighted with the result of this treatment, and as a clinician, it is always very rewarding to improve function while



Figure 19: An abutment was selected and trimmed from the fixture head impression

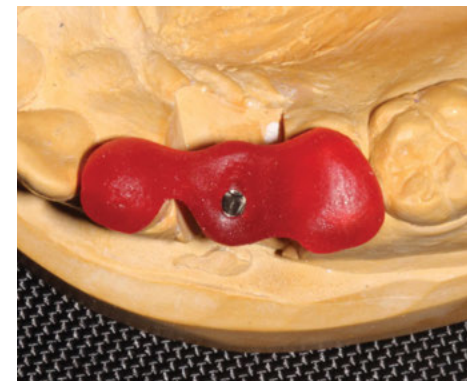
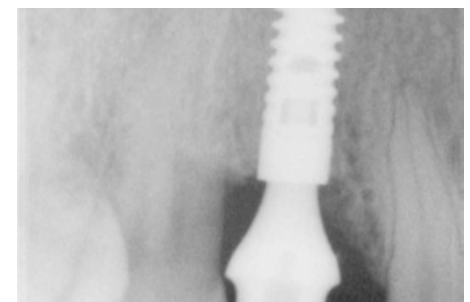


Figure 20: Space was created palatally for a lateral screw



Figures 21-23: The palatal soft tissue was moved buccally at the time of implant exposure to reduce the soft tissue defect. The tissue is discolored as it has not been exposed to the mouth



Figure 24: A metalwork pickup impression was taken and sent to the laboratory



Figure 25: The final crown was fabricated with palatal access for a lateral screw



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Figure 26: By the final fit, many of the patient's issues had been addressed. A. High lip line. B. Mesial papilla has been generated. C. UR3 is in line of the arch. D. No 10 mm recession defect



Figure 27: Initial presentation



Figure 28: After extraction with provisional bridge



Figure 29: Day of fit



Figure 30: Two-year review

ensuring an esthetically pleasing result. And indeed, this case provided many interesting learning opportunities.

The main challenge in this case was predicated upon the patient's early decision to forgo bone augmentation, and that she only wanted to treat the UR3.

She also ruled out two of the other options we discussed:

- Bone graft on the UR3 site — this would have improved the bone height but not to the ideal level as the bone level on the UR4 was halfway down the root, and this level will have been the limit of any vertical augmentation.
- Removal of the UR4 and then grafting the UR3/UR4 site to increase the vertical height of the bone present before placing two implants in the UR3 and UR4 areas. This option would have allowed the best improvement in the vertical bone height, although it would result in the loss of a tooth.

Taking these challenges into consideration, it was thus necessary to utilize either soft tissue grafting or manipulation techniques in order to improve the soft tissue profile of the UR3. During the implant placement and exposure, tissue was moved from the palatal to the buccal side to achieve an improved soft tissue profile. An impression was also taken at the time of surgery, before the cover screw was replaced and the area closed. The abutment, metalwork,



Figures 31 and 32: Final result



and temporary crown were made to the ideal contours, and the implant carefully exposed (at which time the soft tissue was manipulated for the second time) in order to use the abutment and temporary crown to create an adequate soft tissue profile for the restoration.

During the process, the patient was fitted with a Maryland bridge, though this debonded several times. In addition to this, therefore, she was provided with a denture to allow an alternative in the event of emergencies.

The patient had not been attending hygiene appointments as regularly as was preferred prior to the start of treatment, and only after receiving the final crown, did she begin to have regular preventive treatment.

Should a case like this present itself in the future, it would be advisable to encourage a young patient like this to consider grafting if it is needed. While a good result was achieved in this instance without grafting, this may not always be the case.

It would also be beneficial to send the patient for a custom shade. The attendant technician, Khristo Ivanov from Uniqa Dental Laboratory, accomplished a great deal with just some photos to guide him, but a custom shade would have given more information.

The patient's oral hygiene on the opposing arch was a challenge, and despite many hygienist appointments and instruction on interdental cleaning, this did not improve to the desired extent. **IP**

REFERENCES

1. Allen F, Smith DG. An assessment of the accuracy of ridge-mapping in planning implant therapy for the anterior maxilla. *Clin Oral Implants Res.* 2000;11(1): 34-38.
2. Palacci P, Nowzari H. Soft tissue enhancement around dental implants. *Periodontol 2000.* 2008;47:113-132.
3. Sethi A, Sochor P. The lateral fixation screw in implant dentistry. *Eur J Prosthodont Restor Dent.* 2000;8(1): 39-43.
4. Tarnow DP, Magner AW, Fletcher P. The effect of the distance from the contact point to the crest of bone on the presence or absence of the interproximal dental papilla. *J Periodontol.* 1992;3(12):995-96.
5. Tarnow DP, Cho SC, Wallace SS. The effect of inter-implant distance on the height of inter-implant bone crest. *J Periodontol.* 2000;71(4):546-549.
6. Yuill R. Consent in dentistry. *Dental Profile.* 2001;6-8.

Case planning to final restoration of a congenitally missing mandibular left second premolar

Dr. Bart W. Silverman shows how digital implant dentistry leads to more productive treatment

Advancements in implant placement — such as cone beam CT and CAD/CAM technology — allow predictable restorative outcomes that are clinically efficient for doctors and take less time until final restoration. Through a complete digital workflow, we can plan a case, fabricate a custom-milled abutment, and fabricate and insert a crown.

In this case, a 50-year-old male presented to my office with a congenitally missing left mandibular second premolar. Previously, a conventional bridge was placed, which ultimately had failed. His past medical history was non-contributory, and he was not taking any medications nor had any known allergies. We discussed options which included, after removal of the mobile deciduous molar:

1. Leaving the space
2. Fabricating a removable mandibular appliance
3. Placing a mandibular fixed bridge
4. Planning and placing an endosseous implant and restoration using CAD/CAM technology.

After considering all four options, he elected to have the deciduous tooth removed and a dental implant placed.

Preoperatively, a cone beam CT scan was taken with Carestream Dental's CS 9300 system to determine if sufficient bone

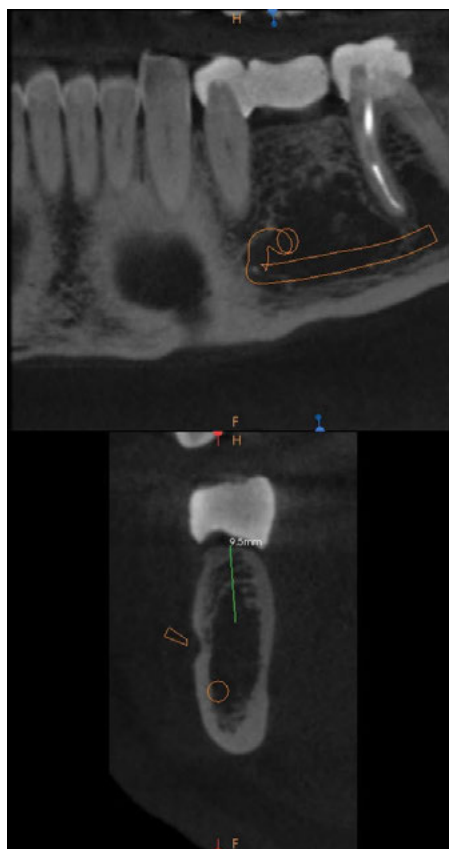


Figure 1

was present to allow for implant placement. Carestream Dental's CS 3D Imaging software was then used to plan the position of the implant (Figures 1-3). According to the Thommen single-stage surgical protocol, a 4.5 mm x 9.5 mm contact INICELL® implant was placed with a 3.2 mm gingival former in the mandibular left second premolar area.

After 3 months of healing, osseointegration was confirmed (Figure 4). At the same visit, the CS 3500 intraoral scanner was used to take an impression (Figure 5). To obtain digital impressions for fabrication of the patient's custom abutments, we sectioned the mouth into sextants. The opposing arch was scanned from the canine distally, and then the gingival former was removed, and the involved arch also was scanned from the canine back (Figure 6). Once the two arches were scanned, the patient was asked to bite maximum intercuspation to obtain the bite.

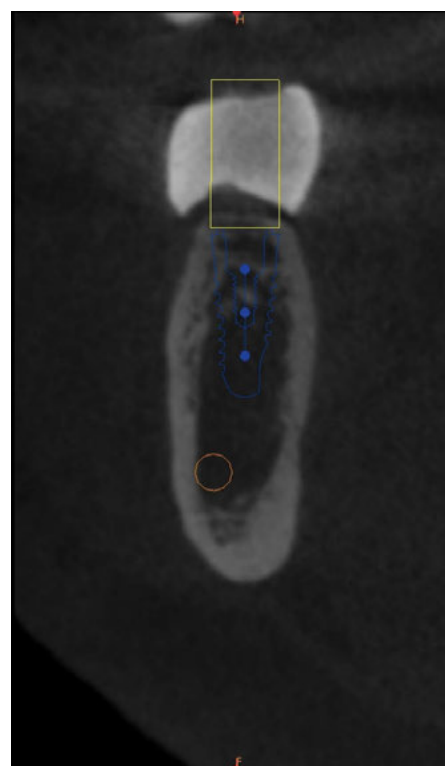


Figure 2

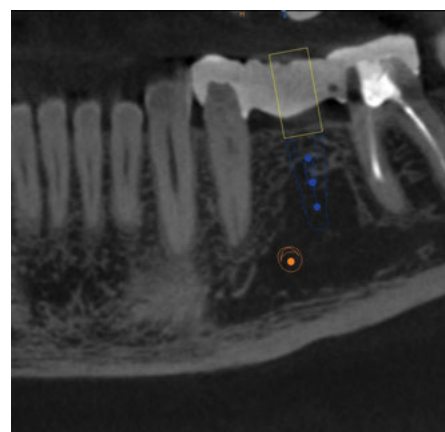


Figure 3

This was done by resting the unit against the teeth and taking three quick scans (Figure 7).

We began by taking a tissue scan. Since we were fabricating a custom abutment, a fixture-level impression was taken next. In conventional implant dentistry, we would place a fixture-level impression coping and then take our impression; however, digital



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Disclosure: Dr. Silverman is a paid speaker for Carestream Dental.

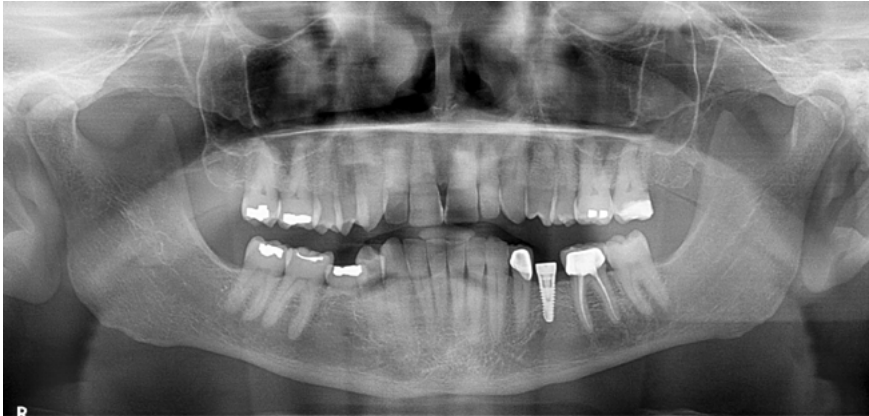


Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

dentistry allows us to place the digital counterpart to a fixture-level impression coping, called a scanning body, into the fixture. A periapical radiograph was taken to ensure proper placement and seating of the scanning body on top of the implant fixture.

We used the CS 3500's cutting tool feature to delete the top of the implant fixture and to use the tissue scan file to scan the scanning body without having to do a duplicate scan, saving us time. We then scanned the scanning body (Figure 8). Next, the scanning body was removed, and the gingival former replaced. Then the patient was sent home after a shade was picked for the final crown. The file was then saved, exported to the desktop, and sent via a secure web portal to our preferred lab.

One of the benefits in digital cases such as this is the ability to send all of the information electronically. Of course, not all systems are created equal — some scanners use proprietary files, which can only be viewed by labs that have the right software. Fortunately, my scanner creates open-platform STL files that can be opened by any lab.

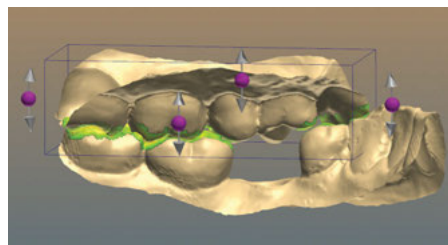


Figure 9

While in conventional dentistry, we would take a fixed-level impression and send it to the lab to have an implant analog placed into the coping before the model was poured up in stone (allowing the lab to have an exact replica of the implant as it appeared in the mouth). Digital dentistry allowed us to obtain the same results in fewer steps (Figure 9). The file with the scanning body was pulled up on the computer, and the scanning body was used to allow a virtual placement of the implant into it so we could have a digital “model” of the exact location, angulation, and position of the implant as it appears in the mouth (Figure 10).

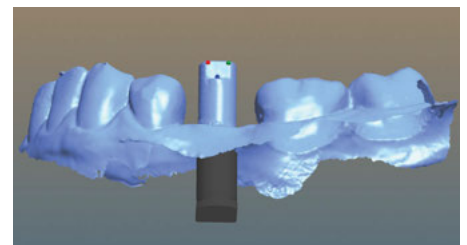


Figure 10

The scanning body was removed by deleting it in the computer, and the custom abutment was planned. We have the ability to design the custom abutment any way we like. If we are planning to make a porcelain-fused-to-metal crown, we may want to make sure we have 2.5 mm of space for the metal and porcelain for our final crown restoration. If we are planning to do zirconia crown, we may need less space. We may want to bevel our buccal cusps or extend our lingual cusps up toward the central fossa of our opposing tooth. We may want to place grooves on the buccal and/or the lingual to be used for anti-rotation. This all can be planned into the custom abutment

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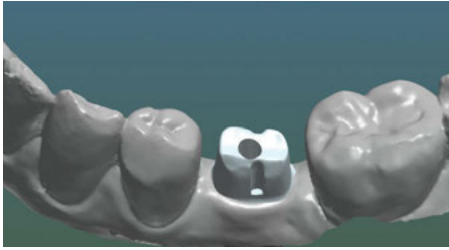


Figure 11

(Figure 11). In this case, we performed a restoration with porcelain-fused-to-metal.

Once the design was approved, the information was sent to the milling machine for fabrication of the custom abutment (Figure 12). Most dentists in their first couple of cases will have a model printed with an implant analog inserted into it when they order it from the lab. After you feel

comfortable with the technology, you can save \$20-\$30 per case if you do not ask for a model. In Figure 13, you can see the resin model with the custom-milled titanium abutment in place. Here we have one of two options: You can have the lab mill a crown after it is designed using the software as discussed previously, or the lab can fabricate a crown on top of the milled abutment.



Figure 12

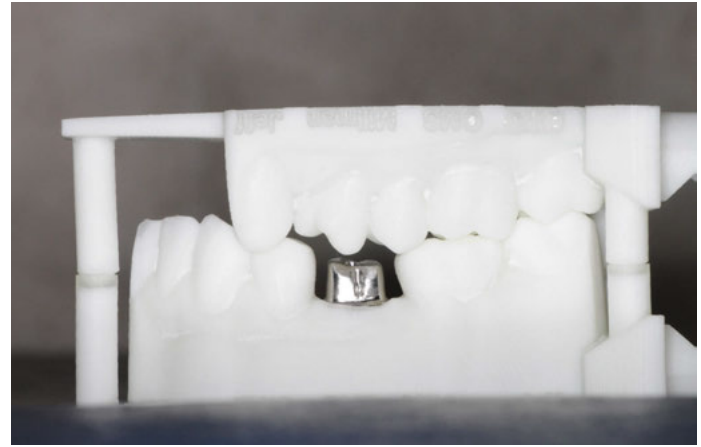


Figure 13



Figure 14

(We chose the latter for this patient.) This step is usually dependent on the digital lab that you are using.

We then scheduled the patient for a crown insertion appointment. Unlike conventional crowns, which can take 25 to 30 minutes to place, the digitally generated crown required only a 5 to 10 minute insertion appointment. The patient was happy, not only with how the fabrication turned out (Figure 14), but also loved the ease and speed at which the process occurred.

When comparing digital implant dentistry to conventional dentistry, aside from being a more exact technique, there are potential time- and cost-saving components as well. No longer must we set aside one operator and one assistant and have them set up for the traditional “goopy” impression — which is time-consuming. After factoring in the time for taking conventional impressions and coupling it with the crown insertion appointment, we are saving at least 1.25 hours with digital dentistry.

We can now use this time to perform “productive dentistry” and do crown prep, or prep for a bridge or an endodontic procedure. Also, when comparing the cost for a traditional custom abutment with the cost of a milled model and abutment, the digital workflow is less. With the digital workflow, we are ultimately providing a better service for our patients, freeing up more chair time and decreasing our overhead. **IP**

Changing paradigms in implant dentistry

Dr. Ashok Sethi examines how the advent of technology has improved the options available for patients and clinicians alike

Human evolution is progressing at an exponential rate — something that is reflected in all human endeavors, including implant dentistry. This article aims to address the changes that have taken place within this field, consider the way they have impacted the way we work, and look at the benefits this has brought for our patients.

In modern implant dentistry, conceiving the end result before embarking on treatment has become easier, making it possible for both the patient and clinician to have an idea of the direction in which they are traveling. This article will specifically address the application of three-dimensional imaging, stereolithography, and CAD/CAM technology in the current practice of implant dentistry. Treatment carried out in stages, as well as the immediate replacement of failing teeth will be addressed.

Backward planning (forward thinking)

Conceiving the end result before embarking on treatment requires a number of stages, both technical and clinical. The key is in starting off with a realistic diagnostic preview (Figure 9) and transferring this information from one stage to the next and between the laboratory casts and the mouth. Three-dimensional imaging coupled with an interactive software program (SIMPLANT®, Leuven, Belgium; DENTSPLY Implants)

Educational aims and objectives

This article aims to address the application of three-dimensional imaging, stereolithography, and CAD/CAM technology in the current practice of implant dentistry.

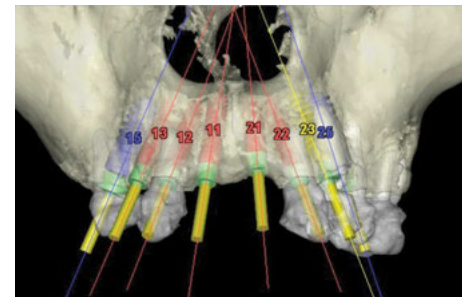
Expected outcomes

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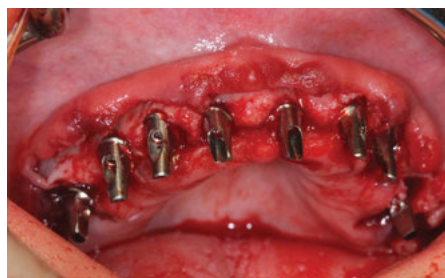
- Realize how new technologies have improved available treatment options.
- Recognize how position and the dimensions of the implants can be decided upon with technology.
- Identify how an interactive software program can greatly increase the accuracy and predictability with which the treatment can be completed.
- Realize how to utilize diagnostic imaging and transfer of tooth position data for immediate implant patients.
- Realize how CBCT, stereolithography, and CAD/CAM are key elements in the immediate implant process.

CE

Case 1



Figures 1-2: Preoperative view of total overclosure with traumatic occlusion. Interactive planning on the three-dimensional image using the SIMPLANT software. Each implant position can now be transferred to a stereolithographic model constructed from CT scan data. In addition, a drill guide can be fabricated from the same data, which will transfer the implant position from the planning directly to the mouth. The ExpertEase™ guided surgery system (DENTSPLY Implants) permits precise positioning in terms of angulation as well as depth



Figures 3-5: Stereolithographic model is a replica of the maxilla and fabricated from the CT scan. Implant analogs have been inserted and abutments selected and customized. The transitional restoration based on the diagnostic preview (waxup) will be supported by the abutments. The connection of the transitional restoration to the abutment is via a prefabricated acrylic sleeve. The implants have been inserted into the maxilla. The preselected abutments have been attached and are visible in perfect parallelism and alignment to each other. These have been transferred from the stereolithographic model. The definitive porcelain fused to precious metal alloy can be seen. Note the closing scheme, which has been transferred from the diagnostic preview

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greatly increases the accuracy and predictability with which the treatment can be completed (Sethi and Kaus, 2012).

Immediate replacement of failing teeth

Staged treatment is highly predictable. However, recent observations and developments in surface technologies have made it equally predictable to place implants immediately and bring them into function at the same time. This is also very attractive for patients because of the reduction in the number of surgical appointments. Most importantly, this provides the patient with a very attractive option of having the failing teeth removed and the new teeth implanted at the same time, albeit with a provisional restoration. The same process of diagnostic imaging and transfer of tooth position data can be carried out for a patient with failing teeth where there is a need for immediate placement of these teeth with implants.

The position and the dimensions of the implants required for rehabilitation of the patient can be decided upon within the SIMPLANT program derived directly from CBCT data. This information can be transferred to a drill guide, which will enable the placement of the implants in the correct position and depth. This is facilitated by the use of stereolithographic models made directly from CT scan data. This, of course, enables the fabrication of the transitional restorations directly on the stereolithographic models. At the same time, selection of the abutments can be carried out based on the selected tooth position.

CAD/CAM technology

The first stage is to construct an accurate cast of the abutments in the patient's mouth (Assif, et al., 1996; Assif, et al., 1999). It is then possible to scan the cast with the abutments, using a digital scanner. At the same time, the diagnostic preview (waxup)

Case 2



Figure 6: Diagnostic preview of proposed esthetic outcome and occlusal scheme



Figure 7: Preoperative view of malpositioned teeth and over-closed intermaxillary relationship



Figure 8: Showing the transfer of information from the diagnostic preview to the mouth in the form of a provisional metal-acrylic bridge, supported by selected teeth. Note the change in tooth position and intermaxillary relationship

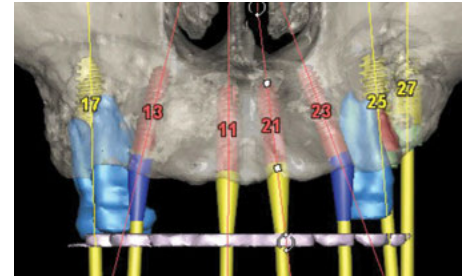


Figure 9: Cone beam CT scan. Interactive planning using the SIMPLANT software showing the positioning of the implants within the available bone as well as the selection of the abutments, which lie within the prosthetic envelope

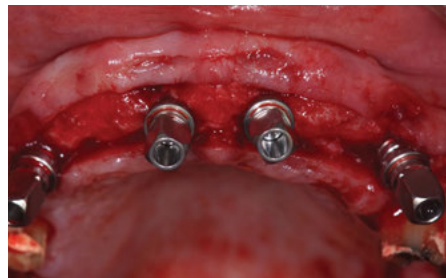


Figure 10: Intraoperative view showing the implants inserted into preselected positions decided upon using the cone beam CT scan



Figure 11: Transitional restoration made from data transferred from the diagnostic preview and the provisional metal-acrylic restoration. The transitional restoration is supported by the abutments. It is used to develop soft tissue contours for a natural emergence profile



Figure 12: Intraoral view of the abutments on completion of soft tissue healing. The contours developed by the transitional restoration are visible. Note that the abutments lie within the prosthetic envelope and are aligned to each other



Figure 13: Definitive restoration. Note the naturally contoured soft tissue emergence profile

Case 3

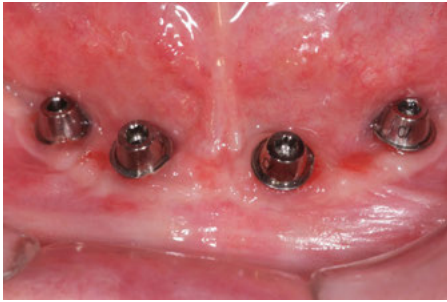


Figure 14: Four abutments, attached to implants in the interforaminal region, can be seen. Impressions of these are taken using the open-tray technique, the accuracy verified, and master cast constructed

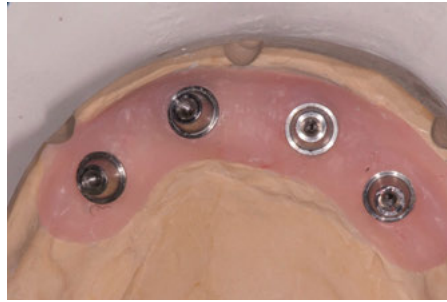


Figure 15: The master cast with abutment analogs is visible. This has been constructed from a verification jig. This will be scanned along with the diagnostic preview. Both the master cast and the diagnostic preview will be sent to the scanning center

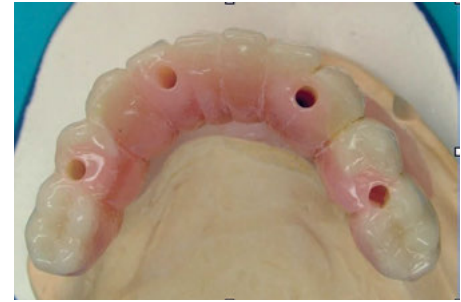


Figure 16: The diagnostic preview will be sent to the scanning center along with the master cast. The scanned data will then be used to construct the metal (chrome-cobalt) framework and the porcelain fused to it visible

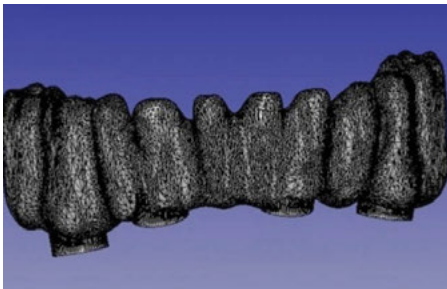


Figure 17: The diagnostic preview scanned. The contour of the try-in has been digitally reduced to allow for space for the addition of the veneering material, which may be either porcelain, composite, or acrylic



Figure 18: The metalwork can be seen seated on to the master cast. Provision has been made for the veneering of the porcelain



Figure 19: The fit surface of the framework — with the porcelain fused to it visible

indicating the position of the planned teeth needs to be scanned.

Once the desired tooth position and the abutment position and shape have been scanned, it is possible to fabricate a prosthetic framework by milling it from a number of materials. These may be titanium, zirconium oxide, or a chrome-cobalt alloy. Porcelain or acrylic can then be veneered onto the framework.

Case studies

The cases studies illustrate how three-dimensional imaging, stereolithography, and CAD/CAM technology can be put in practice in different clinical situations.

Case 1 (Figures 1-5) depicts the management of a patient whose medical condition indicated the reduction of the number of interventions to a minimum.

Case 2 (Figures 6-13) depicts the management of a patient with failing teeth who required a change in the appearance as well as the occlusal scheme to achieve a better esthetic and functional outcome.

Case 3 (Figures 14-20) depicts the fabrication of a framework using CAD/CAM technology, which enables a more accurate fit to be achieved than a framework made by conventional casting technology (Takahashi and Gunne, 2003). [IP](#)



Figure 20: The definitive screw-retained restoration is visible. The main advantage of CAD/CAM technology is that it allows the fabrication of the metal framework, which is more likely to fit accurately than a conventional cast framework

REFERENCES

1. Assif D, Marshak B, Schmidt A. Accuracy of implant impression techniques. *Int J Oral Maxillofac Implants.* 1996;11(2):216-222.
2. Assif D, Nissan J, Varsano I, Singer A. Accuracy of implant impression splinted techniques: effect of splinting material. *Int J Oral Maxillofac Implants.* 1999;14(6):885-888.
3. Sethi A, Kaus T. *Practical Implant Dentistry.* The Science and Art. 2nd ed. London: Quintessence Publishing Co. Ltd.; 2012.
4. Takahashi T, Gunne J. Fit of implant frameworks: an in vitro comparison between two fabrication techniques. *J Prosthet Dent.* 2003;89(3):256-260.

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Changing paradigms in implant dentistry

SETHI

- _____ greatly increase(s) the accuracy and predictability with which the treatment can be completed.
 - Three-dimensional imaging
 - An interactive software program
 - 2D radiographs
 - both a and b
- Staged treatment is _____.
 - unpredictable
 - not recommended
 - highly predictable
 - prone to inaccuracies
- The same process of diagnostic imaging and transfer of tooth position data can be carried out for a patient with failing teeth where _____.
 - there is a need for root canal treatment
 - there is a need for immediate placement of these teeth with implants
 - the treatment needs to be spaced out over several months
 - the patient may be noncompliant
- This information (within the SIMPLANT program derived from CBCT data) can be transferred to a drill guide, which will enable the placement of the implants _____.
 - within the next few weeks
 - in the correct position
 - in the correct depth
 - both b and c
- This (placing the implants correctly) is facilitated by the use of _____ made directly from CT scan data.
 - stereolithographic models
 - a drill stop
 - a laboratory cast
 - images of the failing teeth
- This, of course, enables the fabrication of the transitional restorations directly on the _____.
 - wax-up
 - stereolithographic models
 - plaster casts
 - scanned image
- At the same time, selection of the abutments can be carried out based on the _____.
 - 2D radiographs
 - bite wax-up
 - selected tooth position
 - brand of implant being used
- The first stage (using CAD/CAM technology) is to _____.
 - construct an accurate cast of the abutments in the patient's mouth
 - scan the cast with a scanner
 - scan the preview
 - mill the framework
- Once the desired tooth position and the abutment position and shape have been scanned, it is possible to fabricate a prosthetic framework by milling it from _____.
 - titanium
 - zirconium oxide
 - a chrome-cobalt alloy
 - all of the above
- _____ can then be veneered onto the framework.
 - Porcelain
 - Acrylic
 - Gold
 - either a or b

Case study: immediate implant placement and temporization

Dr. Leon Pariente demonstrates the protocol and rationale for placing immediate temporaries in the anterior

A 35-year-old Asian woman, nonsmoker, in good general health, was referred after horizontal root fracture of the left maxillary central incisor (Figures 1 and 2). She reported that she suffered from a trauma several years before, and that the broken tooth was severely discolored and had been endodontically treated before fracturing.

Clinical examination revealed a horizontal root fracture below the gingival level. The periodontium was healthy with no sign of infection. Radiographic examination showed that the fracture had extended to the bone level. The intermaxillary relationships were normal. Analysis of the smile showed a high lip line.

Treatment plan

The UL1 was diagnosed as hopeless. From a periodontal point of view, the clinical situation was considered as favorable: The gingival margin was at the same level as the adjacent central incisor, and the mesial and distal papillae were present and in their proper position.

The patient underwent computerized tomography to evaluate the available bone volume in the apex area of the UL1 as well as the integrity of the buccal plate of the UL1 (Figure 3). The examination of the CBCT

Educational aims and objectives

This article aims to present a case study illustrating immediate implant placement after extraction of the UL1.

Expected outcomes

Implant Practice US subscribers can answer the CE questions on page 38 to earn 2 hours of CE from reading this article. Correctly answering the questions will demonstrate the reader can:

- Recognize the advantages of immediate implant placement and temporization, when properly indicated.
- Recognize that proper indication is a basic principle in implant placement.
- Realize that the success of implant placement in part relies on atraumatic extraction.
- Realize that sufficient primary stability is imperative for implant success.
- Identify types of materials and techniques that assist in implant placement from a biological standpoint and prosthetic perspective.

CE



Figures 1 and 2: The patient presented with a horizontal root fracture of the left maxillary central incisor



Leon Pariente, DDS, is in private practice in Paris limited to implants and periodontology. He is a graduate of the University of Paris Rene Descartes, has completed the Advanced Program in Implant Dentistry at the New York University College of Dentistry (2012), and published several research projects at the Prosthetic and Implant Department of the University Paris Rene Descartes.

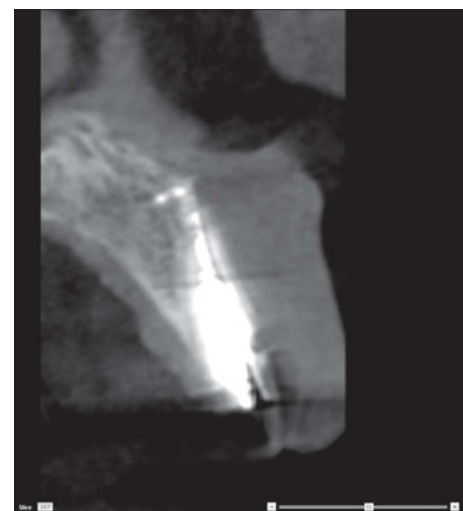


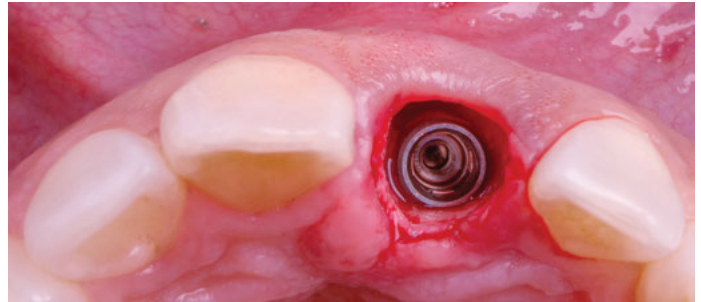
Figure 3: The available bone volume at the apex and integrity of the buccal plate was assessed



Figure 4: Atraumatic extraction of the UL1



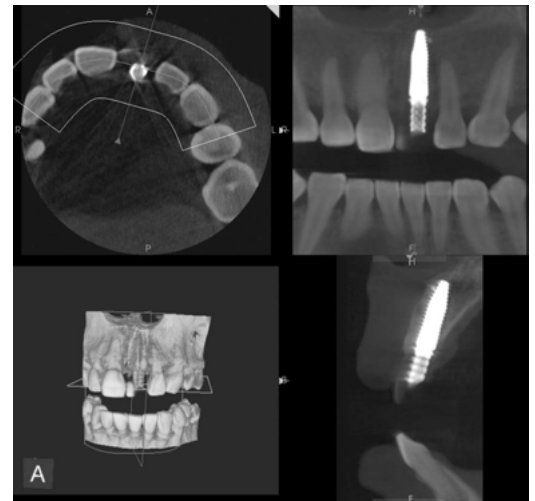
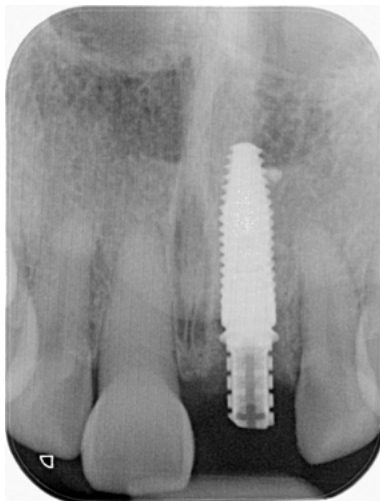
Figure 5: The drilling sequence included 2.2 mm, 2.8 mm, and 3.5 mm drills



Figures 6 and 7: The implant was placed with a final torque of 45 Ncm

showed that the buccal plate was intact 3 mm below the gingival level; correlated to the clinical examination, the future extraction socket was determined as Class I of Elian (Elian, et al., 2007). The bone volume correlated to the axis of the tooth and was considered as favorable for immediate implant placement, Class I of Kan (Kan, et al., 2011).

Immediate implant placement after extraction of the UL1 was planned. Immediate temporization was intended, subject to sufficient primary stability of the implant. The implant chosen for the procedure was a 4.1 mm × 12 mm Straumann® Bone Level Tapered Implant.



Figures 8A and 8B: In its final position, the implant platform lay 4 mm under the ideal gingival margin

Surgical procedure

The UL1 was extracted atraumatically without raising a flap or osteotomy (Figure 4). The extraction socket was meticulously cleaned and rinsed with Betadine® (Purdue Products LP, Stamford, Connecticut). The drilling sequence included 2.2 mm, 2.8 mm, and 3.5 mm drills (Figure 5). The counter-sink drill or tap was not used in this case to safeguard sufficient primary stability. The implant was placed with a final torque of 45 Ncm (Figures 6 and 7). In its final position, the implant platform lay 4 mm under the ideal gingival margin (compared to the adjacent central incisor — see Figure 8). A titanium temporary abutment for the crown was placed, and a laboratory-made shell was positioned without interfering with the temporary abutment (Figure 9).



Figure 9: A titanium temporary abutment for the crown was placed, and a laboratory-made shell was positioned without interfering with the temporary abutment

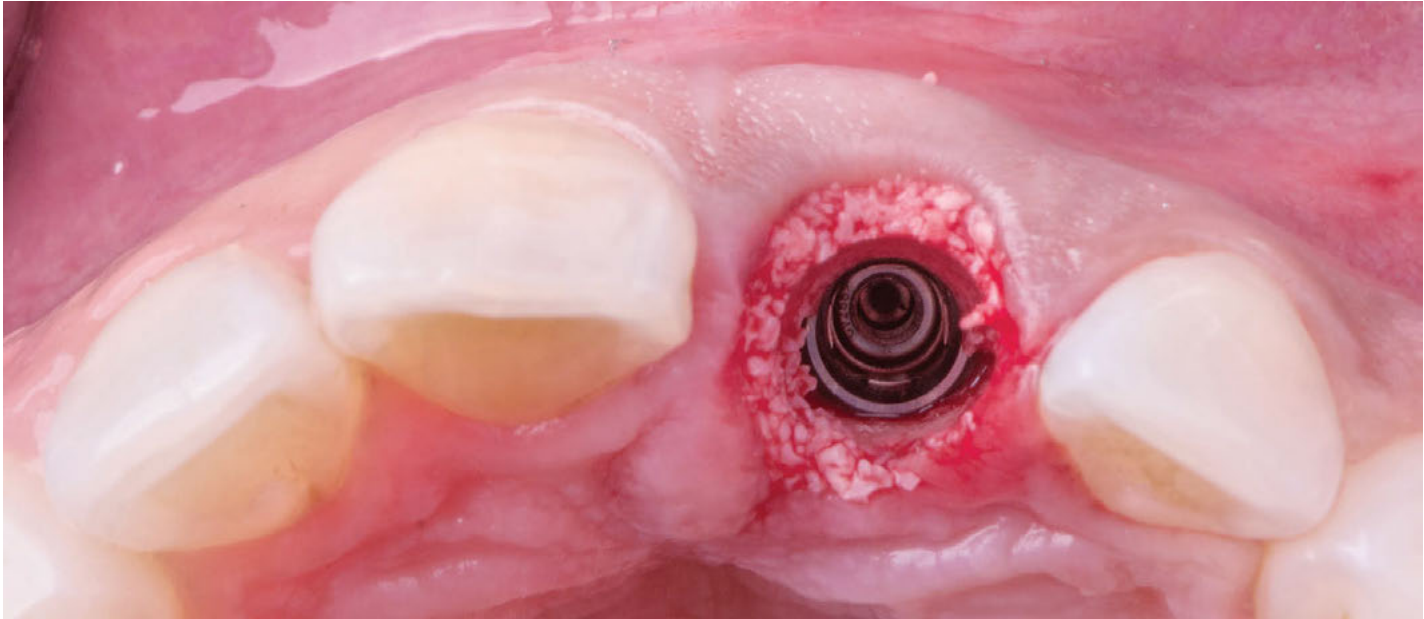


Figure 10: The screw-retained temporary crown was then torqued to 35 Ncm

plate was filled with a particulate bone augmentation material. The screw-retained temporary crown was then torqued to 35 Ncm (Figure 10).

Three months after placement, an implant level impression was taken for final restoration. Follow-up 10 months after implant placement showed a preserved gingival contour (Figures 11 and 12).

Conclusion

Immediate implant placement and temporization, when properly indicated, has three main advantages: timing, biology, and prosthetics. Treatment time and number of surgical procedures are reduced compared to a delayed approach.

From a biological standpoint, using a slow-resorbing material to fill the gap between the implant and the buccal plate can enable predictably preserved bone volume. The provisional crown supports the gingival architecture and helps maintain the pre-existing positions of the gingival margin and mesial and distal papillae.

From a prosthetic perspective, placing an implant-retained provisional crown on the day of surgery simplifies the temporization in the anterior area, allowing the patient to leave the practice on the same day with a fixed provisional.

The success of this procedure relies on three basic principles: proper indication, atraumatic extraction, and sufficient primary stability of the implant. The latter depends widely on the choice of the implant design and drilling protocol, which should be considered for greater primary stability. **IP**



Figures 11 and 12: Follow-up 10 months after implant placement showed the preservation of the gingival contour

Acknowledgments

This case was a collaboration between Drs. Leon Pariente, Karim Dada, Marwan Daas, and Romain Cheron. The authors would like to thank Asselin Bonichon for the laboratory work.

REFERENCES

1. Elian N, Cho SC, Froum S, Smith RB, Tarnow DP. A simplified socket classification and repair technique. *Pract Proced Aesthet Dent.* 2007;19(2):99-104.
2. Kan JY, Roe P, Rungcharassaeng K, Patel RD, Waki T, Lozada JL, Zimmerman G. Classification of sagittal root position in relation to the anterior maxillary osseous housing for immediate implant placement: a cone beam computed tomography study. *Int J Oral Maxillofac Implants.* 2011;26(4):873-876.

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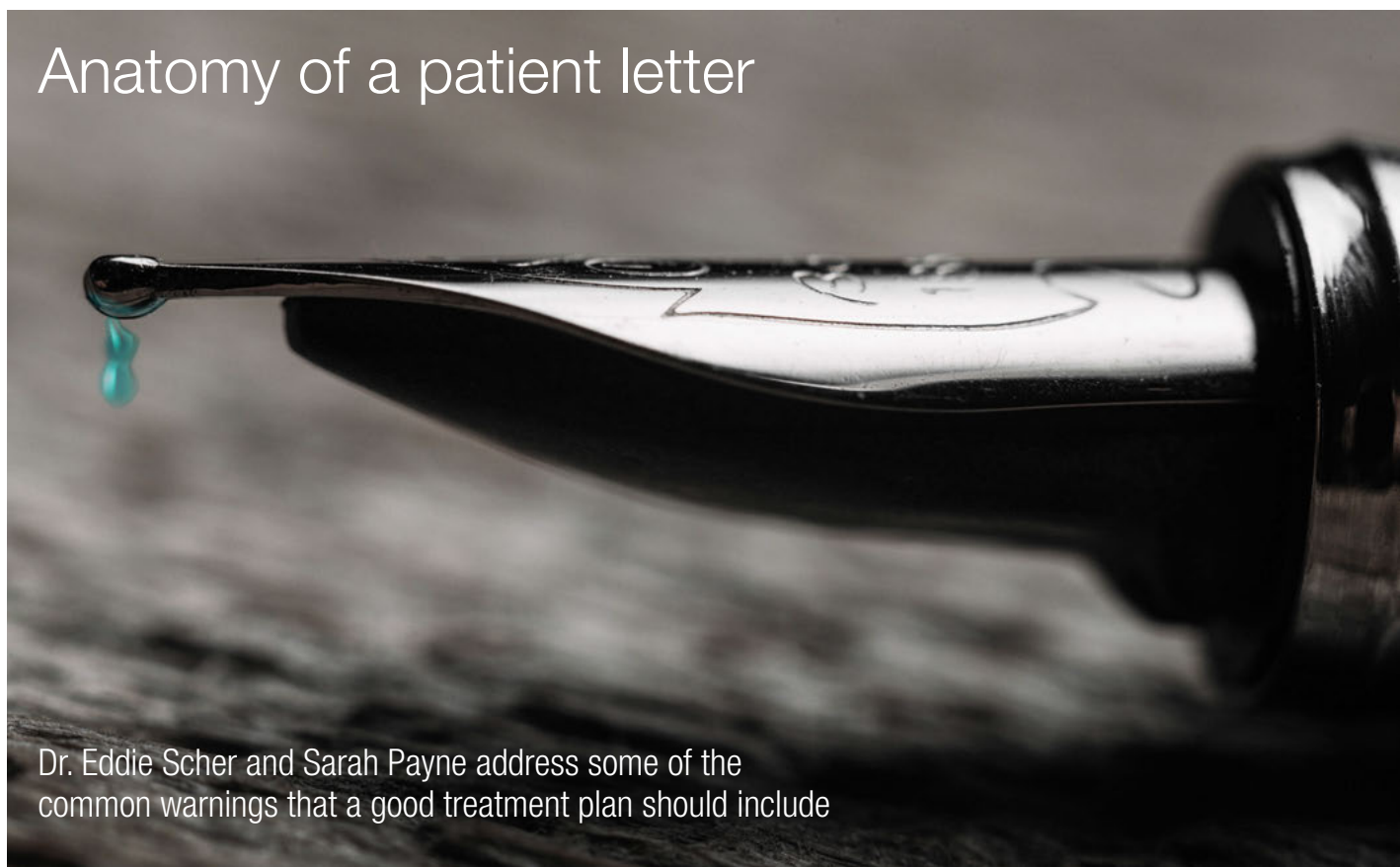
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Case study: immediate implant placement and temporization

PARIENTE

- (For this patient) From a periodontal point of view, the clinical situation was considered as favorable: _____.
 - The gingival margin was at the same level as the adjacent central incisor
 - The mesial and distal papillae were present and in their proper position
 - The gingival margin was lower than the adjacent central incisor
 - both a and b
- The patient underwent _____ to evaluate the available bone volume in the apex area of the UL1 as well as the integrity of the buccal plate of the UL1.
 - computerized tomography
 - an open flap exploratory technique
 - 2D film imaging
 - transillumination imaging
- The examination of the CBCT showed that the buccal plate was intact _____; correlated to the clinical examination, the future extraction socket was determined as class I of Elian.
 - 3 mm below the gingival level
 - 3 mm above the gingival level
 - exactly at gingival level
 - 5 mm above the gingival level
- The bone volume correlated to the axis of the tooth and was considered as favorable for immediate implant placement, _____.
 - Class I of Elian
 - Type II of Elian
 - Class I of Kan
 - Type II of Gelb
- Immediate temporization was intended, subject to _____.
 - sufficient primary stability of the implant
 - gingival sufficiency
 - bone grafting
 - additional socket testing
- The extraction socket was meticulously cleaned and rinsed with _____.
 - hydrogen peroxide
 - chlorhexidine
 - Betadine®
 - saline
- The implant was placed with a final torque of _____.
 - 20 Ncm
 - 30 Ncm
 - 45 Ncm
 - 55 Ncm
- In its final position, the implant platform lay _____ the ideal gingival margin (compared to the adjacent central incisor).
 - 2 mm under
 - 4 mm under
 - equal to
 - 2 mm above
- Before placing the provisional crown, the gap between the implant and the buccal plate was filled with a/an _____.
 - antibiotic-soaked material
 - particulate bone augmentation material
 - de-proteinated porcine bone
 - collagen barrier
- The provisional crown _____.
 - should be placed with a counter-sink drill or tap
 - supports the gingival architecture
 - helps maintain the pre-existing positions of the gingival margin and mesial and distal papillae
 - both b and c

Anatomy of a patient letter



Dr. Eddie Scher and Sarah Payne address some of the common warnings that a good treatment plan should include

Every treatment letter that goes out must have warnings that are specific to each particular patient and treatment option. The template used by the authors in practice has grown in size, as more commonly used paragraphs and warnings have been added to it in order to ensure the patient fully understands the treatment and the risks involved.

Some of the warnings we give are used in every implant placement case, such as points about the condition of the bone, the patient's oral hygiene, and the importance of good home care when you have teeth and implants together in the mouth.

It is also important to warn the patient that no treatment has a 100% success rate, but that you will do everything you can to make sure you get the best result possible. The majority of the letter will be case specific — and should always be double-checked to ensure absolutely every eventuality has been covered.

Eddie Scher, BDS, LDS RCS, MFGDS RCS, is a specialist in prosthodontics and oral surgery. A founder and life member of the ADI, he is visiting clinical professor at Temple University, Philadelphia, and is the editor in chief of *Implant Dentistry Today*.

Sarah Payne, NEBDSA, is the senior surgical nurse and implant coordinator at the Walpole Street Dental Practice. She qualified in 1996 and has worked with Dr. Scher for 17 years.

Below is the template used by the authors for some common warning paragraphs. These are not, and never will be “final” — they have been adapted and added to over time, and we are always looking at ways to improve upon them.

Medical history

Every patient's medical history is likely to be unique and so will require different warnings. Diabetes is an increasingly common condition, and an example of what you might wish to raise with a patient is given here:

“We have discussed the fact that you are a controlled diabetic, and we have warned you that your expectation of success is only just a little lower than if you were a normal medical history. If you were an insulin-controlled diabetic then the prognosis would be much poorer.”

In the same way, a patient's dental condition will be unique, which we mention in every letter as follows:

“Because each patient's medical and dental condition and oral hygiene is unique, long-term success may not occur and cannot be guaranteed.”

Smoking

“As we discussed, recent research has shown that smoking reduces the healing capabilities of the tissues. It has now been

shown that people smoking 20 cigarettes per day or more will reduce their predictability of success by approximately 11%.

“We have discussed the smoking cessation policy, and we have suggested to you that you should give up smoking at least 2 weeks before our implant procedure and refrain from smoking for 4 to 6 weeks after the procedure. Obviously, it would be very nice if you did not take up smoking in the future as this would be a tremendous advantage to your general health.”

Oral hygiene

“As you can imagine, it is important that your mouth is healthy and clean before surgery. Therefore, our policy is for you to see a hygienist a few days before the surgery.

Additional appointments may be required and are listed below:

- Before implant placement to minimize the chances of infection
- After implant exposure to familiarize you with the shape of the transitional restoration
- After temporary crown/bridges are constructed
- After completion of the treatment to guide you in the maintenance of the final crown/ bridgework.

“The number of appointments required will depend upon your needs. During the

course of the treatment, you will need instruction to enable you to look after your mouth. This may be carried out at your practice with your own hygienist. Should you not have access to appropriately trained health-care professionals, we are able to provide this aspect of care.

“As also discussed, it is totally essential that your oral hygiene and home-care procedures are maintained to the highest standards and that you attend all your prescribed hygiene and maintenance appointments. Recent research has shown that when implants are placed in the mouth where natural teeth are present, there is a greater risk of infection, and that the infection can be more acute. The essential lesson to be learned is that the oral hygiene and home-care procedures must be of the highest standard, in order to ensure no possible risk of infection. The remaining teeth will obviously benefit as well.”

Sinus grafts

Cases where the clinician needs to work in the sinus region carry a greater risk of complication, so as well as explaining the procedure, the patient letter must also add some warnings:

“If the sinus lining tears and cannot be repaired (and in some patients, it is very thin), we will abandon the procedure and close. We would then repeat the procedure approximately 3 months later.

“After a sinus lift procedure, it is very important that you do not blow your nose hard, and if it is necessary to blow your nose, then this must be done very gently. We will also ask you not to fly in an airplane, or swim for at least 2 weeks after the procedure.

“If you have the desire or need to sneeze, we will ask you to make your sneeze through your mouth and not through your nose. It is also very advisable that you stay out of an environment where you might pick up a respiratory tract infection. We will require you to attend our surgery approximately 10 days later to remove your stitches.”

Bone augmentation/grafting

“As we discussed, our object is to take a little piece of bone from your chin (inside your mouth) and use this piece of bone to fill in the gap where the root of your tooth was. At this procedure, we always use a bone augmentation material called mineralized freeze-dried bone to pack out the areas where the bone graft does not extend to, and also to fill in the chin area where the piece of bone was removed.

It is also important to warn the patient that no treatment has a 100% success rate, but that you will do everything you can to make sure you get the best result possible.

“As we mentioned at your last appointment, it is possible when removing the piece of bone from the chin that your lower anterior teeth may be affected. This is a very rare occurrence, and what may result is a slight loss of feeling, rather like you having root canal treatment. It is possible that a lower anterior tooth might become devitalized and would need a root canal filling — however, as mentioned, this is a very rare occurrence.”

Platelet-rich plasma and platelet-rich fibrin

“In order to enhance our bone and soft tissue healing, our plan is to use a technique called platelet-rich plasma and platelet-rich fibrin (PRP/PRF), which enhances the healing of both the soft tissues and, to a lesser extent, the bone tissue as well.

“PRP/PRF is a procedure where we draw a little blood from your arm and use this blood in a special one-use-only sterile container. The blood is placed in a centrifuge and divides out your very best growth cells, which we can then add in to our operating site.”

Implant/surgery patients

There are a number of warnings that are appropriate to implant patients, which the clinician needs to choose appropriately for the case:

- “As discussed, there is a gap of 3 to 6 months before we can load these implants. (This is to give the bone time to grow onto the surface of the titanium.)
- If I am not happy with the quality or quantity of the bony ridge, I will discontinue the operation and only charge for you for my time and the disposables used.
- It is requested that facial makeup not be worn on surgery days.
- After implant surgery, your dentures will need to be left out for at least 2 weeks. However, as already discussed, it may be possible to insert it after 3 days/1 week with a soft lining for speech and appearance purposes only.

- We have discussed the close proximity of the inferior dental nerve and the lingual nerve (the nerve that gives feeling to the lip, tongue, and surrounding areas), and the possible problems if either of these nerves is damaged. However, to put this into perspective, I have operated in this region many times and have never had a permanent numbness. If you have any sign of numbness or a change of sensation in this region after 6 hours, please inform me immediately.
- As we mentioned at your last consultation, when operating in the posterior lower jaw, we have to be very careful of a nerve that runs through that jaw. From our special test we can see that this nerve is running very favorably — however, we will follow a special protocol in order to minimize any possibility of nerve damage in this region. The most important aspect of this protocol is that we give local anesthetic in the region of the operation only and not a full block. The reason for this is if we come too close to the nerve, then you will have some feeling in the region and can warn us of that. Also when we are approximately two-thirds of the length of the definitive implant, we will take an X-ray to check that we are in the correct position.
- It may be necessary when placing the osseointegrated implant to augment the little nerve canal at the midline of your upper jaw. We would only do this if the nerve canal was extraordinarily large and crossed over the area where we want to place our implant. It is possible there might be a slight numbness on the palate if we did do this procedure. As we have explained, the augmentation material used in the surgery is mineralized freeze-dried bone of bovine origin.”

Postoperative warnings

Again, there may be a number of postoperative warnings that are appropriate to

pass on to the patient. It is up to the clinician to decide what should be discussed, but an example of one very commonly used warning is given here:

“Gum recession will appear following your treatment. Gum recession is always present after treatment in patients with deeper periodontal pockets and bone loss, since this is part of the natural healing process.

“Gum recession can also appear around implants, which will result to exposure of the titanium threads and esthetic compromise, as well as the possibility of food impaction in the area.”

Dental prosthesis

The nature of your advice to your patients regarding their prostheses will depend on many factors, including the type of prosthesis fitted, the treatment modality, and their own personal circumstances. The following are common paragraphs included:

- “As we discussed during your consultation appointment, all forms of dental prostheses require regular maintenance over the years. With any mechanical appliance, it is necessary that professional cleaning and the replacing of worn movable parts may be necessary from time to time.
- We have discussed the problem of your relatively high smile line, and have explained to you that we will expose the implant in such a way that we will create a nice tissue cuff around your new tooth. It is still possible, however, that this tooth maybe slightly longer than the adjacent teeth.
- Implant cement is used for the permanent restoration. This cement is different from traditional crown cement as we need to have access to the implant occasionally (in case the abutment should loosen, to treat any gum inflammation, and so on). Due to the nature of the implant cement, this does mean that the crown may occasionally debond. This is nothing to worry about and just requires a half-hour appointment to re-cement. This is not an emergency so can be booked at your convenience, depending on availability. If this happens on multiple occasions and becomes too inconvenient, then traditional permanent cement can be used instead. This does mean that, should access to the implant be needed, the crown



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would have to be drilled off and a new one made at our current prices.

- We are very concerned about grinding and clenching forces on osseointegrated implants. We have, therefore, recommended the construction of a night guard (occlusal splint) for you to wear when sleeping.
- The provisional crown brings the implant into function, develops the contour of the gum, and helps us to decide on the shape of the final tooth. The provisional crown will allow you to criticize the shape, size, color, and position of the crown so that we can make any corrections before going to the final restoration in metal and porcelain.”

Dental legalities

Finally, it is extremely important that the letter refers to certain aspects of the patient consultation that explain why they have opted for a certain treatment, addresses the risk of failure, or explains who is carrying out certain parts of the treatment.

These warnings are a crucial part of documenting the patients' consent and help show that you have had a clear, wide-ranging, and unbiased discussion with them about their treatment — and that their consent is supported by sufficient understanding of what they are agreeing to:

- “This treatment, as we have discussed in detail, is not the ideal way to go forward, but other forms of treatment would be considerably more expensive; and we have designed the prosthesis so that in the future we can add in more

implants and change the type of prosthesis when necessary.

- My responsibility is only for the surgical phase. Dr X, who will be taking over the prosthetic phase, is giving you a formal estimate for this. I am more than happy to offer advice here should it be requested.
- I also need to mention that no treatment can have a 100% success rate as any surgical treatment depends partly on the patient's healing response. Although our success rate is extremely high, occasionally problems do occur; and if at any time I feel that a problem has arisen, I will discuss the possible outcomes with you.
- If you have an emergency problem, regarding your dental treatment, Dr Scher's telephone numbers are ____.
- Please find enclosed an estimate of our fees, together with a copy of this letter for you to sign and return to me, signifying agreement to our treatment plan and estimate.
- In order for us to document your smile transformation, clinical photography forms an integral part of our clinical records. These photographs are occasionally used for teaching, publications in scientific journals, and marketing. By signing below, you signify your agreement to this. Should you not wish this, please add a footnote with your signature specifying your wishes.
- Please also note that this referral has been for a surgical assessment prior to possible treatment with dental

implants. I have carried out a general dental assessment, but I have not carried out a detailed check of all of your remaining teeth and gums. As such, a check should be carried out by your normal dentist, who regularly cares for your teeth. You should confirm that your dentist is happy with the current condition of your mouth prior to the start of any implant treatment, and you should have regular dental check-ups to maintain the health of your mouth, any remaining teeth, and your finished implant.”

Conclusion

The authors believe that, by including the appropriate warnings from this article at the end of every treatment-planning letter, most eventualities should be covered — but every case is different, so the responsibility lies with the clinician to ensure that patients have been made aware of anything that could affect their outcome.

All the warnings written here should already have been discussed with the patient at the consultation stage of treatment and recorded in the clinical notes at that time. This letter and the clinical notes should support one another completely.

It is worth repeating that these common paragraphs and warnings should be adjusted where necessary to suit each patient, and that they are presented as a guide only.

This article is provided as guidance only; while every effort has been made to ensure its accuracy, the reader is recommended to seek professional guidance from his/her indemnifier or professional body about the suggestions made here. **IP**

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The OCO Biomedical implant library is available in most of the major CBCT/Guide planning software on the market today. This allows practitioners to plan their multi-unit case quickly and avoid any potential surprises. Once planned, the guide can be manufactured to be specifically used with the proprietary OCO Biomedical Guided Surgical System.

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The OCO Biomedical Guided Surgical Kit is the first, and only, two-step guided surgical kit on the market today that is engineered for simplicity and ease of use. With just a pilot drill and a final drill, this single key system facilitates a rapid and accurate surgery that will make the most challenging case easier to accomplish.

Implant

Once the surgery is completed, the Engage™ implant is the perfect implant choice for these cases. The Engage™ implant incorporates the same patented

implant body that has made OCO Biomedical the leader in immediate load technology. The combination of the mini Cortic-O™ threads, SLA surface, and Bull Nose Auger™ Tip create the perfect combination for incredible primary stability and enhanced osseointegration. These implants utilize an internal hex/conical seal connection. This widely used platform allows for very a stable and reliable implant-abutment connection that makes the restorative phase easier to accomplish with the wide variety of abutments available.

Abutments

The OCO Biomedical Omni-Load™ abutments will easily handle the restorative complexities of nonparallel implants. These abutments, available in 0°, 17°, and 30° angulations, are perfect for traditional All-on-4® protocols as well as other clinical situations that may have prevented the placement of parallel implants. The complete Omni-Load™ system has everything you will need from temporization, to impression taking, to final screw-retained restoration. These abutments are available for use on 4.0 mm and 5.0 mm Engage™ implants.

Restoration

When you are ready, you may use the laboratory of your choice to complete your full-arch case, since most laboratories are

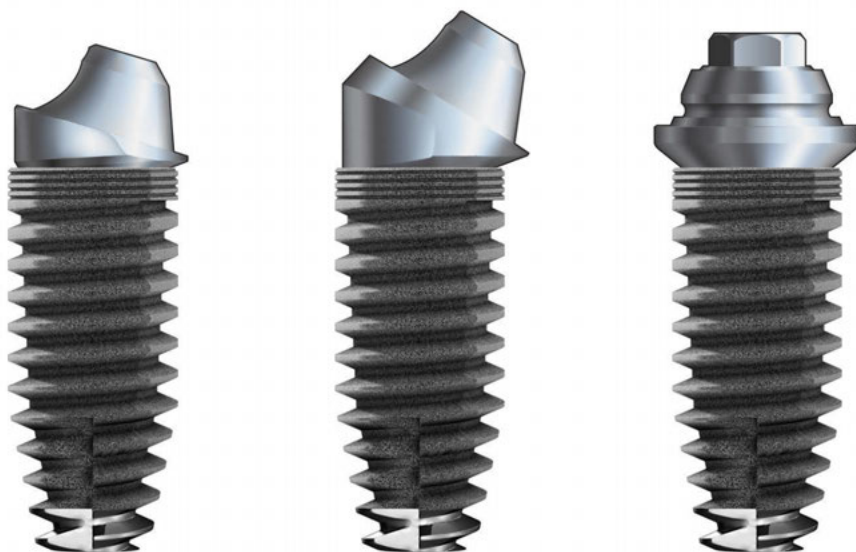


OCO Biomedical Guided Surgical Kit

familiar with the hex connection and the use of the Omni-Load™ abutments. If your lab is unfamiliar with multi-unit screw-retained protocols, OCO has partnered with Dani Dental Studio in Tempe, Arizona, to fulfill your restorative needs. This full-service laboratory will help you every step of the way to successfully plan and complete your case.

OCO Biomedical has taken every step to make complex treatment plans manageable and within the grasp of all implant dentists. Being able to confidently treat simple to complex cases, and transform patients' lives, is the mission of OCO Biomedical. From outstanding customer and technical service, to experienced field implant specialists, OCO Biomedical not only improves your practice performance, but more importantly, your patient care. **IP**

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Multi-unit abutments



Zirconium restoration

So you have a complication. . .

Dr. Justin Moody discusses ways to avoid possible implant glitches

No one ever wants patients to experience a complication during implant treatment, especially after the final restorations have been placed. However, clinicians who place enough dental implants will inevitably have some cases that “take a turn south.” Seems everyone wants to take a

course or learn how to fix the issues, but what gets lost in the panic is what caused the condition, and how we are going to keep it from recurring. Many of the calls and emails I get regarding complications result from bone loss around integrated implants in function.

Finding the root cause of the problem is not often that easy but is essential to finding the solution and, ultimately, the subsequent treatment. In my opinion, many of them are peri-implantitis cases that can be contributed to residual excess cement — those are the easy ones. But what about bone loss around screw-retained crowns? Locators? Sometimes we just don’t know. These cases, I think warrant a look back at the overall health of the patient; here is where I am finding many clues to potential issues.

Risk assessment at the beginning of treatment pays off tenfold in the long-term

prognosis of implant dentistry. Identifying uncontrolled diabetes, alcoholism, multiple medications, and parafunctional habits are just a few in the long list of items to look for and to ask questions about.

Proper treatment planning and execution are the factors that we as surgeons have control over and need to master. The use of surgical guides has helped in the proper placement of implants in the bone for ideal restorative outcomes coupled with cone beam CT and the available software. The future is bright; we just need to stay focused and concentrate on avoiding implant complications! **IP**



Figure 1: Crestal bone loss around implant after 3 years

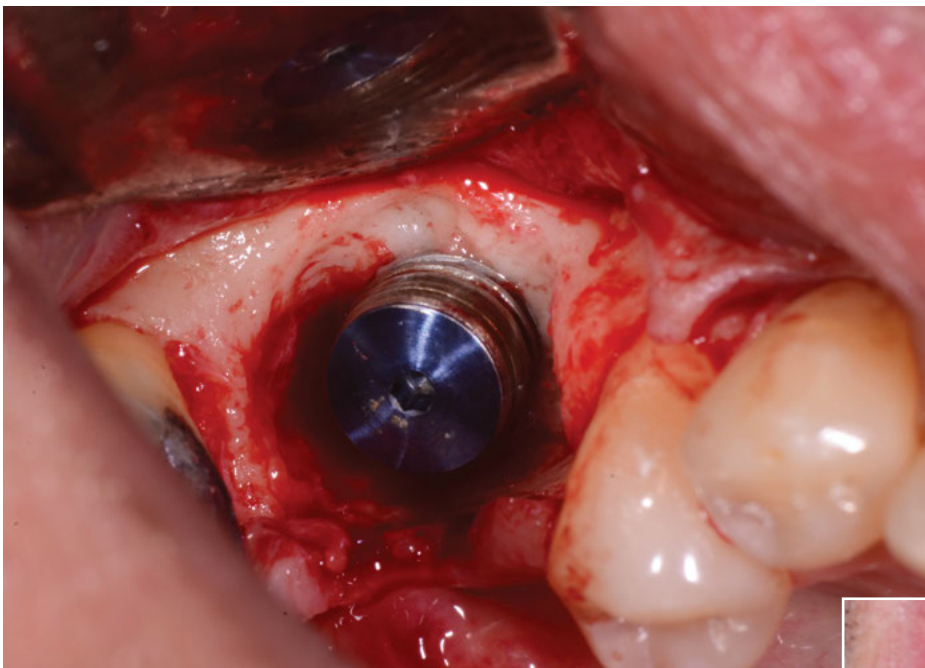


Figure 2: Saucer or cupping loss around the implant



Figure 3: Area cleaned and grafted with MinerOss® Cancellous from BioHorizons®. Radiograph taken 5-months post grafting



Figure 4: Lost implant due to residual cement

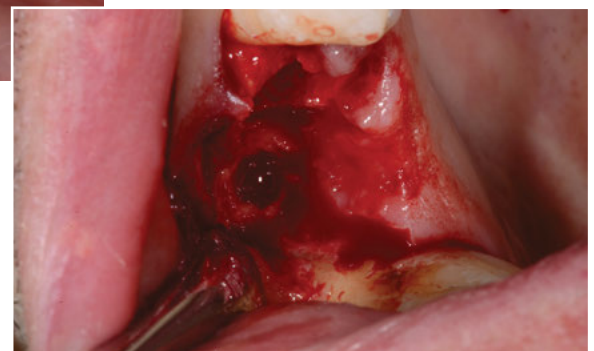


Figure 5: Failed implants can lead to large amounts of bone loss and lost sleep



Justin Moody, DDS, DICOI, DABOI, is a Diplomate of the American Board of Oral Implantology and of the International Congress of Oral Implantologists, Fellow and Associate Fellow of the American Academy of Implant Dentistry, and Adjunct Professor at the University of Nebraska Medical College. He is an international speaker and is in private practice at The Dental Implant Center in Rapid City, South Dakota. He can be reached at justin@justinmoodydds.com or at www.justinmoodydds.com.

Disclosure: Dr. Moody is a paid speaker for BioHorizons.

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Transition year for “Best of Class” Award recognizing game-changing dental technologies

In 2016, the most prestigious award for dental industry companies will transition sponsorship from the Pride Institute to the newly launched Cellera Consulting Group, founded by Lou Shuman, DMD, CAGS. The Cellera “Best of Class” Technology Award, formerly known as The Pride “Best of Class” Technology Award, recognizes innovative game-changing technology offerings, services, and devices. Since the inaugural presentation in 2009, the “Best of Class” Technology Awards have grown to occupy a unique space in dentistry by creating awareness in the community of manufacturers that are driving the discussion as to how practices will operate now and in the future. Prior to founding Cellera Consulting Group, Dr. Shuman served as the President of Pride Institute where he created and developed the “Best of Class” Technology Awards. In just 8 years, the “Best of Class” designation has become a trusted criterion for dental professionals to make educated, informed product and technology investment decisions for their practices and their patients.

For information, visit www.celleraconsulting.com.



Legacy of innovation continues for 3M oral care

With 95 innovations launched in 2015, 3M's designation as the Most Innovative Company in the Dental Industry was earned through a relentless commitment to science-based innovation. Honored with its 11th consecutive win, 3M's rank on The Anaheim Group's “Innovation Index” has once again placed the company in the top spot with 25% more innovations than any other dental company. The maker of countless award-winning products under such brands as Filtek™, RelyX™, and Scotchbond™, 3M's breakthrough innovations are often sourced from within its own walls. Interdisciplinary collaborations have inspired many of 3M's greatest innovations in the dental industry, including pioneering the use of zirconia restorative materials and introducing nanotechnology for enhanced esthetics and strength in universal restorative material.

To learn more about 3M, visit 3M.com/Dental or 3M.com/Ortho.

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Academy of Osseointegration announces new certificate in implant dentistry

In response to a growing number of AO members seeking distinction in the field of implant dentistry, the Academy is launching the AO Certificate in Implant Dentistry. This Certificate represents the highest standards of excellence in implant dentistry, and distinguishes practitioners' continuing education efforts and knowledge to patients and colleagues around the globe. All award winners will receive recognition at a special ceremony at the 2017 Annual Meeting, being held in Orlando, Florida, March 15-18, 2017, where they will be presented with the certificate and a lapel pin. Photographs of each award winner will be featured in Academy News, announced to industry media, and recognized on AO's website.

To qualify for the Certificate, applicants will be evaluated on the following criteria:

- Applicants must present evidence of verifiable CDEs over a 3-year period on implant-related material, totaling 200 hours, to include 85 hours of “core knowledge” continuing education hours.
- Each applicant is required to submit four case presentations to be evaluated, using the Case Presentation Template (CPT) and covering specific categories.
- At the time of application, each applicant must have been an AO member for 3 consecutive years and have attended a minimum of two Annual Meetings during that 3-year period.

The application, along with a Q&A and supporting resources, is available on AO's website at osseo.org.

Comedic legend Jerry Seinfeld slated to regale SIROWORLD 2016 attendees

Dentsply Sirona, The Dental Solutions Company™, announced that comedian Jerry Seinfeld will perform a private standup act for SIROWORLD attendees in Orlando, Florida, on Thursday evening, August 11. A 3-day educational extravaganza, SIROWORLD

offers groundbreaking general sessions, innovative and informative breakout sessions, copious networking opportunities, and astonishing entertainment for all who attend the inaugural event at the Rosen Shingle Creek Resort.

For more information on SIROWORLD, visit www.siroworld.com, email the help desk at siroworld@sirona.com, or call 844-GO2-SIRO (844-462-7476).



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About Dr. Moody

Dr. Justin Moody, DDS is an internationally known dentist, entrepreneur, instructor and speaker in the fields of dentistry, practice management, technology and implantology. He owns dental practices in Nebraska and South Dakota. Learn more at justinmoodydds.com.

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- #DrJustinMoody
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Rapid City, SD 57701



SOUTH DAKOTA
Dental Implant Center

ADA CERP Continuing Education Recognition Program

South Dakota Dental Implant Center (SDDIC) is an ADA CERP provider. CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry. Concerns or complaints about a CE provider may be directed to the provider or to ADA CERP at www.ada.org/goto/cerp. Approval Term: 5/1/2015 through 6/30/2019

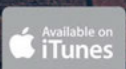


South Dakota Dental Implant Center (SDDIC) is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing dental education programs of this program provider are accepted by the AGD for Fellowship, Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 4-1-2015 to 3-31-2019. Provider #: 342679



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Pediatric heart transplant pioneer to keynote AAID Annual Conference

Leonard Bailey, MD, the pioneer of heart transplantation in babies, will present the opening keynote address at AAID's 2016 Annual Educational Conference to be held in New Orleans, beginning on October 26, 2016. His presentation, entitled "The Evolution of Newborn Heart Transplantation" will take place on Thursday, October 27, 2016, from 1:30 to 2:30 p.m.

For more information about the AAID and the Annual Conference, visit AAID online, or call the 312-335-1550.



OCO Biomedical announces keynote speaker for the Third Annual 2016 OCO International Dental Implant Symposium

OCO Biomedical, Inc., has announced that Howard Farran, DDS, MBA, MAGD, an internationally recognized presenter and best-selling author, will be the keynote speaker at the company's Third Annual 2016 OCO Biomedical International Dental Implant Symposium, to be held Friday, July 22, from 8:00 a.m. – 5:00 p.m., and Saturday, July 23, from 8:00 a.m. – 4:00 p.m., at the Sandia Resort & Casino in Albuquerque, New Mexico.

According to the company, the 2-day, information-packed, value-priced, AGD-Pace accredited special event will also host a robust roster of industry-recognized opinion leaders and clinical educators who will present topics covering the most advanced and innovative methods of implant and restorative dentistry, sinus elevation, and bone grafting.

For more information, call 1-800-228-0477 or visit: www.ocobiomedical.com.

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Dentsply Sirona introduces the INTEGO Transcendental Treatment Center

Dentsply Sirona, Inc., The Dental Solutions Company™, has introduced its INTEGO Transcendental Treatment Center. INTEGO allows practitioners to seamlessly integrate all components of digital dentistry, including CAD/CAM tabletop peripheral equipment, into one easy-to-use unit, streamlining workflow while increasing efficiency. Ergonomically built to ensure optimum patient comfort while maximizing clinical proficiency, INTEGO exceeds the industry standard for digital practice growth and performance.

Available in two flexible models, both the INTEGO TS and INTEGO CS are equipped with an EasyTouch user interface that provides complete control of all operatory instruments via the touch screen. A generously sized, easy-to-read 22-inch medical-grade monitor screen allows the clinician to better showcase patient treatment modules, including intraoral and X-ray images, software and planning views, media player files, and even PowerPoint presentations.

For more information, visit www.sironatc.com.



3Shape releases Implant Studio® 2016

3Shape announced the release of Implant Studio® 2016 software for dental practices and labs. The new 2016 version adds improved speed, performance, and ease-of-use. Implant Studio creates a simplified and predictable top-down digital workflow for implant procedures. It enables the digital planning of single to complex implant procedures by considering the esthetics and intended final restoration as well as the overall clinical situation. Professionals can also use Implant Studio to cost-effectively create, print, and mill their own surgical drill guides. Implant Studio merges surface scans and CBCT (or CT) scans to provide a best-in-class plan based on virtual tooth setups and prosthetic-driven implant planning. It delivers digital insight that enables dental professionals to consider all aspects of the implant treatment, including vertical dimensions, the restorative platform, and available soft tissue. For the restorative design and production workflow steps, Implant Studio data is fully integrated with 3Shape dental lab CAD/CAM design solution, Dental System™. To create a totally digital implant procedure, professionals can input scan data directly from, for example, 3Shape TRIOS® intraoral scanner to Implant Studio.

To learn more about Implant Studio 2016, visit <http://www.3shape.com/en/new+products/implant+studio/cad+software>.



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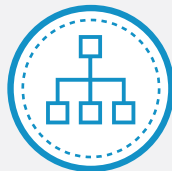
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