

Faculty abstracts

Thanasis Athanasiou

PRP treatment for improving the structural skin surface

PRP has long been known as an effective treatment in various medical fields due to its wound healing ability, as it contains an abundance of various growth factors. Recently topical injections of PRP have been clinically tried for treatment of photoageing-related skin wrinkles as it may induce ECM remodelling by stimulating the removal of photodamaged ECM components and the synthesis of new collagen by fibroblasts. Although more in vivo studies and research about the mechanism of PRP are required, the results so far indicate that PRP is effective in the rejuvenation of photo-aged skin and face and neck revitalization.

In a six-month study, a series of 33 patients were treated with one session of PRP injections combined with micro-needling. The PRP was obtained using the Magellan Platform. Our patients received a total of 10mL of PRP activated with calcium chloride at predefined injection points into the face and neck. After the treatment the automatically collected PPP was topically applied on the treated areas.

We documented the outcome with photos taken before and one month after each session using a high-resolution digital camera and a dermoscope. The results were evaluated using an imaging score and a patient and doctor satisfaction score. The overall results turned out to be very satisfactory with no notable complications.

In conclusion, skin surface improvement using PRP is a relatively easy technique with promising results, especially if combined with strategies for increasing skin penetration and inducing mild inflammatory reactions (micro needling).

A1 June 1, 11:15

Thanasis Athanasiou

Combination of PRP with the 4D high definition procedure

The 4D VASER high definition liposuction represents a new type of liposuction where the concepts of art and sculpture are integrated in the process. It requires the Vaser device which delivers a 30% tissue tightening effect and enhances the definition of the muscles and their tendons giving a more defined and athletic look to the patients who undergo the procedure. It is intended for people who have a good enough basic muscle infrastructure, stable and healthy dietary habits and desire the greatest possible results by exposing the anatomy of the abdominal and thoracic areas. In many cases, it is accompanied by lipofilling (fat grafting) in areas such as the buttocks or the breasts to better achieve an increase in the volume and the total body contouring effect that is desired.

One of the main issues with fat transplantation is the fat resorption. Recent studies have shown that the use of activated PRP as an additive in the transfer process can create an optimal microenvironment in the recipient bed that can expedite and enhance the wound-healing process and graft incorporation.

We harvested the PRP using the Magellan platform and activated it using calcium chloride.

Out of 65 patients that underwent the procedure, 20 men and 45 women, the vast majority had excellent results with zero or minor complications. The patients that received PRP enriched fat grafts showed greater graft volume retention over the period of six months. Results were based on clinical observations, patient satisfaction and ultrasound imaging.

A1 Jun 02, 08:00

Mark Clemens

Keynote address 1: Update on BIA-ALCL - what do we know 2017?

Breast implant-associated anaplastic large-cell lymphoma (BIA-ALCL) is a distinctive type of T-cell lymphoma arising around breast implants. In March 2017, the United States FDA released a safety communication regarding 359 adverse event reports of ALCL and breast implants and concluded that patients have a very low risk of developing ALCL adjacent to a textured breast implant. According to the World Health Organization, BIA-ALCL is not a breast cancer or cancer of the breast tissue; it is a lymphoma, a cancer of immune cells. The incidence of BIA-ALCL is estimated to be 1:1000-30,000 with textured breast implants. Recent case series have reported clinical presentation, prognosis, and treatment outcomes demonstrating the critical role for surgical management. Breast implant associated-ALCL (BIA-ALCL) is highly curable in the majority of patients. Informed consent should include the risk of BIA-ALCL with breast implant patients. Women with breast implants are encouraged to contact their plastic surgeon if they notice swelling, fluid collections, or unexpected changes in breast shape. Physicians are encouraged to send suspicious peri-prosthetic fluid for CD30

immunohistochemistry and confirm diagnoses with cell block cytology, and flow cytometry in symptomatic patients. Standardized diagnosis and treatment guidelines have been established by the National Comprehensive Cancer Network. The association of bacteria and biofilm with ALCL is currently being investigated and one theory is that biofilm may play a role in this disease process stressing the importance of best practice techniques intraoperatively. More information is needed to fully understand risk factors and etiology.

C1-C3 June 2, 16:00

Anand Deva

The Role of Bacterial Biofilm in Adverse Soft-Tissue Filler Reactions: A Combined Laboratory and Clinical Study

Background: The development of chronic nodules and granulomatous inflammation after filler injections has been attributed to bacterial biofilm infection.

The authors aimed to investigate the relationship between filler and bacterial biofilm using a combined in vitro and in vivo study.

Methods: In vitro assays to investigate the ability of filler materials to support the growth of *Staphylococcus epidermidis* biofilm and the effect of multiple needle passes through a biofilm-contaminated surface were designed. Analysis of clinical biopsy specimens from patients presenting with chronic granulomas following filler administration using a number of laboratory tests for biofilm was performed.

Results: All fillers (i.e., hyaluronic acid, polyacrylamide gel, and poly-L-lactic acid) supported the growth of *S. epidermidis* biofilm in vitro. Multiple needle passes through a biofilm-contaminated surface resulted in significantly increased contamination of filler material by a factor of 10,000 ($p < 0.001$). Six clinical samples from five patients all demonstrated bacterial biofilm. The mean number of bacteria was found to be 2.2×10^7 bacteria/mg tissue (range, 5.6×10^5 to 3.7×10^7 bacteria/mg tissue). Microbiome analysis detected a predominance of *Pseudomonas*, *Staphylococcus*, and *Propionibacterium* as present in these samples.

Conclusions: Filler material can support the growth of bacterial biofilm in vitro. Multiple needle passes can significantly increase the risk of filler contamination. Biofilm appears to be associated with high numbers in clinical samples of patients presenting with chronic granulomatous inflammation. Strategies to reduce the risk of bacterial contamination need to be further studied and translated into clinical practice. (*Plast. Reconstr. Surg.* 139: 613, 2017.)

A1 June 1, 09:00

Anand Deva

Bacterial biofilms, breast implants and BIA-ALCL

The role of bacteria and more specifically bacterial biofilm in medical device failure is becoming increasingly recognized. Device associated infection currently is estimated to cost over \$30 billion a year in the US alone due to revision surgery and/or implant failure.

For close to 2 decades, the evidence to support bacterial biofilms as a major cause of capsular contracture has been accumulating. Now there is strong translational evidence to support the prevention of breast implant contamination as they are placed into patients. This 14 point plan has now gathered support and represents today the best evidence based practice available to ensure that patients are given every chance for a good and stable long-term outcome.

More recently, the role of chronic bacterial infection on host immune defenses has been studied. This has implications for the relatively new entity Breast implant associated anaplastic large cell lymphoma (BIA-ALCL). This paper will summarize many areas of research and build the case for a unifying theory of BIA-ALCL. This cancer is likely to arise from the chronic interaction of three factors, textured implants, bacteria and the host response to inflammation.

C1-C3 June 2, 16:00

Nobutaka Furuyama

The Asian Patient, special consideration from a business perspective.

Asia is a huge potential market for medical aesthetics.

There are a lot of countries such as China, Vietnam, and Thailand, where the aesthetic surgery has yet to be general.

Recently, an increasing number of Chinese have been visiting Japan for medical aesthetic procedures since they prefer the strong spirit of hospitality "Omotenashi" and scrupulous in Japanese culture?

We have been utilizing these characters into our treatments by analyzing the difference of preference among countries.

It varies even among northeast Asia such as China, Korea and Japan, so the subtle changes have to be reflected in our treatment procedures.

In addition to this, we are analyzing the difference in the amount of use and the points of injections between Asians and Caucasians.

Their cranial shapes are distinctive, and also preferences in their appearances are not the same by races. Therefore, the infection method has to be different, and there must be applied different formulations and injection methods in Asians.

We will introduce the fact that we analyze the differences in skulls and national characters, and how we are applying the analysis into business strategies.

A1 June 1, 15:00

Günter Germann

How much can fat grafting improve the skin surface and update on adipose derived stem cells - what is the future for skin rejuvenation?

Skin therapies based on adipose tissue derived stem cells (ADSCs) are becoming more and more attractive, regarding the possible positive effects of mesenchymal stem cells on skin cells, such as an increase in collagen content, an improvement of nutrition by increased angiogenesis, a whitening effect through inhibition of tyrosine kinase effect, a reduced apoptosis and a suggested UV-protection of dermal fibroblasts.

ADSCs have been shown to release various growth factors into their immediate environment that could transmit these effects through a paracrine pathway. This mechanism, however, allows ADSCs to interact with tumor cells, too.

However, the area of clinical stem cell application is still a grey zone with an increasing number of indications and treatments advertised by various institutions without any scientific evidence.

The presentation will summarize recent findings of experimental and clinical stem cell research in skin rejuvenation and highlight possible negative side effects caused by interaction with local tumor cells, too.

A1 June 1, 11:15

Eyal Gur

A 5-10 years longevity follow-up of 860 patients 2006 - 2011 – Corset Plastimorphy, cervical fat layer sculpting and muscle plication

The longevity of face/neck lift was previously addressed in several studies with generally poor long term results to the neck component. We elected to assess the longevity of neck-lift surgery using standardized photographs and physical measurements.

From 2006 to 2011, 860 face and neck lifts were operated by the author. The surgical procedure always included the same components: corset platysmorphy, cervical fat shaving and SMAS and platysmal plication. Photographs were taken in a standardized fashion. In order to assess the degree of degradation in cervico-mental and mandibular angles, 40 primary face and neck lift patients were evaluated 5 to 10 years after surgery using measurements performed on those photographs.

During the first 5 years the cervico-mental angle decreased by 2 degrees. The mandibular angle decreased in 1 degree. In the next 5 years until 10 years from surgery the cervico-mental angle decreased by 5 degrees relative to pre-op and the mandibular angle decreased in 3 degrees. There was subjective degradation in the neck region in 3% of the patient by an independent assessors team and by the patient evaluation of the photographs at 1-5 years and 7% at 5-10 years.

In conclusion there is a minor relapse of neck and jowls correction at the first 5 years from surgery increasing gradually in the next 5 years but in relatively modest fashion. Long-term subjective aesthetic assessment remains positive in most of the patients.

This study shows a predicted longevity of neck and jowls lift while using the corset platysmorphy, fat shaving and muscle plication at neck-lift surgery.

C1-C3 June 2, 8:00

Eyal Gur

Current approach for facial paralysis reconstruction – A 16-year Perspective of 279 Patients - An emphasis on post cosmetic surgery iatrogenic insult to the facial nerve

Facial nerve paralysis presents a multitude of problems arising from a paretic periorbital and facial complex.

Reanimation of the paralyzed face deals with restoration of form and function; it is an immense reconstructive

challenge necessitating multidisciplinary management. The goals of facial reanimation are to achieve protection of eye, facial symmetry at rest, voluntary symmetric-facial movement, and to restore involuntary independent mimetic facial expression. To allow the disabled individual regain confidence in its body image and improve its social-psychological status. Specifically with iatrogenic injury to the facial nerve at an aesthetic surgery the devastating outcome lies aesthetically and functionally on the patient but the patient and surgeon experience painful psychological difficulty.

The wide range of facial paralysis deficits requires careful study of the deformity and symptoms in each individual patient, leading to a coherent approach and customized surgical plan.

In this presentation we will present the current methods of facial paralysis reconstruction in different timing and setting, specifically at the unbearable post face lift iatrogenic injury and paralysis.

C1-C3 June 2, 8:00

Per Hedén

Do facelifts improve the facial skin structure?

It is no doubt that facelifts are one of the most powerful ways of rejuvenating the face. We do however know that there are limitations of this rejuvenation in the central facial triangle and especially perioral region with vertical barcode rhytides etc. is not improved at all by a facelift. Therefore, many plastic surgeons combine their facelifts with local treatments with perioral rhytids or other procedures in the central facial triangle including dermabrasio, laser and fatgrafting with NANO och SNIF fat. These lateral procedures can greatly improve the perioral and periorbital rhytides and when evaluating facelift results obviously these secondary procedures have to be excluded. However when it comes to the appearance of the cheek area this is usually not treated in the same way as the perioral area. Thus the effect of facelift on the skin in the cheek area can be evaluated. There is no doubt that skin excess worsens the appearance of the skin structure but lifting and stretching of the skin doesn't have a direct effect on the skin in itself. However, due to the lifting effect there will be improved appearance of the skin that in many occasions surpasses what is seen by other modalities to treat the skin structure. These conditions will be described and evaluated in this presentation.

A1 June 1, 11:15

Per Hedén

How to build a business - from a small to a large clinic

Entrepreneurship and business building is nothing that physicians usually have education in. In spite of that, doctors working as private health care providers must acquire skills in business building. It is common that doctors in this respect focus on their own aspects of building his or her business larger. Many doctors are also individualists and prefer to work alone in spite of the fact that we know that strength is built in groups. Therefore, one essential part of developing a larger business is to affiliate with good partners that share the same visions of growth for your company. Extremely important is the way that employees are selected, remembering that receptionists are the first contact with our patients. In this presentation the experience from growing Akademikliniken from a small clinic to one of the largest clinics in the world will be shared with the audience.

A1 June 1, 15:00

Per Hedén

Hyaluronidase update: Dilution, injection techniques, amount and allergic reactions

Any physician who injects hyaluronic acid must be prepared for aesthetic or functional complications. This could involve poor aesthetic outcome with oedema and swelling of the hygroscopic material in the periorbital region or an intravascular injection resulting in impaired circulation to the skin, or even worse blindness. The mechanisms with these latter complications could either be injection into the trunk of the artery and spreading of the material along the branching or injection peripherally overcoming the arterial blood pressure and retrograde filling into to tree of that artery. The symptoms of an intra-arterial injection could be blanching and pain, but it is not always present. If encountering these problems it is important to be very active in the treatment. Thus immediate injection of hyaluronidase will administered and it is the presenter's belief that Hyaluronic acid should never be injected without having the availability of hyaluronidase at the same time. Previously the regime for treatment was relatively conservative but recent regime has recommended repeated injections until the circulation cleared. It is important to understand that hyaluronidase is an enzyme and that there are risks for allergic reactions, therefore anybody who injects hyaluronic acid should have hyaluronidase available and also Adrenaline and corticosteroids in the event of an allergic reaction to injection of

hyaluronidase. The dilution, frequencies and techniques for injection of hyaluronidase will be presented in this lecture.

A1 June 2, 14:00

Robert Langer

Biomaterials in medicine in the 21st Century

Biomaterials and biomaterials based drug delivery systems are having an enormous impact on human health. For example, new drug delivery technologies including nanoparticles are now being studied for treating cancer and other illnesses, as are novel microchips for drug delivery. Approaches for creating new biomaterials with improved in vivo biocompatibility are being evaluated and examples where such materials are used in tissue regeneration and prosthetics are discussed. Finally, by combining mammalian cells, including stem cells, with synthetic polymers, new approaches for engineering tissues are being developed that may someday help in various diseases. Examples in the areas of skin and spinal cord repair and new approaches towards curing Type 1 diabetes are discussed.

A1 June 1, 08:15

Robert Langer

Approaches to achieve biocompatibility of foreign materials

The body responds to implanted prosthetic devices with an immune cell mediated foreign body response (FBR), which results in the deposition of a fibrous collagenous capsule. Capsular contracture (CC), the progressive growth and contraction of this peri-prosthetic capsule, is the most common complication of aesthetic and reconstructive breast surgery. This adverse response causes significant pain and discomfort for the patient and is the most common indication for revisionary surgery. Our lab sought to investigate the role of surface topography of silicone implants using Establishment Lab's proprietary SilkSurface™ surface textured technology. The SilkSurface™ design was developed with the aim of achieving reduced capsular contracture responses in human patients thereby improving the safety profile of prosthetic breast implants. Using a C57BL/6 mouse model of fibrosis we investigated FBR to miniaturized silicone implants that were smooth in texture or prepared with a surface topography matched to SilkSurface™ design. The miniaturized implants were surgically placed subcutaneously into the dorsa of the mice, and at 3, 6, and 12 weeks post-implantation peri-prosthetic tissue was removed for histologic and immune cell analysis. Our data suggests that the SilkSurface™ does significantly reduce capsule formation surrounding implants and immune cell composition analysis of peri-prosthetic tissue suggests that an increase in an immune suppressive T cell subpopulation occurs in response to SilkSurface™ implants. As fibrotic capsule formation precedes capsular contracture, these results suggest contracture itself may be significantly reduced.

A1 June 1, 09:00

TracyAnn Perry

New findings on the biological response to macrot textured surfaces

The focus of this Allergan R&D program is to gain a holistic understanding of the biological performance characteristics of a textured breast implant. In addition to traditional biocompatibility and safety testing, we use a number of quantitative methods to characterize the properties of the surface texture, with a view to understanding how those properties correlate to the foreign body response at the implant-tissue interface. Characterizing differences among available surface textures can be important for predicting and optimizing performance.

Scanning electron microscopy and X-ray computed tomography imaging were used to characterize the topography and calculated texture surface area of 12 unique breast implants from 7 different manufacturers. Surface areas from the front of the shells ranged from 85 to 551 mm² (8% to 602% higher than the surface area of a flat surface). Textures were grouped into 4 categories based on surface area measurements: smooth/nanotexture (80–100 mm²), microtexture (100–200 mm²), macrottexture (200–300 mm²), and macrottexture-plus (>300 mm²). In rat models, increasing capsule disruption, tissue ingrowth, and tissue adherence were seen with each category of increasing surface texture complexity.

Preclinical capsule formation studies have shown comparability with clinical performance in that structural modification of the surface texture can markedly alter the pathophysiology of the foreign body response. In short, surface area can be used to categorize breast implant surface textures and is an important factor contributing to tissue ingrowth and adherence.

C1-C3 June 2, 16:00

Nikolaus Raab

Large interest for light weight breast implants by patients – experiences from my first 100 cases

Successful augmentation is the combination of the quality of the implant and the skills of the surgeon and the positive experience of the patient. Over the last fifty years, surgical skills have come a long way but breast implants have hardly changed, until now.

B-Lite Lightweight Breast Implants are an innovative, form-stable, silicone gel implant featuring hollow borosilicate microspheres chemically bound within the gel filler network. The proprietary design enables considerably reduced implant weight of up to 30% lower, while maintaining the size, form and function of traditional silicone gel breast implants. Women are becoming increasingly discerning about the choices available with access to surgeon rating sites, patient video testimonials and product information driving the need for surgeons and clinics to raise their game in this competitive market

The benefits of B-Lite are intuitive to women and once proposed the majority will not consider heavier alternatives. It's logical to them that using a lighter implant will reduce stress on the surrounding tissues helping to maintain the surgical results for longer whilst enhancing everyday comfort.

As with common shifts to lightweight options, such as the mobile phone, even at a significant price premium, the majority of my patients convert to B-Lite which I integrate into my holistic approach to care including nutrition, lymphatic massage and personal training. Feedback from my first 100 patients indicates significantly less pain, shorter recovery times and very high satisfaction.

B-Lite is turning into the standard of care in my clinic. Offering a meaningful innovation, confidence in safety and a premium service has increased my consultation and conversion rates as well as revenue per procedure.

B-Lite is the core ingredient to my holistic approach to Breast augmentation.

A1 June 3, 09:00

Michael Schwartz

WORKSHOP: Use of mesh support in mastopexy and revision breast surgery

Presentation of over 75 cases using non-Biologic suture mesh to support the breast. Mastopexy, augmentation mastopexy, and revision breast surgery will be discussed. Long term results over 3 years follow up will be presented. Video demonstration of personal technique will be presented.

Room 23 June 2, 07:00

Michael Schwartz

Breast implant removal and Mastopexy - Trends, safety and technique

An increasing number of patients present with breast and implant related complaints requesting device removal: implant age, increased breast size, ptosis, rupture, capsular contracture and/or general fear or dissatisfaction. The evaluation, techniques for implant removal and concurrent mastopexy, and the avoidance of complications will be discussed.

C1-C3 June 2, 14:00

Michael Schwartz

Five year experience with Shaped, highly cohesive gel and texturing - A US perspective

A discussion of a Single US surgeon's transition from round smooth implants (Both saline and silicone) to textured highly cohesive silicone gel. The author's experience with over 800 cases since FDA approval. Included will be the advantages of adopting these devices, complications unique to this transition, and thoughts regarding the current concerns with texturing from the US perspective. An algorithm for selection of smooth, textured and shaped implants will be presented.

A1 June 3, 09:00

Sandrine Sebban

Combining different methods to improve the skin's surface

The physicochemical properties of hyaluronic acids have the capacity to change and adapt perfectly to our needs, in terms of the treatment of wrinkles, the restoration of volume and the hydration of the skin.

Depending on their characteristics, they are injected into the bones, fat and cutaneous tissue.

Alongside this treatment, there are numerous laser technology, radiofrequency, ultrasonic, peeling and absorbable thread treatments on the market that are less invasive and more effective.

The trend is to opt for combined treatments that simultaneously boost collagen production, enhance hydration and allow for the reshaping of the facial structure.

A combination of treatments allows for optimum, natural facial rejuvenation results to be obtained without having to undergo surgery.

Clearly defined treatment protocols have been proven to be successful:

- Hyaluronic acid in a sandwich technique (cohesive, elastic, non-crosslinked)
- Hyaluronic acid + fractional laser treatment
- Hyaluronic acid + radiofrequency treatment
- Hyaluronic acid + peeling treatment
- Hyaluronic acid + tensor threads

Following combined treatments, the skin is firmer, more hydrated, and the face is restructured in a natural and sustainable way, with very few side effects.

A1 June 1, 11:15

Sandrine Sebban

Mid cheeks and lips

The treatment of the mid-cheek and perioral areas is the most delicate in terms of facial injections with hyaluronic acid.

They can create an artificial, ill-proportioned or heavy look in the areas of skin that undergo significant movement.

The aim of the treatment in these areas is to improve fine wrinkles while maintaining overall harmony, a natural look and the dynamic of the face in optimal safety conditions.

To ensure the above, the fan-shape nappage technique on the superficial hypodermic layers, using a fine cannula with a single injection for treating the entire area, together with an elastic crosslinked hyaluronic acid is the most suitable method. The results are immediate, natural and harmonious and show minimum side effects.

This method allows for the treatment, via a single injection, of cheek wrinkles, the naso-labial fold, the lips and the lip contour as well as the perioral wrinkles.

A1 June 2, 16:00

Sandrine Sebban

The neck and décolletage

The neck and décolletage are important areas to consider in facial rejuvenation.

Both areas are directly associated with the face and together form an indivisible whole.

Until now, treating the neck and décolletage using hyaluronic acid was not an easy task.

As we age, the skin becomes finer in this area and there is very little fat. Needle injections of all types of hyaluronic acids, even the least crosslinked versions, often reveal poor and inconsistent results that are not very long-lasting.

Long cannulas with wide diameters have revolutionised injection techniques in the neck and décolletage region. By using elastic crosslinked hyaluronic acids with strong resiliency and by using a nappage technique over the entire facial contour, neck and décolletage area, skin can be effectively tightened.

The results are harmonious, the skin is lifted and hydrated and wrinkles are visibly improved.

A1 June 2, 10:30

Sandrine Sebban

Clinical experiences of skin elevation and structural changes after HA injections

As we age, the facial skin loses its firmness, the bones resorb, the muscles slacken and the fat moves towards the central area of the face.

In the field of injection, the solution for preserving a natural and harmonious facial appearance is to treat it as a whole using a non-traumatic method that allows for the restoration of bone loss, fat loss and improves the surface of the skin.

The "Stop Facial Aging Method" provides the first step towards combating these effects. By injecting a very cohesive hyaluronic acid (such as Teosyal Ultra Deep) in the upper layer of the periosteum using a cannula, a lifting effect can be achieved, while restoring facial structure.

The second step involves a nappage technique on the entire subcutaneous tissue using a more elastic hyaluronic acid (such as RHA3 or 4). It promotes the re-plumping of the tissues and has a tightening effect.

Lastly, the third step involves a very superficial fan-shape nappage technique using Redensity I, which further boosts the skin's radiance and enhances hydration.

The face should be considered as a whole.

The hyaluronic injections should be performed using a cannula in all 3 anatomical planes in order to preserve a natural-looking face and to obtain a lifting effect in optimal safety conditions.'

C1-C3 June 3, 9:00

Mario Trelles

Laser tissue interaction from the surgeon's point of view

Energy-based devices offering current sophisticated technological advances are used in various modalities to treat facial aging signs and skin disorders. In case of lasers, knowledge of settings, surgical protocols, and light tissue interaction subtleness, are of importance in view to achieve the best outcome from surgery.

The use of lasers result in rejuvenation of skin with tightening of tissue, because treatment stimulates collagen and elastin formation. These occur at time of wound repair following the "therapeutic laser aggression".

Laser energy delivered in pulses when interact with the skin achieves different effects, depending on energy density (radiant fluence) received by area of targeted tissue. Selectivity of effects are closely related to time of irradiation. The wavelength is important to define penetration of laser light. However, if tissue irradiation is longer than the thermal relaxation time (TRT) of the target, heat propagation will occur with loss of selectivity of effects that should stay within the target, irrespective of the wavelength used.

In considering advantages and disadvantages offered by lasers for rejuvenating the skin, physician's expertise, as always, is crucial. It is of fundamental importance to consider each patient's skin characteristics and expectation of results. In evaluating the potential candidate for treatment, factors such as number of sessions, costs, safety, and above all a strict patient compliance is mandatory.

C1-C3 June 3, 14:00

Mario Trelles

Trans Epidermization of drugs with the aid of Radio Frequency (RF) and Ultrasound for enhancing facial skin rejuvenation treatment outcome

Unipolar fractional ablative radiofrequency (RF) technology used with acoustic pressure ultrasound, can guide to the dermis cosmeceuticals applied on the skin surface. RF uses needle-like micro electrodes to form fractionated perforation in the epidermis which serves to introduce drugs in the skin.

In fractional skin rejuvenation, treatment sessions are at 3-weeks intervals, proving to be very effective for bettering the skin condition.

Drugs introduced to the skin enhance results done for facial skin beautification activating effects produced by RF and Ultrasound combined treatment. Location of cosmeceuticals has been trace by staining them with fluorescein noticing its effective deposit into the dermis.

Intensity of dermal fluorescence in tissue when compared to that of auto fluorescence controls, demonstrates significant differences. Trans-epidermal delivery procedure of drugs carried out by RF and Ultrasounds facilitates prolonged and effective dermal effects when treating skin disorders.

C1-C3 June 3, 14:00

Patrick Trevidic

How to combine fillers with surgery

Fillers and surgery concourse to the same target: fighting the aging process

Combining fillers and surgery at the same time is unusual unless when you want your patient to benefit from the anaesthesia for pain purpose when injecting sensitive area like lips for example.

Fillers can be injected after surgery to erase wrinkles or depression that remain after the facial surgery.

Filler can treat surgery complication (nose for example) avoiding a secondary procedure.

But surgery can also treat filler complications.

Therefore the combined therapy is useful for nearly all patients

A1 June 2, 08:00

Patrick Trevidic

Rejuvenation of the hands

For the rejuvenation of the hands, I use the SSTT technique (Scrape skin threading technique)

This technique has been published by Dr LEFEBVRE-VILLARDEBO in the book Master Collection V3. E2e

Publishing www.expert2expert.co.uk .

Based on anatomical and radiological studies this technique is the only one, where the injected filler where not around the tendons but under the dermis

I use a 23G cannulas and make my entry points (normally 3 to 4) with a 18G needle at each top of the triangles.

When advancing the cannula, I take care to scrape the undersurface of the dermis all the way with a fan technique injecting the filler when I withdraw the syringe.

I don't inject too much product and always regularly and gently. I maintain some subtle relief.

Plast Reconstr Surg. 2015 Nov;136(5 Suppl):258S-275S.

Hand: Clinical Anatomy and Regional Approaches with Injectable Fillers.

Lefebvre-Vilardebo M1, Trevidic P, Moradi A, Busso M, Sutton AB, Bucay VW

A1 June 2, 10:30

Patrick Trevidic

The temple

For the temple, I use what I called the "Shot gun technique" in the Master Collection 2/E2e Medical Publishing www.expert2expert.co.uk

The aim of this technique is to deposit filler on the deep side of the temporal muscle in contact with the periosteum.

To ensure the correct placement of the product I use a long needle (more than 25mm) introduced perpendicular to the surface of the skin and advanced until the bone is reached.

The entry point is the point of deepest depression.

The injection is slow and painless with an average of 1ml per side

This technique is the safest one because it's the deepest one. The anatomical dangers are superficial.

Upper Face: Clinical Anatomy and Regional Approaches with Injectable Fillers.

Sykes JM, Cotofana S, Trevidic P, Solish N, Carruthers J, Carruthers A, Moradi A, Swift A, Massry GG, Lambros V, Remington BK.

Plast Reconstr Surg. 2015 Nov;136(5 Suppl):204S-218S

A1 June 2, 10:30

Patrick Trevidic

The malar area: high risk for aesthetic complications and their anatomical explanation

The malar area is a complex anatomical area.

Fixed points, orbicularis oculi, fat compartments, lymphatics vessels are involved in this anatomy

One of the fixed point, the zygomatic ligament limits the malar mounds by creating a border downward for swelling and bruising.

Malar mounds appear for unclear etiology and will be at the beginning reversible, but with the increase of skin laxity, it can create a definitive skin pocket. This pocket can then only be corrected with surgery.

All superficial injection of filler, threads in this area or toxin in the crowfeet can trigger and increase this.

A1 June 2, 14:00

Patrick Trevidic

Mid cheek and lips - fine lines

For the treatment of mid cheek and lips fine lines, I use the "blanching technique" described by P MICHEELS in 2013.

This technique follows some rules, but the main one is: the angle between the needle and the skin needs to be less than 30° to inject intradermally. The hyaluronic acid is a low cohesive one.

The improvement of volume of the cheek and lips may correct the fine lines but not entirely with the aesthetic risk to inject too much.

Plast Reconstr Surg. 2013 Oct;132(4 Suppl 2):59S-68S.

A blanching technique for intradermal injection of the hyaluronic acid Belotero.

Micheels P, Sarazin D, Besse S, Sundaram H, Flynn TC

A1 June 2, 16:00

Patrick Trevidic

KEYNOTE address: Facial anatomy important considerations when injecting fillers and neurotoxins - Video demo

The knowledge of anatomy is essential for filler and neurotoxin injection

Not only the classical anatomy but also the 3D anatomy that allow the injection to reach the right target plane without avoiding anatomical dangers

On this E2e video you will see a lot of examples from our cadaver lab dissection in PARIS

Anatomy of the Lower Face and Botulinum Toxin Injections.

Trévidic P, Sykes J, Criollo-Lamilla G.

Plast Reconstr Surg. 2015 Nov;136(5 Suppl):84S-91S

Upper Face: Clinical Anatomy and Regional Approaches with Injectable Fillers.

Sykes JM, Cotofana S, Trevidic P, Solish N, Carruthers J, Carruthers A, Moradi A, Swift A, Massry GG, Lambros V, Remington BK.

Plast Reconstr Surg. 2015 Nov;136(5 Suppl):204S-218S.

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C1-C3 June 3, 11:00

Ines Verner

Resurfacing in 2017 - where do we stand?

The main skin changes with aging are dyspigmentation, wrinkles, rough surface, solar lentigines, teleangiectasia and laxity.

The histological changes that accompany these clinical changes are found mainly in the epidermis and upper dermis. Thus they are amenable to skin resurfacing.

Skin resurfacing, traditionally performed by chemical peels and light sources (lasers or IPL's), has evolved rapidly over the past two decades.

As a rule, ablative resurfacing can give excellent results but the massive injury to epidermis and dermis is associated with a high risk for complications and a prolonged recovery requiring downtime. Non-ablative resurfacing on the other hand had a low risk for complications, very few side effects but the clinical results were very modest.

Recently new fractional technologies have been introduced, which on the one hand offer efficacy of results and on the other hand have very few complications and nearly no downtime.

These new technologies are: fractional radiofrequency, micro needling RF and some new non-ablative lasers. In fractional ablative radiofrequency, RF is used to ablate and heat tissue and to thus achieve new collagen formation with tissue tightening and overall skin rejuvenation.

The new micro needling RF technologies deliver the energy into the dermis by needles leading to even better epidermal sparing and even less side effects.

And with the new fractional non-ablative lasers, we are able to induce coagulation zones in the dermis. Thus leading to new collagen formation and skin tightening after several treatments.

An overview of available resurfacing techniques and technologies will be given and some new technologies will be discussed.

Jun 01, 11:15

Ines Verner

WORKSHOP: Resurfacing a comprehensive review and evaluation of techniques. What is right for your practice?

Skin resurfacing, traditionally performed by chemical peels and light sources (lasers or IPL's), has evolved rapidly over the past two decades.

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And with the new fractional non-ablative lasers, we are able to induce coagulation zones in the dermis. Thus leading to new collagen formation and skin tightening after several treatments.

An overview of available resurfacing techniques and technologies will be presented and some new techniques and possible combinations will be discussed.

Room 26 June 1, 18:00

Ines Verner

Tissue Tightening by Radiofrequency

Multiple energy based devices (EBD's) are used nowadays for tissue tightening and rejuvenation. Most of these energy based devices induce a wound healing response in tissue leading to shortening and thickening of collagen fibers with afterwards collagen remodeling with replacement of old collagen by new collagen fibers. New hyaluronic acid and elastin is formed and the whole extracellular matrix is renewed. This renewal of skin and connective tissue leads to tissue tightening, lifting and rejuvenation.

If in the past we thought that we need an extensive wound healing response to induce this tissue renewal, nowadays we know that even with limited wound healing response limited inflammation, we can achieve remarkable tightening results.

Tissue tightening by different RF devices, their tissue interaction and their wound healing mechanisms with correlation to clinical results will be discussed.

C1-C3 June 3, 14:00

Ines Verner

What's New in Energy Based Devices (EBDs)?

Tremendous developments have been made in recent years in the field of Energy Based Devices (EBD's). Thanks to this and thanks to our better understanding of device- tissue interactions, we can treat more efficiently with fewer side effects. Moreover, new indications for treatment are coming up.

Lasers and other EBD's have been used for years for the removal of benign skin lesions, skin rejuvenation and hair removal. Following the demand for procedures with minimal or no downtime, new non-ablative lasers, radiofrequency devices and ultrasound technologies have been developed recently. These new technologies can be used with efficiently for skin rejuvenation, body contouring, scar remodeling, acne, hair growth stimulation and more.

An overview of new technologies will be given and several new indications will be discussed.

C1-C3 June 3, 14:00

Ines Verner

Combining radio frequency and chemical peels

Many changes are seen on our skin due to aging. The main changes are dyspigmentation, wrinkles, rough surface, solar lentigines, teleangiectasia and skin laxity.

The histological changes that accompany these clinical changes are found mainly in the epidermis and in the upper dermis. Therefore they are amenable to skin resurfacing.

Fractional radiofrequency (RF) resurfacing can effectively improve skin aging after several treatments. In this form of resurfacing fractional ablative RF is used to ablate and heat tissue and to thus achieve new collagen formation with tissue tightening and overall skin rejuvenation.

When this new technology is combined with the more traditional 20% TCA chemical peel the clinical results achieved are even more remarkable and pronounced.

While 20% TCA leads to epidermal resurfacing and thus helps to improve dyspigmentation and surface irregularities, fractional RF leads to dermal remodeling and thus to new collagen formation and tissue tightening.

Combining these two modalities gives us the possibility to achieve remarkable clinical results with almost no downtime.

C1-C3 June 3, 14:00

Dolores Wolfram

How to minimize biofilm formation

Biofilm formation by human bacterial pathogens on implanted medical devices causes aside major morbidity and mortality also tremendous health care costs. Biofilms consist of microbial communities that are entrapped in a matrix of highly hydrated extracellular polymeric substances forming a densely packed diffusion barrier to antibiotics and human immunity in general.

As a result, novel therapeutic strategies other than conventional antibiotic therapies are in urgent need. We will highlight the recent research concerning new alternative approaches to prevent or treat biofilm formation.

Current anti-biofilm strategies can be divided into two groups (a) targeting the biofilm forming process of bacteria based on the molecular understanding of this process via small molecules and enzymes which disrupt the biofilm (b) anti-biofilm technologies focusing on biomaterial modifications to make the medical devices resistant to biofilm formation. Moreover, we will explain immunological mechanisms leading to the phenomenon of biofilm formation.

A1 June 1, 9:00

Dolores Wolfram

Immuno-biocompatibility of silicone mammary implants

Silicone mammary implants (SMIs) have been used for aesthetic as well as reconstructive indications for more than 50 years. Local and systemic complications in SMI carriers are frequently reported and are controversially discussed in the literature. However, it is generally accepted that the most common complication of silicone mammary implants (SMIs) is peri-SMI capsular contracture, with a reported incidence from 0.5% to 50%. This high variability of reported capsular contracture rates depends on many factors: different time spans, types of implants used, implant locations, and others such as “defensive reporting”. Capsule contraction is the result of fibrosis occurring in the surrounding tissue. Inflammation leads to activation of cells of the innate and adaptive immunity (e.g. mast cells, fibroblasts, macrophages, T-cells). Interestingly, the implant surface texture may influence the breast fibroblast-derived morphology and behavior. In fact, smooth surfaces have a higher incidence of contracture formation; by contrast textured implants have a reduced contracture rates.

In addition, different coating of those surfaces can enhance the fibroblast adhesion. These results suggest that the surface texture of the implant also can affect the immune response to the material. During the fibrotic process, cells of adaptive immunity are also involved. It was shown that effector T cells (Teff), i.e. TH2 and TH17, lead to chronic inflammation. We have also shown that -at least- in an early stage, regulatory T cells (Tregs) may play an important role in controlling capsular fibrosis, by down-regulation T effector cells. At present, we are attempting to (i) investigate the influence on immune response of different textured SMIs and (ii) modify the surface of SMIs in order to normalize the Teff-Treg imbalance in the capsular tissue.

C1-C3 June 2, 16:00