

# DENTAL TRIBUNE

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## World News

Implant market in Europe limited by uncertainty

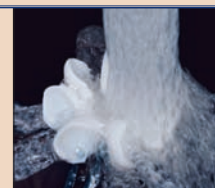
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## Oral Cancer

An interview with Prof. Stephen Porter, UK

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## Aesthetics

Restoring anterior teeth with thin veneers

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## International mercury treaty signed

### Minamata Convention bans products, Agrees to amalgam phase-down

DT Asia Pacific

**MINIMATA, Japan:** Certain products containing mercury will be banned from 2020, according to a new international treaty signed by governments in Minamata in Japan last week. The regulations apply to the production and trade of batteries, cosmetics and fluorescence lamps containing the toxic material, among other products. Amalgam dental fillings are not affected by the ban.

However, the treaty agreed on a number of provisions on the phasing down of the controversial dental material. The Convention, which was proceeded by five intergovernmental negotiation rounds and set in place for adoption at a meeting in Geneva in January, was signed by 87 countries.

Governments now have three years to develop and implement national strategies to reduce or eliminate the production and industrial use of the toxic metal. Mercury emission from large-scale industrial plants, the main



Plenipotentiaries on the Minamata Convention on Mercury October 9, 2013 Tree-planting ceremony  
(From left to right) Nobuteru Ishihara, Minister of Environment, Japan, Achim Steiner, UNEP Executive Director, Ikuo Kabashima, Governor of Kumamoto Prefecture, and Katsuaki Miyamoto, Mayor of Minamata, posing with a plaquette commemorating the signing of the historic treaty. (DTI/Photos courtesy of ENB)

source of mercury pollution worldwide, will also be controlled.

Dental associations reacted positively to the decision, which will permit the use of amalgam as a restorative dental material for the years to come. Dr Stuart

Johnston from the British Dental Association, who took part in the negotiations on behalf of the FDI World Dental Federation, commented: "We are delighted that the Minamata Convention allows the dental profession continued access to a key restorative material. Dental amalgam is safe and

effective: it has been in use for over 150 years and no studies have demonstrated any harm to human health."

He said that despite amalgam not being banned by the treaty,

→ DT page 3

## Desensitising confirmed

A study conducted by dental researchers in Taiwan has provided new evidence that toothpaste containing the amino acid arginine and calcium carbonate can contribute to a significant reduction in dentine hypersensitivity. In the study, almost 98 per cent of the participants reported reduced hypersensitivity after having used the toothpaste for eight weeks.

The study involved 18 male and 25 female adults with dentine hypersensitivity and caries-free teeth. In order to evaluate the clinical efficacy of desensitising toothpaste, which is considered the most cost-effective and easiest treatment for most patients, the participants were asked to brush their teeth twice a day with Colgate Sensitive Pro-Relief toothpaste, containing 8 per cent arginine and calcium carbonate, for eight weeks. Comparative dental examinations at baseline, and after four weeks and eight weeks of product use found that there were no adverse effects on the oral soft and hard tissue. Forty-two participants (97.7 per cent) reported significantly reduced hypersensitivity. DT



Rice University student Oara Neumann (left) and Dr Naomi J. Halas have invented a new type of autoclave that uses solar energy to help sterilise dental and medical instruments. (DTI/Photo courtesy of Rice University, USA)

## Regeneration with diamonds

New research suggests that nanodiamonds could be used to promote bone growth as they bind rapidly to both bone morphogenetic protein and fibroblast growth factor. According to the US scientists, the by-product of conventional mining and refining operations can be inserted noninvasively through injection or an oral rinse. DT

## GC opens new headquarters

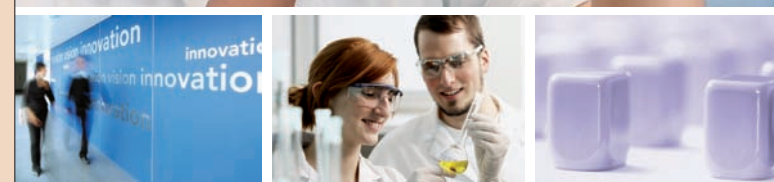
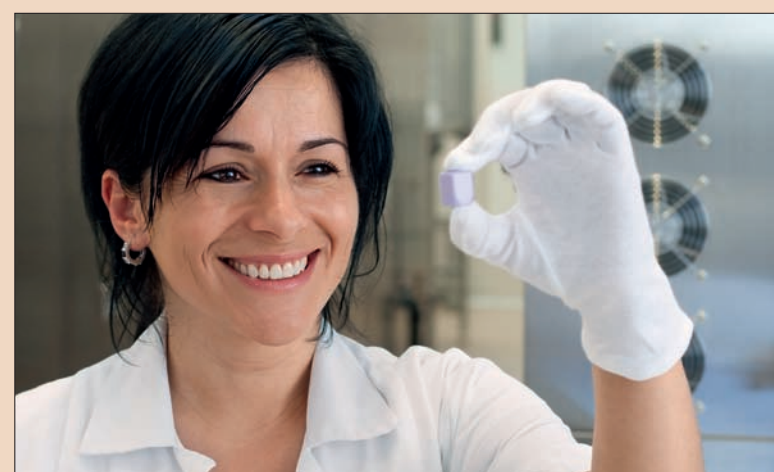
GC International has recently opened its new head office in Lucerne in Switzerland. The newly established international branch of dental products manufacturer GC will be guiding the international affairs of GC Asia, GC Europe and GC America in the future. GC Corporation will continue to operate independently from Japan. DT

## Mouthwash made from neem bark

The International Association for Dental Research (IADR) has recognised a dental student from Myanmar for his research on the clinical effectiveness of mouthwash made from the bark of the neem tree, which used in traditional South-East Asian medicine.

The study by Mg Ye Htut Oo, a final-year student at the University of Dental Medicine, Yangon, found that the plant-derived mouthwash is just as effective as conventional mouthwashes. Moreover, it was more effective at reducing stains.

The prize was awarded during a meeting of the IADR's Asia Pacific divisions in Australia, New Zealand, China, Japan, Korea and South-East Asia that was held from 21 to 23 August in Bangkok. DT



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## NEW TECHNOLOGY TRENDS IN DENTAL PRACTICE

Paul Feuerstein, DMD  
08:00 PM (EST)

An introductory look at new caries detection systems (including early detection/CAMBRA/decalcification), 3D digital radiography (Conebeam), digital impression systems and lab CAD/CAM.

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- To make intelligent purchase decisions



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## DIABETES AND PERIODONTAL DISEASE MANAGEMENT

Luciana M. Shaddox, DDS, MS, PhD  
08:00 PM (EST)

In this webinar, the association between Diabetes and Periodontal Diseases will be elucidated, with special emphasis to how it impacts Periodontal health and the management of diabetic patients with periodontal disease.

### Participants will learn:

- How does Diabetes impact Periodontal Health and how Periodontitis can impact Diabetes control
- How to best manage Diabetic Patients with Periodontal Disease
- How to avoid diabetic emergencies in your office
- How to help diabetic patients maintain their periodontal health and concomitant metabolic control



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# High interest in CAPP Asia meeting

## Digital and CAD/CAM International Conference presents update on digital dentistry

DT Asia Pacific

**SINGAPORE:** Boasting a new record attendance of more than 570 dental professionals, the Centre for Advanced Professional Practices (CAPP Asia) hosted its CAD/CAM and Digital Dentistry International Conference in Singapore last week. The event, held for the second consecutive year at the Marina Bay Sands hotel, presented the latest developments and trends in different fields of digital dentistry, such as imaging and dental CAD/CAM.

Among other topics, the aesthetic potential of modern CAD/CAM materials, as well as digital impression taking and guided implantology were discussed. Furthermore, two presentations demonstrated for the first time how modern digital technology can be applied to orthodontics. The event also featured a number of workshops, where attendees gained hands-on experience of the latest technologies in fields like computer-guided implantology. The benefits of the new technology for dental laboratories were presented during a parallel session on the second day of the conference, which, according to the organiser, was attended by over 50 technicians from the region.



Participants of a workshop getting hands-on with the latest technologies. (DTI/Photo courtesy of CAPP Asia, Singapore)

“Computerisation and advanced technologies have become the future of dentistry and we have to make an effort to stay abreast of the latest technologies,” Singapore Dental Association President Dr Kuan Chee Keong told *Dental Tribune Asia Pacific* in an interview. “The CAPP Asia conference is a good example of that.”

A spin-off of the successful congress series held by CAPP in Dubai in the United Arab Emirates annually since 2006, the event was supported by over 50 industry players from

around the globe. During the show more than 55 brands were presented by leading manufacturers in the field, according to the organiser. It said that plans are already underway for the next show to be held in October next year, with dates and times to be announced in the upcoming weeks.

CAPP's ninth Dubai edition is scheduled for May 2014. The organisation added that it will also host the Dental Technicians Forum at the upcoming International Dental Exhibition & Meeting in Singapore. [DTI](#)

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## DENTAL TRIBUNE

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# Study finds crucial role of dental therapists in child protection

DTI

**DUNEDIN, New Zealand:** A new study conducted by researchers in New Zealand has highlighted that dental workers may hold a key role in reporting child maltreatment. As the majority of injuries occur in the head and neck area, therapists, who are the most common type of health professional to see children up to the age of 14

in New Zealand, are in the best position to report physical abuse.

The study, which was conducted at the University of Otago, involved 320 registered dental therapists from New Zealand, who completed a questionnaire in which they were asked how frequently they had suspected and reported child maltreatment over the past year.

The researchers found that 55 had each suspected up to 10 cases of physical abuse, while 87 had suspected up to 10 cases of child neglect. Moreover, 101 participants had suspected up to 10 cases of dental neglect.

According to Dhara Tilvawala, the final-year Bachelor of Dentistry student at the university who led the study, the therapists primarily reported bruises and

physical signs of abuse to the head and neck area, including cigarette burns, and children who seemed overly fearful when the clinician tried to examine their mouths. Tilvawala said that 50 to 70 per cent of injuries occurred in the head and neck area.

Fears of reporting someone mistakenly, unfamiliarity with the signs of child abuse and fear of violence to themselves from care-

givers were among the barriers to reporting. The greatest barrier, however, was that dental therapists were unsure of where to report suspected cases. According to Tilvawala, 40 per cent said that they would report directly to the Child, Youth and Family service, while others preferred to turn to an official or to discuss the matter with a colleague. Only a few said that they would report the matter to the police, she said. [DTI](#)

AD

← [DTI](#) page 1

however, the dental profession is committed to phasing down the use of the material through the prevention of dental diseases, the development of alternative materials and effective amalgam management. Guidelines in this respect for professionals, health officials and the public are currently being compiled and will be released by the organisation soon. The initial steps have already been taken with a pilot project launched recently by the FDI in partnership with the United Nations Environment Programme in East Africa that aims to train professionals in the country on managing and recycling amalgam waste more effectively.



UNEP Executive Director Achim Steiner and the Japanese Minister of Environment Nobuteru Ishihara lay flowers in memorium of the Minamata victims at the Opening of the Diplomatic Conference for the Minamata Convention on Mercury.

Amalgam remains one of the most widely used restorative materials worldwide. Particularly in developing countries, it is often the only affordable means of treating dental caries, despite the availability of other methods, such as atraumatic restorative treatment. Unfortunately, it is also a significant source of mercury pollution. Recent national tests conducted in Pakistan, for example, found that levels in urban dental hospitals and practices were up to 20 times higher than acceptable levels, which was considered largely due to poor amalgam waste management.

According to estimates by the United Nations Environment Programme, between 300 and 400 metric tons of mercury is used in dental fillings every year worldwide, a tenth of the world's annual consumption. [DTI](#)

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# Dear reader,



Daniel Zimmermann  
DTI

It is not presumptuous to call the recent adoption of the Minimata convention a historic decision. Never before has such an international alliance of policy makers and experts rallied against the industrial use of a single substance.

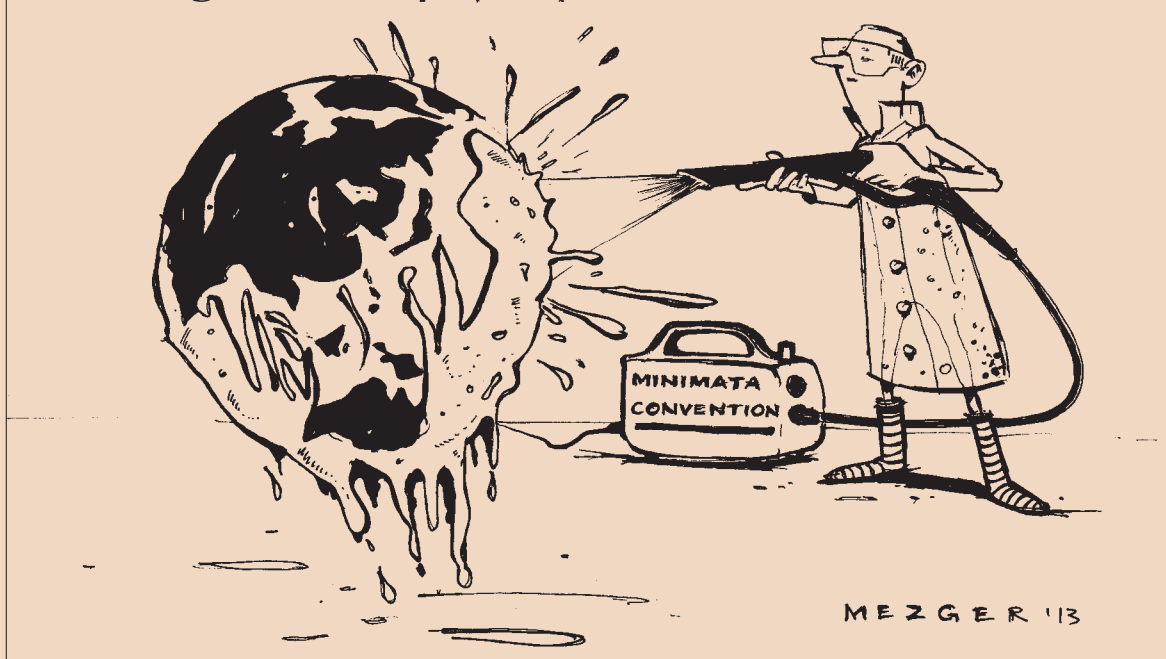
For dentists, this decision, although containing provisions on how to phase down the use of amalgam, will not change a lot. Recent developments in dental technology are already aiming at prevention of dental diseases and the use of alternative materials that are much easier to handle and more friendly to the environment. In 2020, when most of the products mentioned in the convention will be banned from being produced and traded, amalgam will hopefully be something that most dentists consider a thing of the past.

Until then it remains important to remember that there are several effective ways to deal with the remains of the material, ranging from amalgam separators to full-scale recycling. Unfortunately, these measures are still not common in dental practice, both in developed and developing countries. [DT](#)

Yours sincerely,

Daniel Zimmermann  
Group Editor  
Dental Tribune International

## The big clean up



## Immediate implant placement



Prof. Mariano Sanz  
Spain

The immediate implant placement therapeutic concept is one the most debated and studied treatment protocols in current dental practice. Several systematic reviews have analysed its efficacy in comparison with the delayed implant placement protocol and have clearly established that both achieve similarly high survival rates. Moreover, several well-designed experimental and clinical studies have shown that similar levels of osseointegration can be achieved with high predictability with both protocols.

There is, however, controversy as to whether immediate

implant placement in a fresh extraction socket may pose an aesthetic risk for the patient, mainly through the loss of the buccal bone contour of the maxilla, and recession of the peri-implant mucosa and exposure of the implant neck. These events occur more frequently when implants are placed in the anterior maxilla, where the buccal bone plate is usually thin, and above all when implants are placed too buccally.

Several authors, however, have demonstrated excellent long-term aesthetic results even in the anterior maxilla, provided the implants are placed in sites with thicker buccal ridges and in the optimal 3-D implant position or when the physiological changes occurring in the alveolar ridge after tooth extraction are compensated for using slow resorption bone replacement grafts and/or soft-tissue grafts.

All these procedures require thorough knowledge and skills in these surgical techniques and in the use of regenerative biomaterials and autogenous grafts. A lack of knowledge and expertise may increase the probability of post-surgical complications and therefore it may also implicate a higher risk for the patient. In the hands of experienced and knowledgeable clinicians, it may be worth the risk because the achievement of good outcomes in a single therapeutic intervention could clearly be advantageous and comfortable for the patient. [DT](#)

### Contact Info

Prof. Mariano Sanz is currently Professor of Periodontology at the Complutense University of Universidad Complutense de Madrid in Spain. He can be contacted [marsan@ucm.es](mailto:marsan@ucm.es)

## Principles of MID



Prof. Roland  
Frankenberger  
Germany

Nowadays, everyone seems to be talking about minimally invasive dentistry (MID) and many patients now appreciate that only as much hard tissue is removed during dental restoration as needed. MID, however, is only successful when restorations survive for a long time. What use is a small filling if it becomes insufficient after a short amount of time? Or, why should one attempt to completely remove (partially) defective restorations?

Especially with perfectly matching tooth-coloured materials this makes no sense at all. When 80 per cent of the restoration is intact, e.g. facing a chipping of the proximal ridge, there is no reason to completely remove any restoration. Moreover, the risk of iatrogenic injury to sound tooth hard tissues during removal of resin-based composites or ceramics is irresponsibly high.

Modern repair strategies help to avoid these mistakes. Only through the combination of excavation, defect-oriented preparation, longevity and reparability, are we able to work responsibly with almost perfect aesthetic materials. Please think about this for a second. [DT](#)

### Contact Info

Prof. Roland Frankenberger is Director of the Department of Restorative Dentistry at the Philipp University of Marburg's School of Dental Medicine in Germany. He can be contacted at [frankbg@med.uni-marburg.de](mailto:frankbg@med.uni-marburg.de).

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# AWDC 2015—A big opportunity for Thai dentistry



Prof. Prathip  
Phantumvanit  
Thailand

Finally, the FDI World Dental Federation has granted Bangkok the opportunity to host its 103rd Annual World Dental Congress (AWDC) in 2015. Praise and credit must be given to the Dental Association of Thailand, who continuously applied to organise this event for years. It will be an opportunity for the international community to learn about Thai dentistry, especially in the area of dental public health, education, and services, which are well organised.

About 13,000 registered dentists in Thailand, more than one-third, serve the country's population under the Ministry of Public Health at community or provincial level. The government's universal Coverage scheme covers a number of dental services, including oral health promotion and the prevention of oral diseases, at public hospitals countrywide. All ten dental schools in Thailand are focusing on preventive dentistry by providing their students with experience in the field of community dentistry to prepare them to be public health dentists in the future. In addition, dental competency has been fully integrated into

hibition has increasingly attracted companies and dealers from around the world and received a great response from Thai dentists, who are eager to upgrade their practices.

The 2015 FDI AWDC will provide a great opportunity for Thai dentists to gain exposure to the advanced knowledge of well-known experts and world authorities in dentistry, who will be coming to Thailand as speakers, panellists, and delegates from developed and developing nations with the goal of exchanging their knowledge with other participants from around the world. It will be the largest international dental congress for Thai dentists to obtain ideas on how to improve the quality of oral health care for the population.

Although most Thai dentists do not attend professional presentations given in English on a regular basis, the scientific programme for the Bangkok AWDC presented by world-class speakers will most likely encourage the participation of more regional dentists.

The dental expo will be a showcase for new products and materials, and there will be a competition between all exhibitors for the solution that offers the greatest benefit for the patient in terms of quality and cost-effectiveness. This will motivate the dental com-



The contract between the FDI and DTA was recently signed in Istanbul. (DTI/Photo Claudia Duschek)

mercial business in Thailand and the region to expand and update the choices and alternatives, including oral care products, dental materials, dental units, implants, lasers and dental CAD/CAM.

challenge for the organiser of the Bangkok AWDC. Since 2015 is the year by which the ASEAN Economic Community will be established, this will offer an

important opportunity for dental professionals throughout the region to come together to host the congress in partnership. Thailand will be welcoming dentists from around the world to enjoy the country's unique culture and beautiful landscapes in addition to visiting the congress. **DTI**

**“...an important opportunity for dental professionals throughout the region to come together to host the congress in partnership.”**

the six-year dental curriculum so that graduates can confidently begin practising dentistry once having completed the national licensure assessment.

It must be noted that currently half of the dentists in Bangkok work in private practice. A high number of well-equipped dental clinics are run by Thai dentists who received their training at acclaimed dental institutions around the globe. They serve not only Thai people but also an increasing number of medical tourists who come to the country to receive treatment.

The Dental Association of Thailand has been organising its biennial dental congress and trade exhibition for many years. Approximately 3,000 to 5,000 dental professionals usually attend these meetings. The ex-

The Bangkok congress will certainly boost the recognition of the importance of oral health care among the governmental institutions, and will hopefully result in activities that provide support for and greater efforts towards oral health care measures and promotion in the future. Presentations on the association between oral and general health will also raise awareness of oral health issues among policymakers for a better quality of life for the population.

The high number of participants at this year's FDI congress in Istanbul poses a tremendous

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# European dental implant market limited by financial uncertainty

## Countries in Eastern Europe poised for highest growth

Carmen Chan  
Canada

The dental implant market, consisting of implants, abut-

ments, and other devices, in Europe was valued at approximately €1.18 billion (US\$1.6 billion) in 2012. Until the end of this year, the market will con-

tinue to contract slightly. It is expected to recover, however, and reach a value of just under €1.69 billion (US\$2.3 billion) by 2021.

Germany reigns as the largest market, worth over US\$ 300 million in 2012—almost the equivalent of France and Spain combined. Overall, these two

countries have the lowest growth rates, with both suffering from either low GDP growth or high unemployment rates along with overall concerns regarding unsustainable national debt levels.

Demand for dental implant treatment continues to be fuelled by the ageing population. The US Census Bureau forecasts that the population aged 65 and older in Europe's seven key markets will grow at an average compound annual growth rate of approximately 1.5 % until 2021, whereas the total population will only grow at approximately 0.3 % per year. As people age, their oral health tends to deteriorate, resulting in edentulism, for which implant restoration is increasingly becoming a recommended treatment option.

For most European patients, dental implant procedures are considered elective and need to be paid out-of-pocket by patients. As a result, financial considerations are among the most important factors influencing patients' decision to undergo these treatments. The unstable economy has resulted in increased patient hesitance to seek dental implant treatment and in higher preference for lower-risk and less-costly traditional procedures and products, such as traditional loading (instead of immediate functional loading) and screw-retained abutments (over cement-retained ones).

Aside from the economy, countries such as Sweden and the Netherlands have experienced drastic shifts due to changes in government reimbursement. In the past year, both countries' markets have suffered declines due to governments proposing changes to reimbursement. This uncertainty regarding dental implant treatment coverage has fuelled physician and patient reluctance to perform and undergo procedures.

The current dental implant market is defined by a never-ending number of competitors in the marketplace. Competition will become increasingly fierce with the recent merger of DENTSPLY Friadent and Astra Tech Dental to form DENTSPLY Implants, placing the company in direct competition with market leader Straumann for the top spot. While physicians and other competitors still perceive the two as separate brands, DENTSPLY Implants' wider product portfolio and greater focus on the implant business will likely change this. Furthermore, smaller competitors are currently penetrating the market with a

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# HPV may be responsible for increase of oral cancer in young adults

DTI

**DETROIT, USA:** Researchers from the US have linked the growing number of adults under the age of 45 with oropharyngeal cancer to the human papillomavirus (HPV). From a review of cancer data spanning a 36-year period, the researchers observed a substantial increase in young adults with cancer of the tonsils and base of the tongue. In addition, they noted a wide deviation between Caucasians and African-Americans.

The researchers used data on more than 1,600 patients aged 36 to 44 who had been diagnosed with invasive oropharyngeal squamous cell carcinoma between 1973 and 2009. Overall, the study revealed a 60 per cent increase in cancers of the base of the tongue, tonsils, soft palate and pharynx in people younger than 45 during the period. While the rate of oral cancers decreased by 52 per cent among African-Americans, it increased by 113 per cent among Caucasians.

However, compared with Caucasians and other races, African-Americans had a lower five-year survival rate. The five-year survival for the whole study group was 54 per cent.

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strategy that focuses on offering products at lower costs to entice dentists, which is especially attractive in times of economic uncertainty.

The most growth for the dental implant market will stem from Eastern European countries that are relatively underdeveloped. These countries tend to have the lowest implant and procedural costs, which are attractive to patients who reside in neighbouring countries. In particular, the Czech Republic, Hungary and Poland will benefit the most from patients travelling to these countries to undergo dental implant therapy.

Tapered implants are gaining popularity, especially as older dentists retire and are replaced by recent graduates. CAD/CAM custom-milled abutments are expected to experience the strongest growth among all product categories in the dental implant segment, stemming from high demand for aesthetic restorations. Despite slower adoption rates in the next couple of years, growth rates will accelerate with economic recovery. DT

*Carmen Chan is a Senior Market Research Analyst at Millennium Research Group, a global market intelligence provider based in Toronto in Canada.*

According to the researchers, 50 to 65 per cent of patients underwent surgical resection for their tumours.

Patients who had both surgery and radiation therapy had the highest five-year survival rate, they said.

Although the growing incidence of oral cancer has been largely attributed to the sexual revolution of the 1960s and 1970s and changes in sexual practices, the current study of people born during this period suggested that other factors may contribute to this development.

"The predominance of oropharyngeal cancer in this age group suggests either non-sexual modes of HPV transfer at a younger age or a shortened latency period between infection and development of cancer," explained Dr Farzan Siddiqui, lead author of the study.

According to the American Cancer Society, an estimated 36,000 people in the US will contract oral cavity and oropharyngeal cancers in 2013, with about 6,850 people dying of these cancers.

The study was conducted at the Henry Ford Hospital in Detroit. Data was obtained from the Surveillance, Epidemiology and End Results database. The findings were presented at the 55<sup>th</sup> Annual Meeting of the American Society for Radiation Oncology in Atlanta, USA, in September. DT

AD



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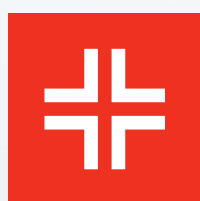
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# Biolase could become the next Intuitive Surgical

An interview with the company's CEO Federico Pignatelli



Federico Pignatelli

In a recent statement, US-based provider of dental and medical lasers BIOLASE announced that health care fund Camber Capital Management in Boston in the USA has purchased US\$5 million of the company's common stock. DTI had the opportunity to speak with CEO Federico Pignatelli about what this means for the company, mistakes of the past and the reasons that the company's WaterLase technology has the potential to revolutionise dental surgery.

**DTI: Mr Pignatelli, your company seems to have been struggling recently, according to some analysts. What is your company's position right now, and what does the recent sale of shares to Camber Capital mean for your business?**

**Federico Pignatelli:** The confusion arises from the fact that we grew 40 to 50 per cent a year for two years and in 2013 our growth has slowed down to "only" 15 to 20 per cent. We believe that BIOLASE will grow strongly in the years to come. We just needed to raise our capital with a few million dollars in order to improve our balance sheet. This capital raise, combined with our US\$8 million Comerica Bank credit line, will give us enough capital to continue our plan of business expansion.

Also, as we approach the fourth quarter we see net income and positive cash flow returning and we are expecting this positive development to continue in 2014. So we feel very positively about where BIOLASE is right now.

**So have the recent restructuring measures paid off?**

Yes, they have paid off handsomely, but there is more to do. I admit that in the past there have been some unhappy customers, but in our defence the company back then was managed by entirely different people and was locked into an exclusive global distribution agreement with Henry Schein. In the new BIOLASE, customers are the number one priority and we do what it takes to take care of them.

What people need to realise is that BIOLASE is a cutting-edge technology company with a new

technology that is potentially going to radically transform the way dental surgery is performed and practised. As a new step in informing the marketplace about WaterLase, we have recently embarked on a social media and press campaign to reach out to millions of patients to educate them about the many advantages of being treated with BIOLASE's technology.

We are glad to have Dr Fred Moll, the co-founder of Intuitive Surgical, who values our technology such that he joined our board of directors recently. He is a legend in the medical field because with his company he transformed the way surgery is approached through the use of robotics. Thanks to a visionary like him, today tens of thousands of patients with cancer can be treated in a much more precise way than ever before.

We believe BIOLASE has a technology that is so advanced and revolutionary that the company could become the next Intuitive Surgical. That is because with WaterLase technology we can transform surgical dentistry for hundreds of thousands of dental practices around the world, while providing better and safer care for patients.

**Why do you think lasers and particularly WaterLase will be the technology of choice in dentistry for the future?**

If you think about it, dentistry has not really changed very much since the dental drill was invented by the Egyptians 7,000 years ago. The principle of removing tissue by mechanical rotation has remained the same since that time, with the only major change in the past 70 years being the attachment of a high-speed engine. With WaterLase technology, we are able to make use of the most basic element of human tissue, water. The human body in its entirety consists of 60 per cent water, so water can be found in almost all tissue. Dentine, for example, has 20 per cent water in it. By energising water molecules with a laser, tissue can be cut without pain, heat, abrasion, vibration, or the risk of microfractures. At the same time, it is also much more precise. Clinically, this is much better dentistry.

Furthermore, there is no need for any anaesthetic for the patient; 99 per cent of patients can be treated without using Novocaine. How wonderful is that? On top of that, laser energy kills bacteria, viruses and fungus, and that provides another advantage for dentists, since it is almost impossible and certainly very costly to have surgical instrumentation like dental burs and endodontic files fully sterilised, and too costly to use new instrumentation for every patient to be treated.

**With all these advantages, why does it seem that the technology has not been adopted widely by dentists yet?**

That is not exactly true. Since the introduction of WaterLase technology 15 years ago, we have sold over 10,000 units worldwide, 6,000 of which were in the USA alone. The main challenge however is education. Dentists need to be better educated about the

treatment and cutting of soft tissue, which is something a dental drill cannot do. These additional options mean that dentists no longer need to refer patients to a specialist for these tasks, thereby boosting revenue in the practice.

idly find their way into dental practices. Dentists that do not upgrade their practices will likely begin to lose patients, become uncompetitive and lag behind. You cannot fight technology; you cannot fight innovation. If you do, you are doomed to be left out of the market.

**"...dentistry has not really changed very much since the dental drill was invented by the Egyptians 7,000 years ago."**

return on investment and the system's extensive clinical advantages in comparison with conventional dentistry.

In fact, only two and a half years ago, WaterLase technology for the very first time broke the speed barrier, which means that it now cuts as fast as a conventional dental drill, sometimes even faster. Furthermore, it allows impressive

**Where do you see the technology in the next five to ten years?**

In contrast with other market-leading systems or technologies, such as Sirona's CEREC, WaterLase is protected by over 100 patents, which will allow us to protect our competitive advantage. The adoption cycle of new technologies is growing increasingly shorter and more advanced technologies like WaterLase will rap-

We regularly ask patients whether they would like to be treated by a conventional dentist or high-tech dentist, and almost 100 per cent of patients would like to be treated by a high-tech dentist. Therefore, we believe that WaterLase will be part of most dental practices in the near future.

**Thank you very much for the interview.**

AD

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