"Clinical education is key to us. Providing dental professionals with essential knowledge is one of our main goals"

By Dr. Dobrina Mollova

DUBAI, UAE: Dental Tribune MEA had the pleasure to interview Don Casey, CEO of Dentsply Sirona and Walter Petersohn, CCO of Dentsply Sirona during their visit to Dubai recently. The interview took place at the beautiful Dentsply Sirona office in Business Bay which is equipped fully to provide outstanding training to dental professionals from around the Middle East region.

Dr. Mollova - DTMEA: A warm welcome to the Middle East. Is this your first-time visiting Dubai, particularly the Dentsply Sirona Office – Middle East?

Don Casey: Yes, this is my first visit to Dubai. The Dentsply Sirona office here is beautiful, showcasing our products and offering outstanding training facilities to our customers. We really appreciate the partnership that we have with CAPP in terms of focusing on clinical education. It is a team effort to help dental professionals practice with new equipment in new ways.

"Clinical education is key to us. Providing dental professionals with essential knowledge is one of our main goals"
CEREC Primemill makes excellence easy

CEREC takes another big step forward with the introduction of CEREC Primemill, a brand-new grinding and milling unit from Dentsply Sirona.

By Dentsply Sirona

Fabricating chairside restorations is about to get easier and significantly faster. Thanks to state-of-the-art technology, a wide range of restorations can now be manufactured with more speed and outstanding results. Together with CEREC Primemill and the CEREC software, CEREC Primemill forms a modern setup for achieving predictable results with a completely new chairside experience—for both the user and patient.

CEREC Primemill, Dentsply Sirona’s new grinding and milling machine, ensures producing impressive restorations with precise margins and a highly smooth surface, which results from the high-speed setup with two spindles and four motors. CEREC Primemill features a powerful 7-inch touch interface, an integrated camera for scanning blocks with computable data matrix code and an RFID scanner for reading tool information. It also works with a wide range of materials. The new design offers significantly smoother operation.

‘CEREC Primemill is a real game changer in the whole workflow,’ said Dr. Gertrud Fabel, dental practitioner in Munich (Germany) and key opinion leader for Dentsply Sirona. ‘Everything works significantly faster than before, the quality of the restorations is convincing due to the very fine margins and smooth surfaces, and handling is more simple than before: the team can provide perfect support and thus accelerate the entire workflow to make it even more pleasant for the patient.’

Guided operation for maximum comfort

When developing the new CEREC Primemill, special attention was paid to its user-friendliness. The large touch interface guides the user through all workflow processes. Each workflow step is displayed in order and shows, for example, which tools are used for the selected material and machining option. The tools are outfitted with a color code depending on the material to be processed and are therefore easy to distinguish. Each tool also contains a small radio frequency identification (RFID) tag that can be read by an integrated scanner in the CEREC Primemill. The machine informs the user about the tool’s status and if or when it should be replaced with a new one. The new user guidance makes it even easier to delegate the operation of the machine.

For additional convenience, material blocks with a compatible data matrix code can be scanned with the integrated camera. With this the block information including type, size, color and zirconia enlargement factor are recorded. The unit’s LED light strip also informs the user about the unit’s status including a moving blue arrow which changes to green when the manufacturing process is finished. In addition, the interface guides the user through routine maintenance procedures and thus facilitates the easy upkeep of CEREC Primemill.

More esthetic, faster and simply excellent

With CEREC Primemill, restorations, especially those made of zirconia, can be milled even faster thanks to new tools and improved technology. The time required to fabricate a zirconia crown has been reduced by more than half. It can be cut from around 10 to 12 minutes to as little as 5 minutes using our new Super Fast mode.

The results speak for themselves. Using newly developed, very fine tools (0.5 mm) in the Extra Fine milling mode, the unit achieves a high level of detail for occlusal fissures as well as interdental areas on bridges, enabling users to achieve predictable, first-class results.

Superior chairside experience

The entire CEREC system takes on a new dimension with CEREC Primemill. For those customers who now want to step into the chairside CAD/CAM world and want to use CAD/CAM technology in their practice, with all the new CEREC tools for a full system with great flexibility for reliable results. Users who are already successfully using CEREC in their practice will appreciate the system with the new level of speed, high level of quality, and convenience provided by CEREC Primemill.

It was important for us to create real added value with CEREC Primemill, both for the CEREC user and for those who have been passionate CEREC users for years,” explained Dr. Alexander Völcker, Group Vice President CAD/CAM & Orthodontics at Dentsply Sirona. “We have noticeably increased the process speed while delivering outstanding restoration results. The variety of applicable materials leaves nothing to be desired and operating the unit has never been easier. The complete system does not require any data imports or exports. All processes are coordinated with one another and validated for an excellent and seamless chairside experience."

Due to various certification and registration periods, not all products are immediately available in all countries.

For more information on Primemill or CEREC please reach out to your local Dentsply Sirona representative or visit our website www.dentsplysirona.com.

Fig. 1: The renewed CEREC system. CEREC Primemill proves to be a real gamechanger.
CEREC Primemill
Excellence made easy.

The new CEREC Primemill is uniquely equipped for superior chairside dentistry. Our fastest milling unit ever, it’s also the easiest to use and compatible with the widest range of materials. Above all, it empowers dentists to deliver consistently excellent treatment for multiple indications.

The CEREC Primemill seamlessly combines with the highly accurate CEREC Primescan and new CEREC Software 5 to redefine performance in daily practice. Join us at your local CEREC event and test it yourself.

The all-new CEREC. Now is the time.

Learn more at: dentsplysirona.com/cerecprimemill
The 100k foot VALO™ curing light drop test: behind the scenes

The True Story of One VALO Curing Light's Journey to Space

By Daniel Lewis, USA

There’s a deftly helplesslessness all golfers know, when you take two shots to get the ball on the green, then another two, three, or four shots to reach the bottoms of the cup. Those final few feet between tee box and pin routinely humble the most optimistic golfer.

Ultradent teed-off on a celestial par 5 when we launched a VALO Grand dental curing light into space in May of 2019. Our version of the putting green was a mountain covered in loose shale where the VALO Grand light landed. We eventually “unk the put” by finding the curing light... but we took several attempts to do it.

The Vision to Send a VALO Light to Space

The tenth anniversary for a product like the VALO curing light can’t be a simple wine and cheese party. The line has set the bar for curing lights for a decade—we had to set the bar with a celebration. “This is the kind of thing where I didn’t ask a lot of permission,” jokes Ultradent’s Mike Simmons, a cornerstone architect of the VALO light to space initiative.

Simmons brought the idea to the table, but he credits the inspiration to a friend. “He had two very sick daugh ters with a rare immune deficiency. One of their brothers donated his bone marrow to his sister...and they had a hero party for him, where they sent a bobblehead of him to space on a weather balloon and captured it with GoPros.”

With this concept in mind, Simmons began formulating a plan to mark the VALO curing light’s decade on the market with a true out-of-this-world event. His team eyed May 1, 2019 for liftoff—10 years to the day for the market with a true out-of-this-world anniversary. They had roughly 90 days of runway for a decade—we had to set the bar to battle frigid atmospheric temperatures that could derail video efforts.

Ultradent’s front lawn was converted to a launchpad and employees made up the peanut gallery. Drones came out to watch the liftoff, accompanied by their own festive balloons to release alongside the main payload.

Following a “10, 9, 8...” countdown necessary for all space travel, the balloons were released, with the weather balloon and its cargo quickly ascending beyond its party-favor brethren.

“We were on cloud nine as soon as we saw it go up into the sky,” says Brown. “Now we know how NASA feels: ‘a smokin’ Simmons.”

Up, Up and Away

As the VALO curing light climbed and slipped from view Simmons, Brown, and crew piled into a vehicle to trail the balloon. “We had the perfect day planned. We had this van, we had the video crew with us. We were going to follow the pings on our phones and laptops,” Simmons says.

“When we got in the minivan to start driving there, we were so excited, thrilled, anxious, just to get to Wyoming,” Brown adds.

The GPS pings were in line with the predicted flight path, and the team followed the digital footprints.

“It was following the trajectory of the prediction calculator exactly. We were like, ‘ok this might be too good to be true,’” says Simmons. “Then we lost it.”

The halt of pings didn’t alarm the team—they anticipated losing communication with the payload when it reached 40-50 thousand feet of elevation. They expected to pick up the pings again once the balloon popped and the cargo descended back toward Earth.

The crew pulled into a roadside diner and bunkered down, eating lunch to anxiously pass the time waiting for the next GPS ping.

“We had lunch with our laptops open, thinking ‘OK anytime now,’” Simmons recounts. ‘A couple hours later we’re just sitting there, and there’s nothing. We knew the total flight time would be somewhere between 2.5 and 3.5 hours. And we gave it probably 4.5 hours, maybe 5 hours. Just waiting, waiting, waiting. We ordered dessert, and still, nothing. We kind of grazed our mounds and went back to Ultradent.’

“There was a totally different feel in the van on the way back. Everybody was quiet, nobody was making jokes. People were making occasional jokes, trying to cheer each other up... but we were all just like ‘ohhh nooo,’” says Brown. “Just a real quiet ride back. I think we stopped to film a train. Oh that will make up for it, look at this train we saw.”

For the GPS pings to start again

Waiting for the GPS pings to start again

Moments prior to liftoff on Ultradent’s lawn

Successful launch

Ultradent’s Mike Simmons packs cargo for the (first) overnight trip into the Uinta mountains

The cargo consisted of a Styrofoam box, four GoPro cameras, the VALO Grand curing light, and the Dr. Fischer bobblehead—all carried into space by a standard weather balloon purchased on Amazon.

The heftiest complication came from the fuel needed to power the 100k foot journey. “We’re in a nation of ‘mathematically limited’ folks of the world, there are websites that do the heavy lifting on these calculations and limit the potential for human error.”

“We felt like we had a pretty good idea where it would come down,” says Simmons. “All of the predictions we ran... [told us] that we were going to pick it up at Flaming Gorge Reservoir, up over the Uinta (mountain range) and down around Flaming Gorge.”

When May rolled around, weather was a large concern and the unpredictable spring in Utah loomed over liftoff. Atmospheric conditions were favorable for the liftoff, despite rain on the ground the morning of the launch.

Dr. Fischer emblazoned his signature across the VALO Grand dental curing light and the team attached it to the outside of the cargo box opposite the bobblehead, both in frame of their own GoPro Handwarmers were added to the payload to battle frigid at-
30 YEARS OF OPALESCENCE

We're celebrating 30 years of brightening smiles!

Save on your favorite Opalescence whitening products today at ultradent.com/opalescence
By Beverly Hills Formula

For Irish oral care brand, Beverly Hills Formula 2019 can be seen as their most successful year yet and the past twelve months will certainly prove difficult to beat. The brand saw their sales grow phenomenally, particularly in Middle Eastern Markets which boasts an extremely loyal following. The brand credit their 2019 success to a number of factors – their commitment to providing top-class at-home teeth whitening with formulations that are yet to be replicated, and their drive to bring first to market products that wow both consumers and dentists alike. The brand has results that really speak for themselves, and we stay well ahead of competitors and are certain that they will see even more success this coming year.

If 2019 was anything to go by, this year is set to be monstrous for the brand. Not only are they entering the new year with a string of spectacular accolades under their belt, they will also be showcasing some of their most innovative products yet, one of which is set to be released imminently.

This year, the ever-popular oral care brand will be exhibiting at the Aedic Dental Exhibition in Dubai, which takes place from February 04-06. The team are really excited to be heading back to see what is set to be one of the most prestigious dental exhibitions worldwide. The exhibition offers Beverly Hills Formula the opportunity to mix with other dentists and suppliers who attend from countries all over the world, whilst also allowing the brand to showcase their latest products and innovations. Their stand, adorned in their trademark bold and daring colours, is always a must-visit for many attending over the weekend.

The brand will be bringing along their most popular products, including the New Professional White Range and Perfect White Range. The Professional White Range, which was launched in 2019, consists of Advanced Pearl Freshening toothpaste, Advanced Silver Whitening toothpaste and Advanced Sensitve Whitening toothpaste.

As well as this, the brand will also be showcasing the ever popular and iconic Perfect White Range. The range consists of the first to market activated charcoal toothpaste, Perfect White Black, as well as Perfect White Gold, Perfect White Black Sensitve and Perfect White Optic Blue. Two high performing gold and black mouthwashes also form part of the range which has soared in popularity and doesn’t look to be slowing down any time soon.

This year, Beverly Hills Formula will ensure that all eyes are on them as they are set to launch their best ever whitening toothpaste. Set to join the Perfect White Family in 2020 is Perfect White Extreme Whitening. Their latest product offers immediate optical whitening results and perfect stain removal whilst still being kind to teeth. The ground-breaking, anti-etch formula provides a whitening effect that is visible after just one use whilst hydrated silica and advanced pyrophosphates ensure excellent stain removal whilst working to lighten and brighten teeth.

The product offers a first to market formulation which also works off light reflection to further enhance whitening results. Beverly Hills Formula are excited to embark on another ground breaking and highly successful year. We look forward to kicking off this off at the AEEDC Dental Exhibition in Dubai and that’s why we are here today to check out them at stand SR08 – there is truly something for everyone.

DTI looks back on a successful 2019

DTI had its 15th Annual Publishers’ Meeting from 20-21 March in Cologne. [Image: Tom Corbally, DTI]

By Dental Tribune International

LEIPZIG, Germany: There is seldom a quieter news day in the dental industry and it has been a pleasure for the DTI team to bring you, throughout 2019, the stories that mattered as well as the quiet news day in the dental industry. As we stand on the threshold of a new year, we can be certain that they will see even more success this coming year.

LEIPZIG, Germany: Dental Tribune International (DTI) held its 15th Annual Publishers’ Meeting from 20-21 March in Cologne. [Image: Tom Corbally, DTI]

Something to Smyle about

A completely new facet of DTI’s media portfolio was also revealed at the publishers’ meeting: the glossy lifestyle-meets-prevention title, Smyle magazine. Published in collaboration with the Berlin-based Luna Media Group, Smyle combines lifestyle, beauty and wellness with a patient-oriented focus on dentistry and oral health.

Two issues of Smyle have already landed in dental offices throughout Germany, Austria and Switzerland. The next issue will hit the shelves in early 2020 and plans are being finalised for an English-language international edition.

E-learning remains a talking point

The online e-learning platform DT Dental Academy Campus, the web-based intranet clients with bespoke e-learning projects and a number of Campuses—customised e-learning platforms—were developed. A good example of developments in this segment was DTI’s work with the Straumann Group: In October, the company expanded its global educational online platform, the Straumann Campus. The website now offers access to 56 webinars per year, in five languages, to its international users. The webinars are free of charge and the overall aim of the platform is to build a true global e-learning community.

Another obvious highlight from DTI’s work in e-learning was the world’s first 24-hour webinar in dentistry. Deriving from the DDS Swiss Dental Academy Campus, the webinar included 31 speakers from 16 countries and attracted over 18,000 participants.

In the mix at dental trade fairs

As the case every two years, IDS dominated conversations among dental professionals in 2019—in all dental markets. Official figures released after the event confirmed that 63% of IDS exhibitors and 62% of visitors came from overseas, and 166 foreign exhibitors were represented in the halls.

Over the course of the show, the Omenius Media and DTI media teams reported on a number of social occasions attended by key opinion leaders, including one that honoured a man who has dedicated his life to advancing dentistry. The Channelery Evening was attended by more than 300 industry professionals and the P-I Brånemark Award for Lifetime Achievement in Dentistry was presented for the fifth time. This year, it was awarded to Prof Jörg Strub of the University of Freiburg in Germany. Dr Kenneth Malament accepted the accolade on behalf of the esteemed professor and he reminded the gathering of Strub’s friends and colleagues that “[He] is an individual who has put his whole life into dentistry—there is simply no one like him.” Malament continued, “He is the best of his generation.”

One of the most exciting developments of 2019 came in the third quarter when DTI expanded into the dental marketplace with its new online sales platform, DDS.WORLD.

One of the things we are particularly excited about in 2020 is our expansion into the Scandinavian dental market. From January, the new licence partner DentNet will provide dental professionals in Denmark and Norway with localised editions of Dental Tribune and much more. Various digital and print products will be offered, such as webinars on DTI Study Club in English, Danish and Norwegian—will help to tailor CE opportunities to dental professionals in both countries and the regional Dental Tribune websites in Denmark and Norway have already been launched.

There are a number of projects yet to be revealed, so stay tuned for an even greater focus on e-learning and other educational opportunities.

ROOTS Summit 2020 is taking place in Prague from 21-24 May and the line-up of speakers, workshops, and opportunities to engage with equipment and protocols looks very promising. The event will bring endodontists and general dentists together and registrations are open—see the event’s website for information on the programme and registrations.

DTI will be on-site at all of the major dental events next year, and our today show dailies will keep you informed at leading events, including AEEDC Dubai 2020 (taking place from 4-6 February at the Dubai International Convention and Exhibition Centre), AEEDC Dental Exhibition in Dubai, and AEEDC 2020 in Singapore (taking place from 24-26 April at Suntec Singapore Convention and Exhibition Centre), and the FEWD World Dental Congress 2020 in Shanghai (taking place from 1-4 September at the National Exhibition and Convention Centre).

As we stand on the threshold of a new decade, it is exciting to imagine what lies ahead in the world of dental practice, international dental markets, dental technologies, and the future of digital dentistry. DTI would like to take this opportunity to thank all of our readers and industry partners for their continued support. We wish you and your families a happy and safe holiday season, and a good ‘20 to the dental world, as the saying goes in Germany.
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- Formulated to achieve great stain removal results without damaging the enamel
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Toothpaste Stain Removal Leading Dental School (UK)

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<th>Product</th>
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#beverlyhillsformula @BHF_Whitening Beverly Hills Formula
Midline diastema closure using the front wing technique

By Dr. Walter Devoto, Italy

About the Case
A 35-year-old female patient expressed a desire to optimize existing composite restorations on her maxillary central incisors, which had been placed 15 years previously to close her diastema. Then, a silicone key had been used for guidance. No tooth preparation was carried out, as the composite was bonded to the tooth structure.

Challenge
The surface of the restorations showed slight discolorations which were removable by polishing. The shape of the teeth was acceptable, but not perfect. A decision was made to retreat her in a non-prep, single-shade approach. The main goal was to create a more natural shape. The front wing technique invented by the StyleItaliano team was used. This approach involved freehand modeling of the vestibular part of the tooth, which was easily accessible. Afterward, material was added to the palatal side, and anatomical matrices were employed for shape optimization.

Outcome
The technique worked beautifully to close the diastema. Despite freehand modeling, it was much easier and more precise than using a palatal silicone index. In addition to the natural shapes that were achieved, 3M Filtek Universal Restorative blended well with the surrounding dentition, making the restorative work indistinguishable.

About the author
Dr. Walter Devoto graduated with honors in dentistry and dental prosthesis in 1991 at the University of Genoa, Italy. He is particularly interested in the fields of conservative dentistry and esthetic dentistry and runs his own private practices in Sestri Levante and Portofino. In addition, he is collaborating with diverse prestigious dental offices throughout Europe, which specialize in esthetic dentistry. He has worked as a teacher and demonstrator at the University of Genoa and as a lecturer at the universities of Siena and Madrid. Now, he is a lecturer at the International University of Catalonia, Barcelona, Spain, and visiting professor at the Aix-Marseille University in Marseille, France.
What if a composite could make your busy days easier?
New SmartLite Pro – more than just a curing light

The user may easily change from the curing tip to the transillumination tip. Within a few moments he holds a diagnostic aid for the visualization of interproximal caries and cracked teeth in his hand. And in the area of root canal treatment this tip will provide for endo access illumination.

But the best news is: The platform technology of the SmartLite Pro offers a forward-thinking system, which gives way to numerous future upgrades and will open up new worlds of indications and applications. The SmartLite Pro is one of the most versatile dental instruments because it features leading quality of care, and yet so much more than just a curing light.

DESIGNED TO PERFORM
Once you have taken the new curing light into your hands you will immediately feel a lightweight and well-balanced pen-style design which is beautiful in each of its details. The SmartLite Pro’s housing is fabricated of medical-grade stainless steel and anodized aluminum providing for robust durability and elegant simplicity.

The user will love the easy and intuitive operation with only one single button. Feedback is facilitated by precise audible and tactile signals. Its clinical performance in everyday practice is unbelievable.

Top of the class in curing
SmartLite Pro features newly engineered state-of-the-art optics to provide a homogeneous beam profile for a uniform curing performance. Unlike many conventional lights the new device has an even and focused light distribution over the whole curing area. Moreover, the SmartLite Pro features an active light output diameter of 10 millimeters. This ensures that the beam completely encompasses even fillings with a large horizontal extension. The leading clinical performance is accompanied by a comfortable handling. The 360 degree rotatable tips and the low-profile head with four high-performance LEDs guarantee easy clinical access even in hard-to-reach areas of the mouth. The dentist experiences excellent intraoral control and will easily maintain a steady hand at the proper angle.

Constant availability thanks to innovative battery management
The Futurist multifunctional charging base features a built-in radio meter and room for extra tips. The intuitive battery management system comes with two quick-connect batteries for constant availability. Cutting-edge lithium-ion phosphate cell technology ensures that the dentist may enjoy a full day of clinical operation with only one charge.

Thinking ahead
The modular versatility expands the options beyond the scope of a pure curing light and includes various other indications. For example, the user may easily change from the curing tip to the transillumination tip. Within a few moments he holds a diagnostic aid for the visualization of interproximal caries and cracked teeth in his hand. And in the area of root canal treatment this tip will provide for endo access illumination.

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Fig. 1: Ergonomic, pure and elegant: the new curing light SmartLite Pro by Dentsply Sirona.

Dental study of ancient chewing gum informs about oral microbiomes of the past

The pitch was found during archaeological excavations carried out by the Museum Lolland-Falster at Syltholm in southern Denmark, and subsequent analysis was conducted by researchers at the University of Copenhagen. Radiocarbon dating of the pitch helped to place it as a specimen from the early Neolithic period in Denmark, while DNA sequencing revealed that it was chewed by a female who was more closely genetically related to the hunter-gatherers of mainland Europe than to those who populated central Scandinavia at the time. It was found that she probably possessed dark skin, dark hair and blue eyes.

Traces of hazelroot and duck DNA were also identified in the pitch, suggesting that these may have formed part of the individual’s diet. The researchers also successfully identified DNA fragments from several bacterial and viral taxa, including the Epstein-Barr virus, which can cause glandular fever.

"[Syltholm] is the biggest Stone Age site in Denmark and the archaeological finds suggest that the people who occupied the site were heavily exploiting wild resources well into the Neolithic, which is the period when farming and domesticated animals were first introduced into southern Scandinavia," said Dr. Theis Jensen, a postdoctoral student at the University of Copenhagen’s Copen Institute and co-author of the study.

"We managed to extract many different bacterial species that are characteristic of an oral microbiome," added Dr. Schneider, associate professor at the Globe Institute.

"Our ancestors lived in a different environment and had a different lifestyle and diet, and it is therefore interesting to find out how this is reflected in their microbiome," he continued.

Though still a relatively new form of analysis, DNA sequencing from birch pitch is growing in popularity, in part owing to its potential to be a good proxy for human bones in archaeological studies. As reported by Dental Tribune International last year, Scandinavian researchers have previously used pitch to sequence DNA from the first humans who settled in the region some 10,000 years ago.

Though a considerable amount of information can be uncovered through the DNA sequencing of pitch, several questions still remain—including the question of what the purpose of chewing it was. Some researchers have suggested that it may have been a method for making the pitch more pliable for further uses, or that medicinal and hunger-suppressing uses have also been put forward for consideration.

The study, titled "A 5700-year-old human genome and oral microbiome from chewed birch pitch," was published on 17 December 2019 in Nature Communications.
MASTERING "BLACK HOLES"
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end. coltene.com
Perform at your best in diagnostic and restorative
Reduce glare and create beautiful restorations

By Hu-Friedy

Having a clear and precise diagnosis is needed in order to correctly plan the necessary treatment and sight is the first sense that every clinician uses, therefore having the best possible vision is crucial.

With this in mind, Hu-Friedy, the global leader in dental instrument manufacturing and infection prevention solutions, leveraged the success of HD Mirrors, Blackline and XTS product lines, to create HD Black Line Mirrors. This innovation was engineered to optimize clinical outcomes by delivering superior visibility throughout any dental procedure.

Designed for enhanced performance, Hu-Friedy’s HD Black Line Mirrors have a Diamond Like Carbon (DLC) coating, which reduces glare up to 80%** compared to a standard metal mirror head and handles. This helps to reduce strain and fatigue, creating a more ergonomic mirror, as the user does not need to adapt their viewing position due to unwanted shine produced by traditional metal mirror handles or frames.

Additionally, the black matte finish provides enhanced contrast and visual acuity within the oral cavity. This creates a distinct contrast between the instrument, the tooth and/or the surrounding tissue allowing for easy identification intraorally.

So, the DLC coating in combination with the superior brilliance and color of Hu-Friedy’s proprietary HD Mirror glass facilitates quicker adaptation intraorally.

Unfortunately, our usual retractor, the dental goniometric mirror, as the user does not need to reduce glare, create a more ergonomic mirror, as the user does not need to adapt their viewing position due to unwanted shine produced by traditional metal mirror handles or frames.

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Tami Wanless, RDH, MED, from USA, states: “I wear loupes with a LED light, a monocle like carbon mirror, as the user does not need to adapt their viewing position due to unwanted shine produced by traditional metal mirror handles or frames. Additionally, the black matte finish provides enhanced contrast and visual acuity within the oral cavity. This creates a distinct contrast between the instrument, the tooth and/or the surrounding tissue allowing for easy identification intraorally.

So, the DLC coating in combination with the superior brilliance and color of Hu-Friedy’s proprietary HD Mirror glass facilitates quicker adaptation intraorally.

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Dr. Carlo Poggio, from Italy, is also using HD Black Line Mirrors in his dental practice: "A very simple 'digital dentistry' issue: when dealing with intraoral scans in the posterior ar-
eas, it is often necessary to retract the tongue. Unfortunately, our usual retractors, the dental goniometric mirror, has a metal reflective back surface, which is not ideal for light reflection. Scanning may be interrupted or distorted. By using Hu-Friedy’s new HD Black Line Mirror I definitely solved the light reflection issues," he quoted (Fig. 2).

Beautiful smile is what patients demand to clinicians every day and therefore highly aesthetic restorations are the standard request in each practice.

“In looking to enhance our product offering for aesthetic dentistry, we identified the need for a resilient composite instrument which would allow clinicians to use brush-like strokes as they create superfine details during biomimetic restorative dentistry,” said Jennifer Nemeth, Senior Product Manager at Hu-Friedy. “By introducing NiTi into the design, we were able to create an extraordinarily flex-
able, wafer-thin composite instrument unlike anything we currently offer. We are beyond excited for clinicians to experience the flex of Akro-Flex™.

Akro-Flex™ is an innovative, incredibly flexible spatala for restorative dentistry. The unique composite instrument features a hyper-
thin working ends made from Nickel Titan-
ium (NiTi) – an alloy known for its super elastic-
ity. The thin, dextible instrument fits easily into narrow interproximal spaces allowing for better visibility as compared to traditional composit-
e instruments. (Fig. 3)

The resilient working ends rebound back to its original shape after use and are excellent for creating fine anatomical detail with delicate, artistic strokes during aesthetic restorations (Fig. 4).

In addition to its slender profile and innovative NiTi working ends, the handle of the Akro Flex™ composite instrument was designed with the clinician in mind. The sleek, smooth finish prevents buildup of excess composite material while the lightweight, ergonomic design allows for an enhanced grip with less hand fatigue.

To learn more about HD Black Line Mirrors and Akro-Flex™ visit www.hu-friedy.eu or contact our local distributors.

Radical oral intervention not necessary before stem cell transplants, study says

By Dental Tribune International

BASEL, Switzerland/Helsinki, Finland: Hematopoietic stem cell transplantation is used to treat cancer and severe blood and autoimmune diseases. Owing to slow immune system recovery after the transplantation, patients have a heightened risk of infection. However, a recent study has reported that the presence of acute or chronic oral foci of infection before the transplantation does not affect the patient’s survival rate within six months of the procedure.

The study was conducted by the University of Helsinki, the Helsinki University Hospital, the University of Basel, and the University Hospital Basel. It involved patients who had been treated at the University Hospital Basel, of whom 341 had received an autologous stem cell transplantation and 135, an autologous stem cell transplantation.

The procedures were carried out between 2008 and 2016. Before the transplantation, all patients underwent a clinical and radiographic dental examination to identify any potential foci of infection and the number of missing and filled teeth.

A total of 51 stem cell transplant patients died within six months of the procedure. However, the data showed that the foci of infection, the number of missing or filled teeth, and the presence of oral infections at the time of transplantation were not associated with the patients’ lower survival rates.

“Contrary to our assumptions, untreated oral infections had no connection with post-stem cell transplantation survival during the six-month follow-up period. Another surprise was that they had no link with any serious infectious complications during the follow-up period,” said lead author Prof. Juha-Matti Waltimo, assistant lecturer in the Department of Biomedical Engineering at the University of Basel.

"However, the patient’s health permitting, and if the wound has enough time to heal before chemotherapy, the radical treatment of such infections is justified. Other than that, conservative, non-radical treatment that eliminates the infection carried out by a dentist familiar with the case appears to be the lowest-risk option in terms of infections and bleeding complications,” Waltimo noted.

According to Waltimo, the study findings can- not be applied to any other patient groups, especially not to patients suffering from cancer in the region of the head and neck, or those with a heart valve or a prosthetic joint.

The study, “Associations of oral foci of infections with infectious complications and survival after hematopoietic stem cell transplantation,” was published on 18 December 2019 in PLOS ONE.
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* 50% brighter than other front surface mirror glass.

SUPERIOR BRILLIANCE & COLOR
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* 100% reflection factor for exceptional image clarity.
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UNPARALLELED FLEXIBILITY
By incorporating Nickel-Titanium, a material known for its super elasticity, Akro-Flex acts as a solid brush. The resilient working ends are excellent when creating fine anatomical detail with delicate, artistic strokes.

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HYPER-THIN PROFILE
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Frame the QR code with your smartphone and watch directly on YouTube. Video courtesy of Dr. Stavros Pelkanos.

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2019 GNYDM highlights latest dental products and technologies

By Dental Tribune International

NEW YORK, U.S.: Held from Nov. 29 to Dec. 4 at the Jacob K. Javits Convention Center, the 2019 Greater New York Dental Meeting (GNYDM) demonstrated once again why it is the country’s largest and most anticipated dental congress by offering an inviting mix of educational sessions, hands-on workshops, product launches and more.

The 95th iteration of the free-to-attend annual event attracted more than 52,000 attendees from all parts of the dental industry. A large number of these visitors were international. The German Pavilion featured a variety of companies displaying their wares under a “made in Germany” banner, while another area of the convention center showcased a broad range of Korean companies such as META BIOMED and DIGIRAY.

More than 300 educational courses and events were conducted over the course of the 2019 GNYDM, covering topics as diverse as adhesive dentistry, guided implant surgery and early detection of oral cancer. A number of these courses were run entirely in Spanish, an inclusive choice that considered the approximately 41 million native Spanish speakers who currently reside in the United States.

Live dentistry sessions were held each day in the convention center and proved to be a hit with audiences. Among these sessions were “Executing Accurate Aesthetic Dentistry,” in which Dr. Michael Apa discussed techniques for preparation, temporization and the integration of digital technology, and “Modern Materials in a Digital Era,” a session presented by Dr. Justin Chi and sponsored by Glidewell Dental.

The Utah-based startup company Weave was present at the 2019 GNYDM to publicly debut Weave Payments, a full-scale payment processing platform for small and medium-sized businesses, and 3DISC launched the latest version of the Heron IOS, its solution for intraoral scanning.

The 2020 GNYDM will be held once again at the Jacob K. Javits Convention Center from Nov. 27 to Dec. 4, 2020.
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- Start by rinsing with Biocitri® Prostathane

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03 MOTIVATE
RAISE AWARENESS AND TEACH
- Emphasize prevention
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- EMS recommendation from Philips for whitening, interdental brushes and Airfloss Ultra

04 AIRFLOW®
REMOVE BIOFILM, STAINS AND EARLY CALCULUS
- Use AIRFLOW® for natural teeth, restorations and implants
- Remove biofilm supra- and subgingivally up to 5 mm
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- Remove remaining stains on enamel using AIRFLOW® Classic Comfort Powder

05 PERIOFLOW®
REMOVE BIOFILM IN TOOTH POCKETS
- Use AIRFLOW® Plus 1 mm Powder on natural teeth to deep pockets and root furcations and on implants
- Use regular PerioFlow® Nozzle

06 PIEZON® PS
REMOVE REMAINING CALCULUS
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- Instrument supra- and subgingivally up to 10 mm
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- Use EMS PIEZON® PS instrument around implants up to 3 mm
- subgingivally and at restorations

07 CHECK
MAKE YOUR PATIENT SMILE
- Do a final check for remaining biofilm
- Ensure calculus is fully removed
- Accurately diagnose caries
- Protect with fluoride

08 RECALL
HEALTHY PATIENT = HAPPY PATIENT
- Schedule recall, frequency according to risk assessment
- Ask your patients if he or she liked the treatment

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Waiting is the Hardest Part

The next ping came in the middle of the night, nearly 12 hours after the team returned to Ultradent HQ. “About 8:45 on the night before, I logged on and saw we got ping-starting about 2 in the morning. But they were very short, and we wondered if it was right. The prediction calculator said it was supposed to be by Flaming Gorge and this was in the middle of the Uintas,” Simmons explains.

The prognosis for recovery was far from ideal—the payload landed deep in the mountains, not far from the second highest peak in Utah. “The forest service told us it’s not accessible by car. It’s 10–12 miles in from the trailhead and they were sitting around 90 inches of snow at the time,” says Simmons. “We were like, OK, we need snowmobiles, snowshoes, cross country skis...we’re going to get this thing.”

“We knew we were going to get it, we were going into it. We were making jokes ‘no VALO light left behind!’ but that’s when we realized there might be a real safety risk of getting stuck in the mountains. And we started screaming, ‘get stuck again driving down the mountain and had to get pulled out...again.’”

Ultradent videographer David Landeen succeeded where Brown’s recon efforts fell short. He was able to get fairly close to the landing zone and returned with a realistic perspective on what a retrieval mission would entail. ’He came back and said, ‘it’s at least a two-day trip.’” Simmons says.

Into the Wild

Back at Ultradent, the team regrouped and picked August 8, 2019 to set out and recover the payload. Horrised were enlisted to help the would-be mountaineers trek through the wilderness. The venture into the backcountry began exactly 99 days after the launch.

It was a rainy morning and they arrived at the trailhead to find a waterlogged path. After a few soggy hours of riding, the team made it to their picturesque day-one destination. “We spent the night at a place called Olive Springs,” says Simmons. “We put everything in slow motion. They smelled like butt.”

At sunrise the team awoke and launched a drone in hopes of spotting the payload box from above, but alas, no visual—for that, more hiking was in order. “I thought that at that elevation (roughly 6,500 feet) it would be all barren with just rocks,” says Brown. “But it was the sound of Music set up there. Beautiful.”

The team searched and searched until a whistle pierced the stillness of the mountain air. “Mike got visual of the payload box and blew the whistle. And we started screaming, we ran over and it’s in the middle of a hill of loose shale,” Brown says.

The team scrambled toward the payload, sliding around on the shale as they tried to stay upright, relieved and rejuvenated from finding the box.

The jubilation was short lived, as they soon realized the VALO Grand curing light was no longer attached to the payload. nor was it anywhere in the vicinity. “We knew we had to head out of this area by noon, to get off the trail by dark, so we can get home without our families calling search and rescue,” says Simmons. “Noon comes, and we didn’t find the VALO light...we got completely dogged.”

After a few hours of searching, the team resigned to leaving without the curing light, but their spirits were nonetheless boosted from finding the payload. “We were all beat at the end of that day, but when we started charging the GoPros in the car and started seeing the footage, it was really exciting,” says Brown.

Video evidence in tow, the team returned—without the VALO light for the second time—to Ultradent HQ.

CSI – Crash Site Investigation

The video investigation got underway immediately, with all five camera angles providing clues to the potential whereabouts of the missing VALO Grand curing light. The footage became Ultradent’s version of the Zapruder film.

“We started to dig into the videos, seeing the footage, and started deriving that where the VALO light went down was not the final resting place of the payload box,” says Simmons. “We put everything in slow motion, all angles from the cameras, sifting around. We saw the VALO light detach right when the payload touched down.”

Frame by frame, the footage was examined and the team developed theories for where the VALO curing light came to rest. They didn’t know exactly where it was, but they knew they needed to go back to the landing zone to find it. “There was basically a 75-yard section of steep embankment, a 200-foot cliff and 300-400 yards of very steep shale that we needed to search,” Simmons says.

“No VALO light left behind,” right?

Return to the Wild

Powedered by dedication and persis-tence (and a desire to spend addition-al days in the woods instead of the of-fice) the search party—now including Ultradent’s Kate Loyola—returned to the trailhead once more and began their journey toward Dead Horse Lake and the landing zone for the payload. They reached the campsite and headed down to prepare for an other day of scouring the shale-covered slopes. Brown even managed to pack a sleeping bag this time.

“I had a metal detector, and we were really concerned that we were going to have to scan all this shale with it,” Brown says.

Search number two got underway at sunrise, with the team determined to track down the missing VALO curing light more than 17 weeks after it was launched.
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“When I saw photos of it, I didn’t realize how large it is,” says Loyola of the landing zone. “You see these boulders on the top of the mountain and think they aren’t so big then you get up to them and they’re the size of a school bus.”

The hunt was physically taxing but it soon provided hope—they found batteries that had been inside the payload box, but still no VALO curing light. “We also found a bell from a goat that’s probably long since been dead. A relic, it’ll be in the Smithsonian later,” Brown recalls, smiling.

After several hours of searching with only batteries and a goat’s bell to show for their efforts, the team threw in the towel for the day without securing the VALO Grand curing light. They returned to camp to spend another night at Dead Horse Lake with one final day of searching ahead of them.

Spotting the VALO Curing Light

The next morning it was déjà vu at 12k feet as the crew hiked to the landing zone for the third time. When the batteries were found, the team had been searching the lower “bowl” section of the landing zone. Now they had to canvas the upper rim and slope. “When you’re down in the lower part of the valley and you’re looking at the upper shelf, you don’t realize how steep it is,” Simmons says, eyes wide.

“The enormity of it was so weird. When you’d look at it, you’d get this vertigo type feeling like from a Hitchcock movie,” says Brown.

“It was so steep, we were thinking, can you even walk on that? Should we have brought rope to harness in?”, Simmons sighs. “We went to the very end of the cliff face and started to zig, zag back and forth and it was, horrible.”

Fortunately for the crew, they soon caught their biggest break yet. “Probably 15 minutes after we hiked up, I look down and 20–25 feet away from me, I see this metallic signature. I don’t see the VALO light, I see Dan Fischer’s signature,” Simmons says with a visible glow. He enthusiastically blew his whistle and the crew scampered over to his location.

Brown grabbed the VALO Grand curing light and as soon as he put batteries in, it gave off a BEEP, signaling it still worked. That seemingly innocuous BEEP cascaded unfiltered elation over the search crew as pride in the curing light’s durability flooded through them.

“I was yelling so loud, somebody else came over from a different mountain range thinking I was hurt. Full throated bellows,” Brown recounts, visibly relieved by the successful mission.

With the slog now finished, a victorious search team retreated from the landing zone for the final time, to proudly return the fully functional VALO Grand curing light to Ultradent HQ 126 days after it left.

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Smile rejuvenation with Biosmart restoratives

Dr. Hussein Naama
Alghadeer Center, Iraq

Introduction

Dentists today are spoilt for choice with a variety of direct and indirect treatment options for aesthetic restorations in the anterior zone. We are often challenged to create restorations that mimic natural teeth or enhance smiles to meet patient desires and expectations. I have recently adopted the Minimal Invasive Cosmetic Dentistry (MICD) concept introduced by Dr. Sashid Koirala which is based on a holistic patient-centric treatment approach that integrates minimally invasive treatment techniques with aesthetic dentistry to enhance the smile while taking into consideration the psychology, health, function and aesthetics of the patient.

Diastema or space between the teeth is a common dental condition that can create cosmetic issues in adults and often corrected with orthodontic treatment or indirect veneers. The clinical case below highlights a different treatment approach where direct aesthetic restorations were selected after assessing the following 5 factors which we take into consideration when treatment planning in my practice: 1. Treatment longevity, 2. Cost estimation, 3. Vitality of the tooth, 4. Biological cost, 5. Expection of the patient.

To achieve predictable aesthetic outcomes when opting for diastema closure and smile rejuvenation with direct restorations, it is very important to understand the optical characteristics and properties of the composite material being used. For this clinical case I have used a BEAUTIFIL II LS reactive, low shrinkage composite resin with like-life aesthetics and high polishability to mimic nature with long-term predictability (Fig. 1a & b).

Patient Case

A 28 years old female patient visited our clinic requesting for a beautiful smile with less tooth destruction at a reasonable cost as the gap between her front teeth had affected her confidence to smile for a long time (Fig. 2). Other dentists had suggested orthodontic treatment or indirect veneers. After careful examination the following 5 factors which we take into consideration when treatment planning in my practice: 1. Treatment longevity, 2. Cost estimation, 3. Vitality of the tooth, 4. Biological cost, 5. Expectation of the patient were considered.

Materials Used

After careful examination the following materials and composite shades were selected:

- Tooth preparation
  - Fine Diamond points (Red band on the shank) and Super Snap Violet Disk
  - Etching and Bonding - 37% Phosphoric acid and FL-Bond II
- Composite materials
  - Palatal shell - BEAUTIFIL II Enamel shade T
  - First Dentin layer - BEAUTIFIL II LS opaque shade A2O
  - Second Dentin layer - BEAUTIFIL II LS shade A2
  - Enamel Layer - BEAUTIFIL II Enamel shade HVT (High Value Translucent)
  - Finishing & Polishing - Fine Diamond Points, Super Snap X-Treme Kit
  - Super Polishing for high gloss - DirectDia polishing paste with Buff disk

Restorative Approach

Direct Mock-up and Shade Selection

Composite mock-up can be used as an aid in both diagnostic and aesthetic evaluation. In this instance, a prepless direct mock-up technique was selected with the aim of motivating the patient, evaluation of patient expectations by directly checking the smile design and to create the silicone index for fabrication of the palatal shell in the final restorations (Fig. 3). During the direct mock-up, composite material was added to the distal side of the left lateral incisor tooth to enhance the overall appearance while preserving tooth structure as per the MICD approach (Fig. 4).

There are many different methods used for shade selection to achieve an accurate shade match with the natural tooth. In my practice, we prefer to use the direct technique for shade selection, where the enamel and dentin shades of composite materials are placed directly on the tooth surface and compared with the shade of the natural tooth. Shade selection procedure is completed with digital photography taking into consideration the 3 dimensions of color with ‘Hue, Value and Chroma’ (Fig. 6). A composite recipe is identified for build-up of each restoration.

Clinical Tip: It is important to check occlusion and identify the high points using articulating paper to ensure that an accurate silicone index can be created for the palatal shell (Fig. 5).

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Composite Build-up

After adhesive etching of the restorative enamel surface with Phosphoric acid (Fig.8), FL-Bond II, a 6th generation 2-step adhesive system was selected. First the Primer was applied, left for 10 seconds and air dried; followed by the application of bonding agent which was light cured for 10 seconds. (Fig. 9). The palatal shell was created with the silicone index using Beautifil II Enamel shade T. Beautifil II LS opaque shade A2O was placed on the incisal edge to achieve a natural halo effect for enhanced aesthetics. (Fig. 10)

Clinical Tip: Palatal shells technique helps to prevent over build-up of composite on the palatal surface resulting in efficient finishing and polishing of the final restoration.

Finishing and Polishing Protocol

The inclusion of Beautifil II enamel high value translucent shade HVT. (Fig 11). For the incisal surface build-up, a thin layer of Beautifil II enamel shade A2 was used followed by Beautifil II enamel shade HVT. (Fig. 12). The restored central incisors after composite build-up demonstrated that life like aesthetics had been achieved successfully. (Fig. 13).

Diastema closure between central incisors was completed using the naturanometric layering technique with incremental build up and 10 second light cure. The dentin layer was created using Beautifil II A2 followed by Beautifil II enamel high value translucent shade HVT. (Fig 11). For the incisal surface build-up, the layer of Beautifil II enamel shade A2 was used followed by Beautifil II enamel shade HVT. (Fig. 12). The restored central incisors after composite build-up demonstrated that life like aesthetics had been achieved successfully. (Fig. 13).

Clinical Tip: Spend time to achieve the accurate shade match and tooth anatomy during the composite build up phase to save chair time.

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By mectron s.p.a.

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Conclusion

The above clinical case illustrates that optimal life-like restorations can be achieved using fi- oint composite material with predictable aesthetics and function. By adopting the Mini- mally Invasive Cosmetic Dentistry (MICD) con- cept and treatment protocols, we have been able to provide patients with direct restorative treatment options that exceed their expecta- tions while preserving natural tooth structure. The inclusion of Beautifil II LS and Beautifil II Enamel range of composites with a predictable finishing and polishing protocol has helped to minimize amalgamation and meet patient’s aesthetic demands more efficiently in my daily clinical practice. (Fig 20,21).
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Oral-B iO unveiled at consumer electronics show, marking the brand’s most innovative power toothbrush to date

A CES Innovation Award 2020 honoree, the new Oral-B iO reimagines brushing from the inside out, delivering superior design, performance and experience for a professional clean feeling every day.

By Oral-B

Oral-B, the industry leader in oral care innovation, today unveiled the most revolutionary technology in its history with the Oral-B iO. Introduced at a press conference hosted by parent company Procter & Gamble during the Consumer Electronics Show (CES) in Las Vegas, the Oral-B iO signals the latest addition to the brand’s impressive line of power toothbrushes. Further validating the product’s exemplary design and engineering, the Oral-B iO was given the distinction of being one of this year’s CES Innovation Award Honorees, an annual accolade that recognizes outstanding new consumer technology products.

Oral-B iO is a new power toothbrush series that has been reimagined and redesigned from the inside out, combining best-ever clinical performance with a superior user experience, making it one of the industry’s most advanced brushing products. Oral-B iO was designed as a result of insights collected from more than six years of product research and development and over 250 patents from around the world. Oral-B iO uniquely features a frictionless magnetic drive, which distributes energy more efficiently to the tips of the bristles, resulting in a smooth, quiet, sensational cleaning experience. The new magnetic drive delivers cleaning energy to the redesigned iO brush head, which has been engineered to combine oscillating and rotating cleaning motions with micro-vibrations for a professional clean feel.

“Nothing like the Oral-B iO. It introduces a new era in brushing and is a monumental leap in innovative oral care technology,” said Steve Bishop, P&G Health Care CEO. “The result of years of expert development, Oral-B iO strikes the right balance between effectiveness and experience and reimagines how a brush performs, cleans and feels. It is a brush that people will look forward to using and will deliver superior oral health.”

As a result of input from more than 1,800 consumers, the Oral-B iO includes five key pillars of design features and experience capabilities:

- Linear Magnetic Drive: created from the need to deliver a more effective and enjoyable brushing routine. Producing controlled, harmonious movements, the quiet and frictionless linear drive system efficiently transfers more energy directly to the bristle tips.
- Superior Cleaning Action and Re-designed Brush Head: Oral-B iO brush heads combine oscillating, rotating movements with micro-vibrations to ensure a deep clean that reaches every contour. The brush head has been redesigned with twisted bristles, and reinforced with high-density tuft-in-tuft configuration for a sensational brushing experience.
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The SphereTEC revolution continues...

Introducing the complete Neo Spectra ST composite portfolio for efficient esthetics.

By Dentsply Sirona

With the new Neo Spectra ST composite portfolio dental professionals can now find the full range of handling preferences and esthetic needs covered by a single product line. Thanks to SphereTEC filler technology, the portfolio offers optimized performance in the areas that matter most, helping clinicians to achieve reliable, esthetic results efficiently.

Dentsply Sirona’s latest innovation in composite filler technology, SphereTEC, was introduced to dentistry in 2015. SphereTEC fillers are spherical-shaped, pre-polymerised fillers created from sub-micron barium glass. Their morphology, particle size distribution, and surface microstructure deliver the benefits that matter most to dentists. Over 24 million restorations after the new technology’s debut, Dentsply Sirona introduced an expanded portfolio with SphereTEC technology. Clinicians can now enjoy SphereTEC technology benefits in all composite cases with the comprehensive Neo Spectra ST portfolio. Neo, meaning ‘new’ or ‘revived’ emphasizes the modern, cutting-edge approach taken to optimize our composite portfolio. Neo Spectra ST explains the portfolio’s coverage of the full range or ‘Spectra’ of handling preferences and esthetic needs optimized with SphereTEC (ST) technology.

Covering the Full Range of Handling Preferences

Dentsply Sirona recognizes that every clinician is unique and when it comes to composites, so are their handling preferences. That’s why the Neo Spectra ST composite portfolio was designed to cover a full range of handling options, enabling clinicians to select their preferred viscosity for placement ease and efficiency. Neo Spectra ST High-Viscosity (HV) universal composite has a firm, packable handling, while the Low-Viscosity (LV) option offers a creamy, spreadable handling. Thanks to SphereTEC technology, both the HV and LV universal composite viscosities are non-sticky to the instrument, easy to adapt, sculpt, and shape, and are resistant to slumping. For applications where higher flowability is preferred, the nano fillers in Neo Spectra ST flow help to create a versatile, thixotropic ‘flow on-demand’ handling that stays put until the user initiates the flow. Each of the three viscosities offers proven durability, excellent chameleonic blending abilities, high polish, and stain resistance.

Covering the Full Range of Esthetic Needs

In addition to satisfying the range of handling preferences, the Neo Spectra ST composite portfolio makes it easy to achieve natural esthetic results with a streamlined shade inventory and simplified techniques. The unique construction of SphereTEC fillers creates an excellent chameleonic shade blending effect that enables five shades A1 to A4, called universal CLOUD shades, to cover the entire VITA Classic range, and satisfy the esthetic demands for the vast majority of cases with a single shade. One additional shade, BW (bleach white), is also available for restoration of bleached teeth. For esthetically demanding anterior cases, Neo Spectra ST Effects offers two opaque dentin shades and one translucent enamel shade that work together in a simplified layering technique with Neo Spectra ST universal CLOUD shades. The simplified shade concept and layering technique result in streamlined composite inventory while ensuring reliable, highly aesthetic clinical results. The unique structure of SphereTEC fillers also maximizes composite strength and durability, while their sub-micron primary particle size ensures excellent polishability.

For further information about Neo Spectra ST composites available from Dentsply Sirona, please contact your local Dentsply Sirona representative or visit our website www.dentsplysirona.com.

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The reality is that digital dental technology has now become user-friendly and affordable enough to be adopted by anyone who wants to access its benefits. Clinics and labs of all sizes are unlocking substantial efficiency and productivity gains with no compromise in quality. In fact, many digital workflow users credit digital dentistry tools with contributing to improved quality in care due to the level of precision that is now possible, and the fidelity of planned versus actual outcomes.

Digital scans and digital designs fuel accurate digital production that increasingly requires less and less post-processing before next steps can be taken. This is true for everything from prosthodontic models to long-term, full arch dentures. These advancements are exciting and beneficial to everyone involved. Labs can handle higher volumes, practitioners can expand in-house services, and patients can get precise treatment faster, with fewer visits.

For instance, the new capabilities in 3D printing speed make it possible for clinicians to deliver complete restorations within a same-day appointment that have historically required multiple visits. On the NextDent 5000, for example, it is now possible to 3D print a full arch in half-an-hour or less. For practitioners, this means the ability to see more patients over time while offering a more convenient, expedited treatment experience. For patients, the integration of this technology means fewer scheduling conflicts and life disruptions to address their concerns.

For dental laboratories of all sizes, increases in digital production speeds are of tremendous value. Large laboratories are able to increase productivity to keep production volumes up, and small laboratories are able to avoid backlogs to maintain availability to take on new jobs. Fast and highly accurate 3D printing also enables superior communication between dentists and laboratories to enable streamlined restoration fabrication and delivery and increased patient satisfaction.

The expedient input to output loop created by the digital dentistry workflow is more comfortable and convenient to the patient than the traditional processes it replaces. Furthermore, digital precision at every stage gives care providers higher confidence in fit. The author of this piece has firsthand experience to support these statements, as I was one of the first patients to receive a 3D printed restoration. I had a tooth replaced in 2016 using 3D printing, and it works and looks as great as it did on day one!

As dentistry and 3D printing continue to evolve and synergize, my experience is becoming less and less unique, which I view as a wonderful thing. From high production labs where large volumes of unique parts must be fabricated quickly, to private clinics where the provider wants to enhance patient experience with high quality expedited treatment: 3D printing technology is leading a transformation in dental occupations that allows everybody to win.
The complete digital implant workflow

By Drs Kirill Kostin, Mikhail Erohin, Oleg Ponomarev & Maxim Kozhevin, Russia

Planmeca is known for high-tech innovations and continuous product development. The company’s powerful Planmeca Romexis software platform allows all stages of the dental implant and aesthetic prosthodontic treatment to be completed using one piece of software, from the computer-assisted design of patients’ smiles to the fabrication of surgical guides.

The following clinical case, which I performed together with my colleagues Dr Ponomarev, Dr Kozhevin and Dr Yarokhin, illustrates how digital solutions can be used in prosthodontic treatment, implant placement and restoration design. According to our experiences, digital CAD/CAM technologies enable maximal functional and aesthetic results compared to traditional methods.

Clinical case report

The clinical case illustrates the advantages of using Planmeca CAD/CAM solutions in the digital planning of an implant placement and surgical guide as well as in the fabrication of a ceramic restoration. This article presents a clinical case in which the treatment was completed using the Planmeca Romexis 3D Implant Guide software, Planmeca PlanCAD Premium software and Planmeca PlanMill 40 milling unit.

The clinical case features a female patient, who complained about missing tooth #22, as well as the shield-like shape of tooth #12 (Figs. 1 & 2). During the initial examination, the area around the missing tooth was estimated to be quite narrow for an implant. However, the patient declined orthodontic preparation, as she had already previously had orthodontic treatment with orthodontic surgery.

In this particular case, we started with an aesthetic analysis of the patient’s CBCT data and concluded that a Straumann implant with a 2.9 mm diameter would fit in the area of tooth 22, if we used a surgical guide for maximum precision (Figs. 3–5). For tooth #12, we decided to fabricate a thin-walled IPS e.max ceramic restoration (Ivoclar Vivadent).

Thanks to digital planning and a carefully fabricated surgical guide, the implant was placed successfully, even though the anatomical conditions appeared to be less than advantageous. We achieved a torque of 30 Ncm and attached a healing abutment to the implant (Figs. 6 & 7).

Three months after the implant placement operation, the osseointegration of the implant fixture was completed. A temporary crown was fabricated on the implant from a temporary crown was installed to support the formation of soft tissues. (Figs. 8–10). Crown lengthening was performed on tooth #12.
VITA ENAMIC multiColor block to support the formation of soft tissues (Figs. 8-10). We improved the original design on the Straumann superstructure with gum contouring. On tooth #11, crown lengthening was performed with an electrosurgery (Figs. 11-13).

Once the formation of the soft tissues was complete, tooth #12 was minimally prepared for the ceramic crown with the help of a surgical microscope. After the preparation, the teeth were scanned in order to digitally design a custom abutment and crowns (Figs. 14-19).

The final smile design was planned digitally together with the patient. For the implant structure, we chose an individual zirconium abutment screw with a ceramic facing and a fully anatomical Empress crown (Figs. 20 & 21). The ceramic facing concealed the excessive brightness of the zirconium, and we were able to achieve the desired colour. Thanks to the digital workflow, we managed to fulfill the wishes of the patient (Figs. 22-24).

Conclusion

Thanks to the development of modern technologies, a 3D model of a patient’s set of teeth can now be acquired in only a few minutes, without infringing on the comfort of the patient. At the same time, combining a CBCT image with an intraoral scan enables the dentist to plan the implant placement and surgical guide accurately and with just a few mouse clicks.

Finally, digital technologies also enable visualising the treatment outcome for the patient. Clear visualisations of the end result facilitate communication with the patient, which, in turn, can increase case acceptance.

About the author

Dr Kirill Kostin graduated from Saint Petersburg State Medical University in Russia in 2004. He became the co-founder of the PerfectSmile dental clinic and dental study centre in 2014. At his clinic in Saint Petersburg, Dr Kostin runs a private practice concentrating on the aesthetic and functional rehabilitation of natural dentition and implants, applying various digital instruments as part of restorative procedures (digital smile design, intraoral scanning, CAD/CAM milling, 3D printing, and guided surgical procedures). Using a dental microscope on a daily basis, Dr Kostin focuses on minimally invasive restorative procedures with direct and indirect restorations.

This particular case Kostin performed together with his colleagues Drs Mikhail Erohin, Oleg Ponomarev and Maxim Kizhevin.
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I was a witness to the opening of the first ever Sirona showroom office opening in Dubai, 10 years ago. Remembering Dr. Amro Adel, your General Manager for the MENA region, working countless hours, from making everything himself even the design and it was excellent. I am a witness of this long successful journey and to reach the success with Sirona here, now Dentsply Sirona, what is your first impression of the Dentsply Sirona Middle East office?

Don Casey: The office is gorgeous and highly well-staffed, with the right equipment and great space. I would say this is one of our best training facilities in the world. Walter Petersohn and I travel constantly, and I would put this office among the best.

“The Dentsply Sirona office here is beautiful, showcasing our products and offering outstanding training facilities to our customers.” – Don Casey, CEO, Dentsply Sirona.

In February 2016, Dentsply and Sirona merged resulting in the largest dental manufacturing company in the world in dental products and technology. Currently the company has 15,000 employees so how have you managed to keep the company consistently strong in terms of strategy and culture? This question is in particular regarding the Middle East due to its multicultural environment, religions and most importantly crucial parties having different educational backgrounds.

Don Casey: When trying to integrate companies, whether it is a homogenous market, like North America or a multicultural environment, like the Middle East, you have to start with a single goal: the customer. At Dentsply Sirona, we are all unified around the idea that if we focus on helping the half million dental professionals around the world and improve their practices, that’s what will create a united culture. Whether you are Egyptian, German or American, our goal is to help dentists deliver better oral care and smiles to their patients. That is what we do.

The education here in the Middle East is the challenge especially due to the different educational backgrounds coming with different approaches from different countries. This is very challenging, but I am certain we can manage well in the Middle East in terms of education.

Don Casey: Clinical education is key to us. Providing dental professionals with essential knowledge is one of our main goals. One of the conversations we’ve had with Dr. Amro Adel was this region has done an exceptional job because of great partnerships, like we have with you, in focusing on clinical and lab education. We have to consider that we need to do things differently in Saudi Arabia compared to Egypt or Morocco. For example, how we teach Class II restorations or digital dentistry, when dealing with different backgrounds and the complexity of each region.

How important is the Middle East dental market to Dentsply Sirona? And for which reasons?

Walter Petersohn: Super important. This isn’t an easy market, but it is a growth market. Growth markets attract us. Over the last five years we’ve learned a lot, and with Dr. Amro’s help, we have put together a magnificent team and all the building blocks to accelerate growth. Compared to Europe or the U.S., there are different aspects in this market, and you need a leadership team that is aware of these elements. The formulation for success involves local partnerships, local involvement of trainers, customers and key opinion leaders. All that combined with a good portion of focus is really the basis for growth. The Middle East is complex, and a lot of countries fear the region, but we have a long history in the region and expertise. We have many people with over 20 years’ experience on our team, so we know how to grow.
the business, to build it, accelerate it, and we are excited. This is why we continue to invest in facilities here, and why we continue to grow the team and increasingly invest in clinical education.

Which product line do you feel is best represented in the Middle East region and which ranges still require more awareness? What are some of the solutions dental professionals can expect in the Middle East in the future?

Walter Petersohn: First, it is important to understand that people know our brand. It is known through our presence, our innovation and how we remain active in certain segments and fields. Clearly, everything that is digital, combining procedures into digital workflows, aligners, implants, restorative materials and the endo solution process, have become very popular. Our task is to make sure we stay with our strongholds and accelerate in these areas, and we continue to support dental professionals with our innovations, both in the product and the procedure level, so they can be successful and help patients smile. Again, this means focus. Countries vary, hurdles vary, it is multidimensional but a big opportunity.

“Over the last five years we’ve learned a lot, and with Dr. Amro’s help, we have put together a magnificent team and all the building blocks to accelerate growth.”
– Walter Petersohn, CCO, Dentsply Sirona

How far ahead do you plan when it comes to innovation planning and introducing novelties in the Middle East? What is your forecast and vision?

Don Casey: You will understand some we cannot talk about. We want to emphasize a number of different businesses, but I think Walter Petersohn said it very well: we believe digital is the future. Whether that is the evolution of 2D to 3D, the migration with CAD/CAM, chairside dentistry or Primescan, it’s a substantial digital business. But there is also Orthodontics and the Implants business too. When we look at the region, our Endodontic business plays an important role. This is an area where we have a lot of history and tenure. We went from hand files to digital, to reciprocating files. And the Middle East has played an important role in the growth and will continue to be a great emphasize here. In our mind, we look at different blocks of innovation, and digital will be one. We believe that we are at the beginning of what we think endodontics will be like over the next decade. We’re also excited about our implant business, which traditionally has not been a focus in the Middle East. But with someone like Dr. Amro, who has been making investment decisions in the region, we’re changing our direction and structure. Working closely with our customers in the region, he’s able to inform us on what should be our focus. From our point of view, the implants business will be good opportunity over the long-
term. At Dentply Sirona, we used to think we have so digital businesses that all had to move at the exact same speed. But we've learned that it makes more sense combining separate solutions to sensible product solutions and then sell the solution outside the box.

I am very excited about the advancements of digital dentistry and the new workflow. When you win your new scanning system it can keep the data of the patient even after many years from now. We can see how important it is starting from the early stages of digital dentistry. I remember we talked about this at Dentply Sirona World in Las Vegas last year. We are not sure where technology will go, but I think if you had an impression of a patient's mouth and you as a dentist could tell them that their teeth will get worse and a years later it actually does, you can start using digital solutions.

This is the international platform. These webinars are going to our 159 publishers in the world. From China to the States. States is a big partner. Middle East is the second largest after the United States.

Don Casey: As you think about your platform, and it's a conversation we had today, we really heard a lot of buzz from Russia. I would love to see the development and recognition of more local KODAs. As we do programs, let's not make them the same way, with the same guys who always do them. I think people are doing great dentistry all over the world. One of the things I'd like for Dentply Sirona to do is make our webinars and our dental education to reflect the style and culture of countries around the world, including local voices and faces.

Two days ago, we were in the office in Moscow and the technique and work were probably better than anything I had ever seen. I would love the world to learn best practices from all over the globe. There's not just one centre. The power sits in localising activities. We reduced the regional responsibilities to have our leaders be more engaged and involved with our customers, dealer partners and staff. The same is true for training. The more you can get local leaders involved in training and education, same country, same language, the better you can convince local customers of the quality of products.

How important are the dental dealers in Middle East for Dentply Sirona International?

Walter Petersohn: They're very important, also because of the geographic diversity. There's no way we would ever be able to cover this gigantic region without the help of the dealers. That means we also have to train the dealers on our products so they can train the dental professionals. We usually bring together all the dealers, that's what we do during our so-called Dealer Days. One of the challenges, depending on the region, is how can we help them with credit. Economically, it's a challenge when dealing with different parts of the world, and different economical situations and so on. Ultimately, every day starts with us asking, how do we help our customers - and the dealers are a critical way for us to help.

Do you have anything else to say to Dental Tribune Middle East readers?

Don Casey: First, we're excited about your presence and the excitement of all your readers in the field of dentistry. We want your readers in the region to know that we mean it very seriously. This is why we believe in a local footprint and local staff. As you know, we are not just in Dubai, we have our teams all over the Middle East and North Africa region. This is a significant commitment! By putting the focus on the right areas and growing education, all of our customers and dental professionals around the region will see that, which will translate into new partnerships.

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"Clearly, everything that is digital, combining procedures into digital workflows, aligners, implants, restorative materials and the endo solution process, have become very popular." – Walter Petersohn, CCO, Dentply Sirona

It is good because we can keep data of the patient, even in investigatory cases, we will search for the papers in the clinic. It's just digital. What is the process of Dentply Sirona starting from the product innovation down to educating the dental professional, dental technician, dental hygienist, dental assistant, even new dental managers - the full circle?

Walter Petersohn: As you mentioned, it is a multilevel process. The thing we can clearly state: the more, the better; the deeper we educate and train will lead us to innovation if you had an impression of a patient's mouth, and you as a dentist could tell them that their teeth will get worse and a years later it actually does, you can start using digital solutions.

The fields of implantology and oral surgery are important elements of dental and oral medicine, and they support and complement each other uniquely in their understanding.

Implantology is thereby one of the major growth areas in dentistry. No other field has developed as strongly, from a diagnostic, therapeutic and scientific perspective, in recent years. Other factors, such as demographic developments, material science, among other parameters, that constantly changing spectrum of medicine with new therapy possibilities, also place new and increasingly greater demands on surgical treatments. The needs of the patients should thereby not be forgotten.

Despite the general trend towards specialization, the majority of patients want holistic treatment from their family dentist.

In therefore gaps without saying that the practice of surgery should also offer implantology and oral surgery, anyone who has dealt with implantology and oral surgery, wants to expand their intellectual and manual spectrum. One should not immediately push oneself to one's limits, but rather subject oneself to a well-founded scientific learning process.

The knowledge transfer of secure concepts and alternatives, combined with manual skills, aims to enable the participants to be able to share the knowledge in their own practice and also in their own practice.

The challenges of a modern society's expectations and quality yourself for the future.

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INTERVIEW

Master of Science in Oral Surgery/Implantology (MSc) Academia Dentista Prof. Dr. Dr. Ralf Granat

The high quality of our Master of Science in Orthodontics (MSc) programme is known throughout the world, as can be seen by the countless number of students coming from abroad to attend our courses and complete the programme at our university in English.

Recent programmes have included participants from, e.g., the Netherlands, Poland, Switzerland, Austria, Greece, Nigeria, Libya, Dubai and Yemen. The current developments in the field of orthodontics play an important role in the Master of Science in Orthodontics (MSc) programme, which is naturally also available in German.

In addition to the predilection treatment of children and adolescents practiced in orthodontics to this day, periodontal-therapeutic, functional-therapeutic, pro-somatic and aesthetic treatments for adults also play a major role. New treatment techniques and methods that meet the needs of orthodontic treatments for adults are taught in great detail and with a practical orientation. As a result, orthodontics becomes a treatment method for (almost) all ages, thus significantly expanding the area of activity for orthodontists and making the orthodontist a professional valuable addition to any practice.

For further information on our university-based Master of Science continuing education programme please contact:

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