Hair's the Question*

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*The questions presented by the author are not taken from the ABHRS item pool and accordingly will not be found on the ABHRS Certifying Examination.

Female hair loss diagnosis and treatment has been getting a little more attention lately thanks to several treatment updates and improved understanding of some of the underlying causes. And if you read the last issue of the *Forum* (May/June 2014; Vol. 24, No. 3), Drs. Bernard Nusbaum and Nicole Rogers also provided great summaries of their approaches to female hair loss along with some recent information. Test how well you have been scanning the literature of the last 5 years for female hair loss!



New Thinking for Female Hair Loss

- 1. A 25-year-old woman walks into your office with a biopsyproven case of androgenetic alopecia. She is confused by all the diagnostic methods available and asks you which of the following methods is superior for diagnosing female androgenetic alopecia in a case like hers. You tell her that besides a biopsy, which of the following is best?
 - A. Trichoscopy (also known as scalp dermoscopy) is best especially in early cases.
 - B. Trichogram is best.
 - C. 17 hydroxyprogesterone deficiency blood testing is best.
 - D. HairCheck™ device measurement (i.e., cross-sectional hair shaft diameter measurement) is the best diagnostic tool available.
- 2. Which of the following treatments was recently approved by the FDA for treating female androgenetic alopecia?
 - A. 2% minoxidil foam
 - B. 2% minoxidil oral preparation
 - C. 5% minoxidil foam
 - D. 5mg finasteride oral tablets
- 3. Which of the following treatment devices has received 510K approval from the FDA for treating female androgenetic alopecia?
 - A. Any low level laser therapy (LLLT) in the 640-730nm range for at least 20 minutes twice weekly
 - B. HairMax® LaserComb, MEP-90, Theradome, and Sunetics laser devices
 - C. Any device emitting light in the 640-730nm range for at least 20 minutes twice weekly including both LEDs and lasers
 - Sharks with laser beams attached to their heads a la the movie Austin Powers
- 4. Which of the below is one possible loci conferring genetic susceptibility to female pattern hair loss?
 - A. 20p11
 - B. AR/EDA2R for early onset FPHL
 - C. AR/EDA2R for late onset FPHL
 - D. Unknown and unknowable

- 5. In addition to checking a Ferritin and ruling out thyroid disease in your female patients with a presenting complaint of hair loss, which of the following might you add to your favorite hair loss laboratory panel based on recent data?
 - A. Vitamin D levels
 - B. Lead blood levels
 - C. BaldX genetic testing
 - D. Inflammatory markers
- 6. Based on recent data, which of the following cosmetic hair treatments might you advise your patients (particularly female patients) to avoid?
 - A. Rinse-out coloring agents and shampoos with sulfates
 - B. Cool blow dryer hair drying habits
 - C. Beer application to the hair
 - D. Brazilian keratin treatments
- 7. If you were to choose a dosing level for finasteride for a female patient with androgenetic alopecia (realizing, of course, that it is an off-label use), which of the following might be optimal based on recent data?
 - A. 1mg PO daily
 - B. 1ml topically daily
 - C. 2.5mg PO daily
 - D. 5mg PO daily
- 8. Androgenetic alopecia has demonstrated not only association with but also increased mortality with which of the following disease processes?
 - A. Psoriasis and schizophrenia
 - B. Diabetes mellitus and heart disease
 - C. Crohn's disease and aortic aneurism
 - D. Prostate and breast cancers

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Answers

- 1. A. Trichoscopy is correct according to Galliker, et al. I like Trichograms as well (and wish I had the capability!) but after reviewing the literature, the preponderance of evidence seems to fall on the side of direct visualization and characterization with several classification systems and diagnostic criteria available for individual practitioners to decide their favorite method. The HairCheck device is excellent for following patient response but should not be considered diagnostic since significant intra-patient variability exists. Checking 17 hydroxyprogesterone levels for deficiency may help in cases of suspected hyperandrogenism but is not standard for diagnosing FPHL.
- C. As of February 28, 2014, this answer can be found on the FDA's website.
- 3. **B.** This is correct as of December 2013 and more devices are sure to follow (and this list may not be all-inclusive either—nor do I own stock in the manufacturers or sell any of these devices). Of note is the recent proliferation of homeuse hands-free devices that are popular with patients from a convenience standpoint. It seems that the data supports the efficacy of lasers for hair growth via photobiostimulation (see my previous quizzes about LLLT for references), but LEDs may prove effective in future studies as well.
- 4. **B.** This is based on an interesting little study from Redler et al. that came out in 2012, and it raises the question of whether FPHL will be predictable via genetic testing in the near future. Already companies such as BaldX claim to be able to predict genetic susceptibility with a cheek swab. 20p11 is the *region* in male pattern hair loss that is a genetic risk loci and AR/EDA2R is a *gene* that may predict risk for male pattern hair loss. There are several others of these but these are two of the important ones to remember when you are searching the literature. However, no definitive genetic markers have been pinned down for females yet.
- 5. A. Checking Vitamin D levels has more recently become popular among physicians I have polled, especially if their patient's history seems to suggest alopecia areata (diffuse) or an ongoing telogen effluvium. Chronic lead poisoning may cause hair loss, but it is rare and would not be indicated in every patient. Genetic testing is not widely available at this time. Inflammation may be more significant in the physiology of female hair loss than originally realized, and more so than in male pattern hair loss, but inflammatory markers are too general to add substantive diagnostic power to an evaluation.
- 6. D. Keratin treatments is the answer I was looking for, but C is NOT a joke (see http://www.womansday.com/style-beauty/ beauty-tips-products/8-homemade-hair-treatments-110251). The reason to avoid these "Brazilian Blowouts" is the amount of formaldehyde contained in several of them.
- 7. **D.** This data is not definitive, merely suggestive since only a few studies have been done. That being said, 5-alpha reductase inhibition and anti-androgen drugs are showing promise as effective inhibitors of future miniaturization in females (and possibly even of re-growth of hair in certain cases). In my opinion, topical finasteride does not have enough clinical data to recommend it.

8. **B.** Although not strictly associated with FPHL, this blew me away. I would have picked my teaser answer of D with all the cancers, since the Internet is full of scary misinformation on these topics. However, the study out of Taiwan was powerful and convincing (N=7,252 subjects!). Now we just need a study that demonstrates that replacing the hair via hair transplant surgery reduces mortality from diabetes mellitus and heart disease and we are in business!

Bibliography

(Note that ALL of these articles are published within the last 5 years and that the recent ACell/platelet-rich plasma (PRP) studies that I saw on PubMed were either investigational or concluded that there was not enough evidence to draw conclusions on the efficacy of this therapy for women with hair loss. Hence, it was not included as a question on this particular quiz!)

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Meetings and Studies

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Below are summaries of four well-organized and successful hair restoration meetings held in different countries and continents over the last 3 months. Three of them are related to ISHRS Global Council regional societies (the Brazilian, South Korean, and Italian Societies), and the fourth was an ISHRS Regional Workshop held in Brussels. As the summaries show, they were rich with content. A variety of topics were covered in the regional society meetings; in Brussels, the focus was donor harvesting with strip and FUE techniques. A big thank-you to all of the meeting reviewers!



Review of the 4th Annual Scientific Meeting of Korean Society of Hair Restoration Surgery May 11, 2014 • Seoul, South Korea

Jae-Hyun Park, MD, and Tommy Hwang, MD, PhD Seoul, South Korea Jay8384@naver.com

The 4th Annual Scientific Meeting of Korean Society of Hair Restoration Surgery was held at the Baekbum Memorial Museum. The KSHRS (Korean Society of Hair Restoration Surgery) has come a long way as it holds its 4th annual scientific meeting. With about 200 physicians actively participating, it is one of the most organized and most active societies in holding academic meetings and discussing the latest



developments in the field of hair transplantation

KSHRS Chairman Dr. Jae-Heon Jung and his organizing committee did a lot to make this event happen. The annual meeting was kicked off with the Dr. Jung's opening remarks then it was off to either the main general session, an instructional seminar program, or a Surgical Assistants Program.

Professor Moon-Kyu Kim of Kyungpook National University gave a special lecture on the stem cell in hair follicles. Additional lectures included Dr. Tommy Hwang's presentation, "Depth Controlled Hair Transplantation."

Six presentations in free papers were held during the morning, among which Dr. Hyun Wook Bae's presentation "Escalator technique in FUE" was the most memorable. The key tips given in this presentation was that there are cases where the angle of the hair follicle lying beneath the skin is more acute than the angle of the hair exiting the skin. In such cases, a slight pushing during the FUE punching procedure, as if when one takes an escalator in a department store, helps to reduce the transection rate and to gain a higher yield rate. It was a very helpful surgical tip since the presenter shared his surgical expertise gained through various cases of FUE practice.

In the seminar room, starting in the early morning, there was an instructional course on the overall information regarding hair transplantation. I (Dr. Park) gave a presentation to beginners on the subject of consultation, design, and amount of grafts, which laid out the most basic step for hair transplantation. There were also other helpful lectures drawn from rich clinical experience with follicular unit strip surgery (FUSS) , including slit with forceps and implanter graft placement techniques.

There was also a Surgical Assistants Program held, which was the first such program in Korea targeted at surgical assistants. Many experienced presenters stood on the podium for this program. When I asked the nurses at my clinic afterwards about

this program, they all responded that it was a very helpful program and that they hoped there would be many more programs like this in the future.

After a brief lunch break and coffee break, attendees had a chance to catch up with colleagues and acquaintances in the field of hair transplantation.

In the afternoon, all seven free paper presentations, starting with

Dr. K.Y. Kang's, "Ergonomics in Hair Transplantation," offered helpful information. In addition, there were six free paper presentations with differing viewpoints. I gave the presentation, "Side-Hairline Correction Surgery in East Asian Females: Indication, Design, Surgical Techniques and Surgical Know-how."

There also was a one-hour panel discussion on difficult cases. It was followed by a surgical video session with the topic "Everything on FUE." The organizing committee made a special effort to ensure that the various points of view, surgical tools, and surgical methods that differ from operator to operator were presented so that we could learn the latest developments and controversies and have a look at surgical techniques via video. In-depth discussions followed.

In the General meeting, Dr. Tommy Hwang was named as the president of the KSHRS for a 2-year term.

My personal opinion on the annual meeting is that it was a very well-organized event that allowed many participants to share their knowledge, opinions, and surgical techniques.

Korea is often referred to as a dynamic country. As such, it is also seeing rapid progress in the field of hair transplantation. The 5th KSHRS meeting will be held in May 2015 in Seoul. I look forward to the event serving as yet another forum for doctors from all over Asia as well as across the world to exchange on both an academic and personal level.

Review of the 5th Brazilian Meeting of Hair Restoration Surgery May 21-24, 2014 • São Paulo, Brazil

WEDNESDAY/MAY 22, 2014 Arthur Tykocinski, MD, FISHRS São Paulo, Brazil Arthur@cabelo.med.br

President of Associação Brasileira de Cirurgia de Restauração Capilar (ABCRC), or the Brazilian Society of Hair Restoration Surgery, Dr. Ricardo Lemos, began the meeting with a welcome followed by an outline of the meeting from Program Chair, Dr. Arthur Tykocinski. ISHRS President, Dr. Vincenzo Gambino, presented data about the ISHRS and how the many national societies can collaborate for mutual benefit, and he invited the audience to join the ISHRS. In addition, Drs. Ival Peres Rosa, Jose Candido Muricy, and Marcelo Gandelman were acknowledged as honored pioneers and recalled stories from the early times in hair restoration in Brazil.

The Art and Planning in Hair Restoration

In "Notes from the Moderator," Dr. Ron Shapiro pointed out that much has been said about the donor area in recent years, but there has not been as much focus on hair design and distribution, and that is the ultimate reason the patients come to us: to restore their hair as perfectly as possible. Dr. Robert True, in "FUT and

FUE in Norwood V/VI Patients," described a systematic approach to advanced balding combining medical treatment with finasteride, minoxidil, platelet-rich plasma (PRP) and ACell injections, FUT, and FUE from both scalp and body.

Dr. Gambino, in "The Art in the Vertex Restoration," pointed



Meeting faculty

out the importance of following the sharp hair angles and directions to create a perfect whorl. You should not start the hair restoration at the vertex, because of the risk of exhausting the donor area without leaving sufficient hair supply for the front. For that reason, if you decide to start with the crown, you should leave enough donor hair supply for at least 2 sessions in the fontal area. Dr. Tim Carman, in "Looking at the Hair Restoration from the Artistic point of view," noted that there is a limited hair donor supply, usually 8,000 FUs using the strip technique, which is often less than demand. For that reason, you should think of the global pattern of distribution, avoiding hairlines that are too low and use techniques that maximize coverage with a sparse hair placement. In "My Approach with Young Patients," Dr. Robin Unger described the safest approach: stabilize the loss by keeping a patient on minoxidil and finasteride (if they have a baseline a normal sperm count) and perform just one procedure using the "safest donor area." Concentrate the hair on the top and forelock area, with central density. The young are the worst candidates for FUE as they are the most difficult to predict the future for, and so it makes it difficult to identify the limits of the safest donor area. In "Restoring the Temporal Area," Dr. Tykocinski pointed out that the temporal area is a key feature of the frontal hair restoration, as the face is framed continuously by the hairline, which includes the temporal area. Temporal hair thinning may become more evident after age 40 and more severe over 50 years of age. The temporal baldness increases the forehead width, producing a "wide screen" appearance, ruining the facial balance and facial "sex appeal" in men. Despite its importance, it is technically difficult and not for beginners. If frontal hair restoration is to stand the test of time, it is important to restore the temporal area.

Androgenic Alopecia Today

Moderator: Dr. Francisco Le Voci. According to Dr. Denise Steiner's "Finasteride 20 Years After," finasteride still is the first choice of oral medication for AGA in men. Despite all of the internet "noise," the medical data so far still considers it a safe medicine. On the topic of "The Consultation Process," Dr. Robert Leonard pointed out the importance of a strong relationship between doctor and patient, and how the first consultation is so important to achieve this goal. In "Use of Dermoscopy for Hair and Scalp Disorders," Dr. Nicole Rogers commented that having so many devices easily attached to a smartphone to examine and take photos of the scalp brings dermoscopy to anyone. Being part of a routine examination, the doctor can easily identify the miniaturized hairs on patients with AGA, and

that also helps to define the safest donor area, which has no miniaturization. Earlier signs of cicatricial alopecia can be identified, like perifollicular erythema, as well as white dots and hyperkeratosis. Then in "Impostors of AGA: When to Transplant and When NOT To!" Dr. Rogers reminded the audience that alopecia

areata should not be surgically restored. Other conditions, like frontal fibrosing alopecia (FFA), should be carefully evaluated: first, confirm the diagnosis with a biopsy and treat it medically. Two years after "burn out," make a graft test patch. If this grows well, proceed to hair restoration; however, it should be made clear to the patient that long-term results cannot be guaranteed. In "Scalp Micro Pigmentation (SMP)," Dr. Mary Matsuda presented multiple examples of its uses and how sophisticated and artistic the correct technique can be. She mentioned that any pigment can be permanent or not so permanent, depending on the depth that it is placed. To be less permanent, it needs to be applied very superficially and with a small needle.

FUE: Technique and Planning

Moderator: Dr. Antonio Ruston. Dr. Glenn Charles presented "Evolution of FUE" and concluded that many different techniques and instruments can allow for good results. He also presented a hair restoration case he did on twins. In "FUE as a First Choice," Dr. Maria Angelica M. Sanseverino said that FUE can be used in most cases, being especially suitable for young patients where smaller procedures are usually needed and where they are more likely to want to wear their hair short.

Dr. José Lorenzo presented a very detailed video, "FUE: Manual Technique," showing all the sophisticated finger movements he uses, with the left hand bringing the FUs on scalp to the punch, not the other way around. He uses first a fast short

spin to cut superficially and then a gentle spin to finish the cut. Using smaller punches such as 0.75-0.85mm for FUE and removing subfollicular units allows expansion of the number of grafts available in the donor area. In young patients, he uses finasteride 1mg orally and mostly performs the FUE procedure on patients over the age of 40. In "FUE: Robotic Assisted," Dr. Masa Nagai demonstrated how a robotic system can be successfully integrated into a medical practice without previous experience with FUE and how to perform multiple procedures per day, using more than one system.



Faculty Drs. Tony Ruston and Robert True

International Honor Guest

Dr. Ron Shapiro was acknowledged as an international honor guest and told stories about his early times, like doing magic tricks to entertain his little patients while working in the Emergency Room, and his strong connection with Brazil.

FUE: Complications and How to Avoid Them

Moderator: Dr. Robert Leonard. In "FUE: Manual Technique," Dr. Lorenzo warned that with any surgical technique bad results can be produced if poor technique is utilized, and FUE is no exception. Many different instruments can produce quality grafts, but in hard cases he prefers the manual technique because it allows the physician greater sensitivity and control. The big problem with FUE is that some surgeons do not have enough training and try to perform large sessions producing unacceptable transection rates and exhausting the donor area after multiple procedures with poor growth and poor results. He also prefers to use smaller punches in order to avoid visible scars. He tries to leave 1-2 hairs from the follicular unit or group (harvesting a "subfollicular unit") to further disguise the scars.

In "FUE: Motorized," Dr. Robert True performed FUE as well as FUT, and noted he feels comfortable with both techniques. When doing FUE, an important tip is to limit the punch penetration depth into the skin to the point where the hairs splay. This avoids transection. His light and ergonomic system makes for a comfortable procedure for the surgeon.

In "FUE: with Cordless Machine," Dr. Alex Ginzburg presented a budget-friendly FUE device that is cordless and also very light, which he says makes the procedure faster and easier.

Controversies 1: FUT × FUE

Moderator: Dr. Alex Ginzburg. In "Will FUE Replace FUT? Yes," Dr. Antonio Ruston performed both FUE and strip, but noted he has been doing many patients with FUE and feels that with FUE he is able to help cases not possible with FUT, like those with sparse donor areas. Picking the best follicles is also possible with FUE. He believes, however, that both techniques have a place and will continue to exist.

In "Will FUE Replace FUT? No," Dr. Carlos Leão stated that he is not 100% against FUE, and believes some patients would benefit from the FUE technique when performed by a surgeon with great skill. But, on a regular basis, he does not believe FUT can be replaced by FUE. His biggest concern with FUE is using an "expanded donor area" and harvesting grafts from an unsafe zone. This could happen especially with FUE performed in young patients. Another issue is that the total donor FUs available for transplantation with FUE is smaller compared to FUT. This could impact severely over extensive baldness in patients with small but dense donor area. Also, more fragile grafts are produced with FUE. This can be a real problem for some patients. And finally, instead of having a camouflaged linear donor scar,

FUE will produce thousands of scars over the donor area after multiple procedures, and these are especially visible if 1mm punches are used. The worst complication so far is exhausting of the donor area, with the remaining hair too sparse to cover those thousands of "invisible" scars.

In "Choosing Between FUE and FUT," Dr. Robert True showed how he explains the advantages and disadvantages of both procedures to patients.

In "Combining FUE and FUT," Dr. Marcio Crisostomo noted that in order to expand the size of the hair restoration session, he combines FUT and FUE in the same procedure. By perform-

ing FUE after FUT, he can take advantage of the skin traction produced by the FUT. He harvests surrounding the suture, but leaves an "untouched area" for a second FUT procedure later.

THURSDAY/MAY 23, 2014 Sam Lam, MD, FISHRS Plano, Texas, USA drlam@lamfacialplastics.com

The first section of the day was dedicated to female hair loss. The avoidance of epinephrine was emphasized to minimize post-operative effluvium in women with one retrospective report stating that when no epinephrine was used there was less than a 15% incidence of effluvium (with the speaker stating that she never published this study so that her patients would not believe that they were unfortunate if they were one of the unlucky 15%, so I have kept her name withdrawn here).

Dr. Nicole Rogers reported some interesting studies in which daily 5mg finasteride proved to help the majority of post-menopausal women, a finding that she has corroborated in her clinical practice, and unlike the equivocal nature of 1mg finasteride for women in the literature. Also, she discussed how 5% minoxidil daily for women was found to be as effective as 2% minoxidil twice daily, and easier to tolerate because of women's hair-care practices, and without an increase in unwanted hypertrichosis.

The second session of the morning focused on growth factors in hair restoration. Moderator Dr. Carlos Calixto claimed that a 4 times physiologic platelet concentration was ideal for bioactivity of platelet-rich plasma (PRP). I then gave a lecture on the use of PRP and ACell in my clinical practice over the past 3 years with the bottom line that it has been unequivocally beneficial in improving the percentage of graft growth, as I cited examples of patients who had poor growth without these adjunctive measures who then had spectacular results on a second session when they were incorporated during the procedure. Dr. Christine de Campos Graf Guimarães showed impressive results with an in-office laser therapy using the 1340 ND-YAP laser twice monthly for 5 months' duration.

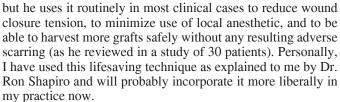
The third session of the day was dedicated to the details necessitated to design natural hairlines by experts including Drs. Ron Shapiro, Antonio Ruston, Fernando Basto, Arthur Tykocinski, and Ricardo Lemos. Dr. Shapiro emphasized the need for multiple passes to get the hairline just right, and Dr. Ruston discussed the selection of "ultrafine" 1-hair grafts as the first line of one hairs to make the result as natural as possible.

The section was followed by a speech by the international guest speaker, Dr. Bob True, who recounted his successes and difficult cases, and then stated that he was principally interested in two topics for the day: 1) the selective FUE harvesting in which partial follicular units were judiciously left behind so as to avoid overdepletion of the donor area and the consequent thinned-out appearance that can manifest, and 2)regenerative medicine concepts such as the use of liposomal ATP, PRP, ACell, and

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Hypothermosol to help with graft growth and improved results.

After lunch, the next section was dedicated to planning a maximal FUT session. Dr. True's use of human recombinant hyaluronidase (HRH) was perhaps the most fascinating lecture of the day for me. He mixes the entire 150u bottle of HRH with 40cc of saline and injects about 20-30cc of it 1cm above and below the donor incision. He has found from 50% to over 100% increase in donor laxity within 10 minutes so as to close difficult wounds,



Dr. Jerry Wong discussed very large megassions of 5,000 FUs transplanted at one time by harvesting 60-65cm2 (32×2cm incision) and he argued that wide donor harvests do not lead to wide scars when good patient selection and closure technique are present. He also uses cut-to-fit blades and generous 300-500cc of recipient-site fluid to ensure vascular integrity.

The final section of the day focused on improving FUT wound closures. Dr. Parsa Mohebi reported application of what he terms "partial trichophytic closure" in which he completes a full trichophytic closure on the bottom epidermal edge of the wound but selectively removes targeted, additional skin from the upper ledge where transected follicles are situated; he argues that transected follicles that do not grow lead to wider scars in those denuded areas. Dr. Robin Unger reported for erythematous and thicker scars that she uses triamcinolone 10mg/cc diluted 1:2 with 2% lidocaine for a final concentration of 3.33mg/cc for a total of 3cc or so with the needle depth guided to the thickest substance of the scar to improve this condition.

The session closed with a debate about whether old scar should always, sometimes, or never be removed during subsequent sessions. The proponents of removing the old scar advised that blood supply would be compromised in a second incision performed elsewhere even if the first incision healed invisibly. Advocates for venturing to another site for FUT harvesting argued that one could lose up to a third of the harvest if not more with harvesting the old scar.

This summary shares some salient highlights and clinical pearls that I took home with me. Obviously, there is insufficient space to review every lecture that was presented, but there was a wealth of information covered in this very well-run course.



Program Chair, Dr. Arthur Tykocinski, w ABCRC President, Dr. Ricardo Lemos

FRIDAY/MAY 24, 2014 Henrique N. Radwanski, MD Rio de Janeiro, Brazil hnradwanski@hotmail.com

The day began with the Eyebrow and Eyelash Session, which I was honored to moderate. Dr. José Régis presented an overview of patient selection and surgical planning, with useful details for the younger surgeon. Dr. Alonso Aymoré, from Belém (a city in the Amazon basin) showed us his pro bono experience in reconstruction of the eyebrows in victims of massive scalp avulsion due to boat accidents. These patients (known locally as "the turban women" because

they spend the rest of their lives hiding this terrible defect), usually present with total scalp loss and, in many cases, loss of one or both eyebrows. Dr. Marcelo Gandelman next discussed his 40+ years of experience in eyebrow surgery, starting with island flaps and punches and progressing to FUT. Finally, Dr. Johnny de la Riva showed us his interesting technique on how to transplant the eyelash.

In the next session, "Complications: How to Avoid and How to Treat Them," Dr. Jerry Wong talked about scar revision, emphasizing the importance of pre-operative scalp massaging and pointing out that, in some cases, two procedures are necessary to obtain the ideal final scar. Dr. Sandro Salanitri exposed a variety of complications in hair restoration and how best to correct them. In my talk, I explained that the specialist in hair transplantation may be requested by other plastic surgeons to amend stigmas following a face-lift, such as camouflaging visible scars and repairing the excessively dislocated hairline. Causes of poor growth were analyzed by Dr. Fabio Bongiovani, and Dr. Francisco Le Voci wrapped up the round table discussing his approach to the young patient.

The Miscellaneous Session was moderated by Dr. Robert True. A potpourri of different subjects began with Dr. Sara Salas covering some important aspects of the initial interview and what the surgeon should be aware of. Dr. Roberto Trivellini presented his experience with FUE, showing us his own device that, in his hands, allows for the extraction of up to 1,200 grafts/hour. A progressive tunneling technique to remove the donor strip was shown by Dr. Raul Mauad, who claimed that this might cause less pain and result in a better scar. Dr. Marcelo Pitchon talked on his preview long-hair technique for eyebrow transplantation, and, with his usual panache, Dr. Tony Ruston presented the finer points in marketing for the hair restoration expert.

The final session was an open discussion on the ideal hair length: short, medium, or long. Panelists included Drs. Wong, Ruston, Muricy, and Pitchon. As expected, each surgeon favored their specific choice with convincing arguments, proving that there are many roads that lead to the same excellent results.

The Congress ended with live patient viewing. Due to bad weather, some patients could not travel to Maresias. Nevertheless, 12 patients were presented, exemplifying results of the FUT and FUE techniques. Respective surgeons included Drs. Ricardo Lemos, Arthur Tykocinski, Alan Wells, and Tony Ruston.

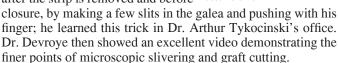
Review of the ISHRS European Hair Transplant Workshop: Focusing on the Complementary Approaches of FUT & FUE June 13-15, 2014 • Brussels, Belgium

FRIDAY/JUNE 13, 2014

Jerry E. Cooley, MD Charlotte, North Carolina, USA jcooley@haircenter.com

Workshop director, Dr. Jean Devroye, opened the conference noting that over 110 physicians from around the world were attending this workshop, attesting to the growing interest in FUE. Dr. Vincenzo Gambino then delivered welcoming remarks from the ISHRS.

Dr. Ron Shapiro lectured on his top tricks and peculiarities of the strip FUT procedure. He noted that in his practice, FUE and FUT were complementary approaches. For him, the prime objective was always to create naturalness and density in the recipient area, and donor considerations were secondary. He shared some of his favorite tricks, including the use of a blunt dissector to reduce transection during strip harvesting. He also likes to "milk" out all tumescent fluid after the strip is removed and before



Dr. John Cole lectured about basic principles of graft holding solutions including pH balance, temperature, nutrients, and anti-oxidants for ischemia reperfusion injury. He noted that much is still unknown about the ideal solution and temperature to hold grafts. Dr. Brad Wolf gave an excellent overview of making recipient sites and the importance of gentle placing.

Dr. Cole shared his views on FUE and stressed the importance of 1) sharp punches and 2) customizing the settings on motor driven devices to get the best results on any given patient. Dr. Jose Lorenzo presented an overview of his experience with FUE, emphasizing the ever-increasing session size in his practice. He stated that he is able to harvest over 5,000 grafts in two sessions on most patients, and up to 10,000 grafts over three sessions in those with above average donor areas. He also demonstrated the use of implanters with a video, showing the impressive speed with which grafts can be placed.

Dr. Koray Erdogan demonstrated his FUE technique with video, emphasizing two important points. First, he harvests with the patient in the sitting position, which he believes give the best access for the surgeon to perform FUE. Second, he uses a manual punch and first scores the skin by putting the punch perpendicular to the skin and then turning it to match the angle of the hair. This creates a smaller hole compared to entering the skin at an angle.

Dr. Jim Harris presented an overview of his FUE philosophy, describing the purpose of his punch design to decrease transection. Over the years, his technique has evolved from 1) sharp then dull punch to 2) semi-sharp motorized punch to 3) a new "hex" punch design that represents a further refinement. He also briefly reviewed his experience with robotic FUE.

The attendees then proceeded to Dr. Devroye's clinic to observe the faculty perform both FUT and FUE. Participants were given an up-close look as the experts performed their techniques, which this author found incredibly useful.

SATURDAY/JUNE 14, 2014 Conradin von Albertini, MD Zurich, Switzerland info@riverside-center.ch

The second day started with a Q&A breakfast with the faculty, followed by an inspiring general session. Here, the speakers represented follicular unit extraction (FUE) as a technique that is both complementary and stand-alone, and suitable for a broad variety of clinical problems.



Workshop faculty (*l to r*): Drs. Alex Ginzberg, Ron Shapiro, Koray Erdogan, Brad Wolf, Jean Devroye (Program Director), John Cole, Jim Harris, and Jose Lorenzo

Dr. Brad Wolf considered combinations of donor harvesting with FUE and strip techniques. In his opinion, the two are complementary and should be combined depending on individual treatment goals. For instance, the same-day combination of FUE and donor strip may increase the number of grafts. Donor strip followed by FUE is a sequence often driven by the patient's preference or comfort, while FUE followed by donor strip can help to manage donor depletion.

Dr. Jose Lorenzo discussed FUE options in women. He performs FUE only on diagnosed, medically responsive women with a stabilized hair loss. As he illustrated with a multitude of examples, for him, FUE and donor strip techniques are both applicable for the treatment of female pattern hair loss (FPHL). He pointed out that the diffuse hair loss in the temporal and occipital region depletes the donor site. In this case, Dr. Lorenzo suggests multiple smaller sessions of donor harvesting with FUE vs. donor strip.

Dr. Ron Shapiro presented follicular unit transplantation (FUT) options in women, advising to resist operating in mild cases of FPHL. To handle smaller donor sites in advanced cases, he selects the recipient site with the greatest cosmetic impact and uses larger follicular units (FUs). Furthermore, he decreases the higher risk of effluvium in women through avoiding dense packing as well as minimizing trauma with fine incisions.

Dr. John Cole reported findings on body hair transplants. He found out that the survival of leg hair transplants decreases above a density of 30 hair/cm2 and that anagen hair has a higher yield than telogen. While body hair tends to grow longer on the scalp, it also grows thinner except for the coarse beard hair. He also noted that beard hair harvesting has a better cosmetic impact and with much less hypo-pigmentation in the donor.

Dr. Alex Ginzburg discussed hair transplantation in cicatricial alopecia and highlighted methods to improve graft survival in scar tissue. For instance, he recommended waiting at least two years after inflammatory scarring alopecia has resolved. He also proposed to adapt the technique of scar repair to each particular case by choosing an acute incision angle, reducing epinephrine, and leaving an interval of one year between sessions.

Dr. Cole presented tips on beard hair removal such as applying traction, using sharp punches, or hyper-extending the neck. Beard hair transplants, he noted, heal well in the donor, but the curly, coarse nature may reduce patient acceptance.

Dr. Koray Erdogan showed a video about natural results

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with FUE. An animation of a Norwood VI case showed his FUE technique. His goal was to create the illusion of a uniform short haircut by rebalancing the recipient and the donor site. To this end, he first thinned out the donor site. Then he redistributed the grafts to a large recipient (e.g., 200cm²) at low density (e.g., 21 FU/cm²). Dr. Erdogan further described how to create natural hairlines with FUE, for example, by harvesting single grafts from ideal donor area (temporal, supra auricular, lower mid occipital).

Dr. Jim Harris highlighted best practices of the critical steps of donor harvesting with FUE. During graft removal, necessary steps are reducing transection, avoiding crushing by using the correct instruments, and reducing surgical time. During the implantation, factors that count are a minimal time outside of body, the holding solution, and proper graft grasping techniques. Donor scarring needs to be minimized by lowering the punch size and avoiding surgical patterns. Special attention should be given to the fringe of the safe zone.

Dr. Jean Devroye recapitulated the FUE Research Committee's definitions of various transection rates (as published in the *Forum*). In his view, transection rate is an important quality indicator in FUE and should be tracked by sampling 200-300 grafts in each procedure.

Finally, Dr. Ginzburg provided an overview of scalp micropigmentation as a substitute for or a complement to hair restoration. He noted that the scalp's blood supply and its thickness both influence the outcome making micro-pigmentation an art form.

After the Q&A session, participants were invited to watch live surgeries at Dr. Devroye's clinic. Dr. Shapiro showed a FUT–donor strip case and Dr. Cole an FUT–FUE case. Dr. Ginzburg performed an FUE procedure, and Dr. Lorenzo demonstrated the combination of manual FUE and implanter pens. Ms. A. Cassano showed scalp micro-pigmentation.

Another highlight was the gala dinner amid the wonderful vintage cars of the Autoworld museum.

SUNDAY/JUNE 15, 2014

Sandeep Sattur, MS, MCh India drsattur@yahoo.com

After two days of live surgery demonstrations, the workshop had remained quite true to the theme "complementary approaches of FUT and FUE." I now looked forward to opinion of the faculty on "sensitive topics."

Dr. Koray Erdogan moderated a panel comprised of Drs. Ron Shapiro, Jose Lorenzo, Alex Ginzburg, Brad Wolf, Jean Devroye, Jim Harris, and John Cole. Discussion topics included whether one uses tumescence or not in FUE, choice between blunt and sharp punches, manual vs. motorized extraction, modes of implantation and use of implanters, presence of white dots in the donor area, trimming of the epidermis of the grafts, coronal v/s sagittal slits in the recipient areas, and the use of robotics for hair transplantation.

Tumescence

The panel was split on use of tumescence in donor harvest by extraction, where Drs. Lorenzo and Erdogan do not use tumescence at all; the remaining panel used it, based on individual patient parameters, or used very superficial tumescence.

Punches: Blunt vs. Sharp and Manual vs. Motorized

Again the debate on sharp vs. blunt punches was crackling. The panel was split on use of the blunt or sharp punches but all

agreed that the choice is dependent on surgeon skill and patient scalp skin quality. It was generally agreed that manual extractions



ISHRS President Dr. Vincenzo Gambino (right) presents award to Workshop Director Dr. Jean Devroye (left).

were better done with sharp punches, while both sharp and blunt worked equally well with motorized systems. Dr. Shapiro felt that the grafts with blunt punches were slightly chunkier, but Dr. Lorenzo felt that sharp punches were less traumatic. Drs. Ginzburg and Wolf both mentioned that they started out with blunt punches but now use sharp punches. On other hand, Dr. Devroye started out with sharp punches but shifted to blunt punches. Dr. Cole said that data shows that there is decreased transection with sharp punches. Dr. Erdogan summed it up well when he stated that, if he is using manual punches, he

would prefer sharp, and, if he is using motorized, he would look at sharp and dull depending upon the patient's scalp properties.

Dr. Lorenzo intentionally transects follicular groups so that he can get 2 hairs per graft (sharp punches are better). Dr. Erdogan does the same to get single-hair grafts for the hairline. Dr. Cole mentioned that his decision regarding intentional transection of FUs depends on the goal of the procedure. If you increase the punch size, there is decreased transection and increased hair yield, and if you reduce the punch size, there is increased transection. He agreed with Dr. Lorenzo on the concept of homogenizing the hair distribution between donor and recipient areas. Most other panelists mentioned that they do not intentionally transect the FUs. Dr. Harris went on to remark that the results and outcomes of intentional transection are yet unknown, and hence, he does not practice intentional transection of FUs during extraction.

White Dots

The panel discussed the presence of white dots from hypopigmentation in the donor area post-extraction. Drs. Shapiro and Wolf mentioned use of ACell, and PRP in the donor area. Dr. Lorenzo opined that the occurrence of white dots could be dependent on skin color. Dr. Ginzburg alluded to the presence of white dots in a case even before the procedure was conducted. He recommended use of smaller punches, and the best way to deal with this issue was scalp micropigmentation. Dr. Wolf pointed out that overharvesting leads to increased white dots and Dr. Devroye also affirmed the same. Dr. Harris suggested that the cause of white dots could be either hypopigmentation or loss of hair, and the best way to reduce their incidence was to reduce the punch size. Finally, Dr. Cole shared his experience and said that he did not find any benefit to using PRP in the donor area to reduce white dots but felt that ACell could have a role in reducing the incidence of white dots. None of the panelists connected white dots with the scarring caused by graft harvest. Also, there was no discussion on the donor scar from the strip surgery.

Trimming of Epidermis

The next topic discussed was the trimming of epidermis of the harvested grafts. Most of the panelists did not trim epidermis of the grafts, but if the grafts are fairly large, the epidermis needs to be trimmed to avoid the tenting effect post-operatively.

Implantation Techniques

Most of the panelists worked with pre-made slits. Dr. Ginzburg split the implantation part into a medical/aesthetic part—creating the recipient sites—performed by the hair transplant surgeon, and a technical part—the actual implantation—performed by technicians. Dr. Wolf reiterated that implantation is one of the crucial steps in a hair transplant procedure, because it is integral to the outcome, and so he personally implants and supervises all implantation in his practice. Dr. Lorenzo, who almost exclusively

uses implanters, mentioned the benefits including avoiding graft injury and time saving (which would come with practice). Dr. Cole said implanters are best for beginners while Dr. Devroye uses implanters for special areas like the eyebrows.

Coronal vs. Sagittal Recipient Sites

Most of the panelists mixed their sagittal and coronal slits depending on the area of the scalp, size of the grafts, type of scalp skin, and site of implantation (eyebrows, temple triangles, etc.). All agreed that dense packing with coronal recipient sites could endanger vascularity.

Robotics in Hair Transplantation

Robotics application in hair transplantation would need to be refined to become more acceptable on a routine basis; this was a consensus by many of the panelists.

By not discussing the strip surgery at all, the panel discussion did not completely do justice to the theme of the conference—the complementary approaches of strip surgery and FUE. This gave a very lopsided view of the current practice of hair restoration to the attendees, as this was not an "only FUE" workshop.

The next lecture was given by Dr. Nathalie Renard on scalp biopsy and hair loss diagnosis. She covered different types of hair loss (scarring, non-scarring, etc.), the possibility of pathological hair loss imitating pattern hair loss, clues to differential diagnosis, and the role of scalp biopsy. The importance of doing both horizontal and vertical sections was emphasized.

In the next session on patient assessment and difficult cases, Dr. Lorenzo discussed one patient with very poor donor area capabilities and how he tackled this patient essentially by homogenizing the donor area. Another patient with an isolated patch of colored hair was also discussed.

Live patient viewing concluded the workshop. Patients operated on by both FUT and EUE were a part of this session. The live session helped the delegates to actually see the end result with hair transplantation.

Dr. Devroye's personal clinic was a great venue that provided audiovisual and operation theatre arrangements and an exhibitor area. All in all, it was a good workshop, but personally, I felt a bit disappointed as strip harvest and how it could complement FUE was not adequately addressed.

XV Italian Society of Hair Restoration International Meeting June 27- 28, 2014 • Siracusa, Italy

Michele Roberto, MD Bari, Italy seab2003@libero.it

The XV Congress of the Italian Society of Hair Restoration (ISHR) was held in the magnificent setting of Palazzo Vermexio at the center of the island of Ortigia, first nucleus of the Magna Grecia civilization (2800 years ago). It was a very successful meeting with 90 participants from the United States, Europe, South America and the Middle East. The scientific program included workshops on trichology, platelet rich plasma (PRP), and microtattooing and a live FUE surgery.

FRIDAY/JUNE 27, 2014

After the inauguration by Congress Presidents Drs. Franco Buttafarro and Pietro Lorenzetti and ISHR President Dr. Vincenzo Gambino, the program started with the presentation by Stefano Ospitali describing new artificial implants to be used for pathological cases of the scalp, using real hair not treated with dyes and implanted with an inclination similar to the normal scalp. Dr. Bianca Piraccini then discussed medical therapies in the most common forms of disease of the scalp; she mentioned the use of the Excimer Laser, which appears to be more effective than PRP in alopecia areata, and the initial positive results in the use of cooling of the head with a helmet during chemotherapy to prevent alopecia. Dr. Alfredo Rossi showed his statistics on the effects of long-term therapy with finasteride; he indicated that future research will be the use of these drugs for transcutaneous delivery. Dr. Akio Sato confirmed with photographic assessment that the positive effect of finasteride within the year is maintained with a slight increase in the following years. The positive effect is higher in the Japanese than in Caucasians. Dr. Andrea Marliani showed interesting case histories on topical use of estrone in certain cases of AGA.

A live workshop demonstration on microtattooing in the balding or shaved patient by Milena Lardi followed. She has developed instrumentation and a technique derived from tattooing and showed two live patients. One of them was our colleague Dr. Antonio Ruston who was subjected to a correction of the old strip scars and who kindly answered questions from the audience.

Dr. Robert Haber assessed the benefits of low level laser therapy (LLLT), the parameters of its use, and the cases where it makes a useful choice from other medical therapies. Also, Dr. Ken Williams spoke about LLLT and providing an explanation of all medical treatment options during the first consult.

In a small session on legal considerations, lawyer Leonardo D'Erasmo spoke about a consent form, while Dr. Francesca Romana Grippaudo spoke about professional responsibility and especially team responsibility. Dr. Piero Tesauro suggested some tricks regarding the efficiency, skills, and objectives of the various components of the surgery team. Dr. Gambino mentioned the efforts that the ISHRS is making to demarcate the ethical, moral, and legal boundaries between surgeons and assistants, noting that hopefully in time the big differences between nations will diminish to reach a uniform standard.

As the day concluded, Dr. Parsa Mohebi spoke about the use of the Laxometer in strip surgery. Dr. Alex Ginzburg introduced a cordless machine for FUE extraction.

SATURDAY/JUNE 28, 2014

The day began with an introduction to hair restoration surgery presented by Dr. Piero Rosati. Beginners were given a glimpse of all types of hair loss in the lectures on medical management of patterned and unpatterned hair loss.

Dr. Damkerng Pathomvanich showed cases of poor candidates for hair transplantation who, with the right surgical techniques, had great results.

Dr. Kuniyoshi Yagyu showed how to manage patients with mild coronary abnormalities (angina) or more severe ones

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(Brugada syndrome). Some participants did not agree with working with high-risk patients. Dr. Mario Illengo insisted on the continuous presence of the anesthetist during all phases of the surgical procedure; he particularly insisted on a complete cardiac examination and not to use cardiotoxic local anesthetics (bupivacaine). Dr. Franco Buttafarro pointed out the importance of Nitrous oxide to reduce anxiety and pain for a few minutes.

The next session on PRP showed the considerable participation of the Italians. In the live video workshop, Dr. Buttafarro explained and showed a treatment on a patient, while Dr. Tesauro highlighted the technical reasons for PRP; he suggested a subjective evaluation of the results of treatment by using a questionnaire. Dr. Ciro Desio gave an extensive and valuable overview of the rational and the practical indications for PRP in male (MPHL) and female pattern hair loss (FPHL) patients. Dr. Gary Hitzig showed improvement in the combined use of extracellular matrix (ECM) mixed with PRP, although this was not confirmed by Dr. Cole. Dr. Niro Sivathasan and Dr. Leroy Rebello emphasized the effects of APC (human platelet lysates) is 10 times more effective than PRP. Dr. Cosimo Fasulo showed good improvements (65-75%) in male and female AGA treated with PRP, while Dr. Enrico Guarino showed an increase in dermal microcirculation and blood flow after treatment with carboxytherapy plus PRP. Dr. Michele Roberto was not able to show any improvements in the density of transplanted hair after 3 monthly treatments with PRP.

Discussion about donor harvesting with FUE vs. donor strip techniques followed. In a series of communications, Dr. Williams showed his personal experience with FUE: punch (Harris/Cole), size (1.00-1.2mm), depth of incisions (2.5-3mm), transection rates, the position of surgeons' and nurses' shoulders, etc. Dr. Haber showed videos on his FUT–strip technique and the role

of the dissecting microscope in slivering and FU dissections. Another video by Dr. Mohebi showed the technique of tricophytic closures. He pointed out how it is less traumatic for the graft to reduce the time between the removal and insertion of the hair grafts, so he divided the whole procedure into various times (removal and insertion). There was a fairly similar idea presented by Dr. Antonio Ruston, who inserts more than 400 follicular units at a time. Also, Dr. Ruston showed the ideal aesthetic lines of the face in relation to the patient's wishes. Dr. Kenichiro Imagawa showed the aesthetic type, form, and size of the eyebrows as well as the direction and the placement of transplanted grafts. Dr. Michele Roberto used staples + sutures on the left part of a scar strip and sutures alone on the right side; no differences were found between the two methods.

Presentations on FUE filled the afternoon. Dr. Tesauro gave some pearls of wisdom about team selection, technical advice and refinements, and surgical indications to obtain better results. Dr. Ruston presented data on an FUE in South America (30-40%), while Drs. Conradin Von Albertini and Koray Erdogan showed their personal experience in the extraction of 2,000 grafts/day. Dr. Marcio Crisostomo presented the combination of donor strip and then FUE grafts to add more grafts in less time.

Dr. Cole showed data on the population of the various areas of the safe donor area and indicates 20-25% as the maximum limit of follicular unit removal without apparent depletion areas. At the end of the session, Dr. Gambino pointed out that the general idea is that it should be mandatory to know and use both techniques (strip and FUE) to cover any possibilities and desires for the satisfaction of the patient. At the end of the day, Drs. Haber and Miguel Canales explained the past, the present, and the future research of robotic restoration.

The evening concluded with a great dinner at the home of Dr. Lorenzetti and his wife where everyone enjoyed good food and a beautiful view of the Mediterranean.



Regional Societies Profiles

I have always been a fan of Dr. Jerry Wong with his common-sense approach to hair restoration. An easy-going manner belies a deep thinking brain that never stops trying to improve patients' outcomes. The contributions of Hasson and Wong to the one pass, dense, acceptable outcome has continued and expanded upon the visions of the late Dr. David Seager. For all these reasons, it was great to talk with Dr. Wong about the Asian Association of Hair Restoration Surgeons. This is an over-arching, umbrella organization that represents countries that have their own hair societies and those countries that do not. Dr. Wong asked a true legend of hair restoration in Asia, Dr. Damkerng Pathomvanich, to add a few words as well. —MM

Asian Association of Hair Restoration Surgeons

Dr. Jerry Wong, President of the AAHRS, provided this summary of the AAHRS:

The Asian Association of Hair Restoration Surgeons (AAHRS) was founded in 2010. The two founding principals were Dr. Damkerng Pathomvanich (Thailand) and Dr. Sungjoo Tommy Hwang (F

vanich (Thailand) and Dr. Sungjoo Tommy Hwang (Korea). The initial board of governors consisted of Drs. Kuniyoshi Yagyu, Golamali Abbassi, Kenichiro Imagawa, Jerry Wong, and Sanjiv Vasa. The primary purpose of the AAHRS is to educate and raise the operating standards of hair surgeons in Asian countries. The ISHRS sets the standard for education in hair surgery and holds the best hair meetings. Unfortunately, only a small minority of Asian doctors can afford to attend the ISHRS meetings. The AAHRS hopes to address this problem by:

- 1. providing a high-quality meeting combined with a live surgery workshop, and
- 2. making it affordable by holding the meetings close to home and choosing locations in affordable areas.

The AAHRS has been successful on both accounts. My biggest surprise after the first AAHRS meeting was the incredible display of skills by the operating surgeons and the cases presented. There have been several surgical techniques I picked up that I still use today.

The goal is to host a meeting every 2 years and the next meeting is scheduled for March 28-29, 2015, in Bangkok. Currently, we have over 200 members, which I think represents but a very small percentage of hair practitioners in Asia. Hair surgery in countries such as Japan and Korea is fairly well established, but for most of Asia, hair surgery is still in its infancy so there is huge potential for growth.

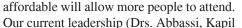
The leadership of the AAHRS is comprised of those who are also members of the ISHRS. As individuals, we all have a well-proven track record in hair restoration. We would like to share our experience and raise the bar for our less-experienced colleagues. The challenge is getting the message out and the AAHRS is starting to play a very prominent role in this regard.

With the older and more experienced doctors, their practices are a combination of FUT and FUE. The new doctors in the field are more focused on FUE. It's just easier to begin with FUE; however, the learning curve is steep. It is not surprising, therefore, that most of the bad results for our patients come from these new doctors. This is not just an Asian problem.

As the economies in Asia improve and the standard of living increases, the demand for hair surgery will increase, and the numbers may someday surpass those in the west. The real strength of the AAHRS lies with its leadership. The founders knew that the surgeons who needed the AAHRS the most are the new



hair transplant surgeons with the least experience. Most of them will not have the means to attend the ISHRS meetings. Keeping the AAHRS meeting





Dr. Jerry Wong

Dua, Hwang, Imagawa, T.J. Lee, Pathomvanich, Akaki Tsilosani, Vasa, Wen Yi Wu, and Yagyu) is grateful for our friends in the ISHRS for their support and guidance. We have always worked well together and will continue to do so in the future. We are hoping some of the ISHRS members will attend our meeting this March. Those of you who have attended in the past had a great time and we have to say that people who have not attended an AAHRS meeting are really missing out. Think about it, "a hair meeting in Thailand"—it doesn't get any better than that.

Dr. Damkerng Pathomvanich added:

There are many robots in Asian countries. As far as I know, two in Thailand, maybe four in Japan and Korea. There is also a robot in Taiwan. In other words, robots are on the rise, maybe for the advertisements that come with them.

With respect to advertising, most Asian countries do not allow medical advertising, however, they always seem to find a way. TV, radio, newspapers, and websites all extol the virtues of the various clinics.

Finally, business is good for most, especially the established doctors with good practice reputations.

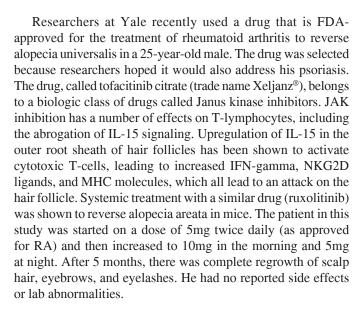
Dr. Wong is a graduate from the University of Alberta Medical School and he attended the Marzola School of Hair Transplant Surgery. His background is in General Practice. Dr. Wong developed the lateral slit technique, and, along with Dr. Victor Hasson, developed the custom recipient blade and pioneered mega sessions. In 2011, he was awarded the ISHRS's Golden Follicle Award. Currently, he works full-time in hair transplants at Hasson and Wong.

Review of the Literature

Nicole E. Rogers, MD Metairie, Louisianna, USA nicolerogers11@yahoo.com

New Biologic Therapy Shows Promise with Alopecia Universalis

Craiglow, B.G., and B.A. King. Killing two birds with one Stone: oral tofacitinib reverses alopecia universalis in a patient with plaque psoriasis. *J Invest Derm.* (Accepted for online preview 18 June 2014.)



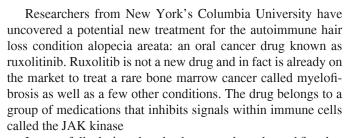


Comment: This article was widely publicized within the media, perhaps due to confusion that this drug might also treat androgenetic or other forms of alopecia. There are presently NO studies showing a role for this drug treating either androgenetic or cicatricial alopecia. Furthermore, the drug has potential for opportunistic infections, tuberculosis (TB), neutropenia, and increased cholesterol levels. So far, one patient has died from TB while taking this drug. A topical formulation may eventually show promise and be better tolerated. Insurance coverage will also likely be sparse for this drug (currently wholesaling at \$2,000/month in the U.S.) until more studies are done and FDA approval for alopecia is acquired.◆

Jeff Donovan, MD, PhD Toronto, Ontario, Canada jeff.donovan@ymail.com

Ruxolitinib: A Potential New Treatment for Alopecia Areata

Xing, L., et al. Alopecia areata is driven by cytotoxic T lymphocytes and is reversed by JAK inhibition. *Nature Medicine*. Published online 17 Aug 2014. doi:10.1038/nm.3645



In a carefully designed study, the researchers showed first that the drug ruxolitinib was effective in a mouse model of alopecia areata. After showing it worked it mice, the researchers then tested the drug in three patients with alopecia areata. All three patients experienced hair growth in a few months. Although the study was performed in only a small number of patients, it opens the door for further study of this medication.



Comment: Above, Dr. Rogers shares a study from Yale University whereby another JAK inhibitor drug called tofacitinib helped a 25-year-old man with alopecia areata regrow his hair. Ruxolitinib is therefore the second medication in this class that can potentially help to treat alopecia.

Ruxolitinib is currently prescribed by cancer physicians and patients who use the drug need to be carefully monitored. It can cause a drop in blood counts, and can increase the chance of bleeding and bruising. Some patients are more prone to infections while on the medication. Rarely, other side effects such as irritation of the heart and liver, weight gain, and elevated cholesterol levels can occur.

Further studies are needed to determine if the cancer drug ruxolitinib is safe and effective for patients with alopecia areata before determining if it should or should not be prescribed to larger numbers of patients. Certainly, results from the first three patients are encouraging.



Does Minoxidil Promote Eyebrow Growth?

Lee, S., et al. Minoxidil 2% lotion for eyebrow enhancement: a randomized, double-blind, placebo-controlled, spilt-face comparative study. *J Dermatol.* 2014(Feb); 41(2):149-152.

Eyebrow thinning is common and many individuals are looking to enhance eyebrow density. Although minoxidil may be one treatment option, there have been no randomized placebo controlled studies evaluating the role of this medication for eyebrow enhancement.

Researchers from Japan determined the efficacy and safety of minoxidil 2% lotion for the treatment of age-related or genetically thin eyebrows compared with placebo. There were 39 patients (26 females, 13 males) randomized to minoxidil on the eyebrow on one side of the face (1 drop twice daily) and placebo on the other. Efficacy was evaluated by photographs, measurement of

eyebrow diameter, eyebrow count, and the overall satisfaction of study participants. Side-effects were also evaluated.

After 16 weeks, the minoxidil group achieved significantly better results in all measured outcomes compared to the placebo group. Global photographic scores showed that 15% had moderate improvement and 51% had minimal improvement. Side-effects were minor and did not preclude patients from continuing the study. The conclusion of the study was that minoxidil 2% lotion is a safe and effective treatment for individuals with age related or genetically thin eyebrows.



Is Dutasteride an Option When Finasteride Fails?

Jung, J.Y., et al. Effect of dutasteride 0.5 mg/d in men with androgenetic alopecia recalcitrant to finasteride. *Int J Dermatol.* Published online 5 June 2014. doi: 10.1111/ijd.12060

Not all patients with androgenetic alopecia respond to finasteride treatment. Korean researchers set up to evaluate the clinical efficacy of the drug dutasteride in men with androgenetic alopecia who did not have improvement with finasteride.

Dutasteride at a dose of 0.5mg/d for 6 months was prescribed to 35 Korean men who did not respond to at least a 6-month course of finasteride. Efficacy was evaluated by global photo-

graph assessment and via the phototrichogram. Of the 31 patients who ultimately completed the treatment, 24 patients (77.4%) had clinical improvement as documented by global photography.

The authors concluded that dutasteride may be an alternative treatment option for patients with androgenetic alopecia who do not clinically respond to finasteride.



Letters to the Editors

Re: Role of automated devices in hair restoration Jeffrey S. Epstein, MD, FACS *Miami, Florida, USA jse@drjeffreyepstein.com*

I feel it imperative to respond to all the attention given (as no fewer than four columns in the March/April issue of the *Forum*) to the role of automated devices in hair transplantation. For the 21 years I have been a member of the ISHRS, there has been no shortage of other "ethical" issues that merited yet did not receive ISHRS attention, including but not limited to: physician members of the ISHRS or their clinics paying for patient referrals, a process that was quite prominent in the 1990s and still goes on today under euphemistic "Affiliate" programs; predatory internet sites that defame members; the inaccurate portrayal on members' websites of expertise in specific procedures or accreditation; and the utilization of assistants by some of our most respected physician members to perform "stick-and-plant" procedures. The justification for a lack of action has been that the ISHRS's purpose is support and education of the public and its physicians, not policing. However, it is understandably clear to me that politics (a term that incorporates economics) has always been a factor as well, and today is driving this attention to automated devices.

The promotion of specific automated devices starting in the late 2000s by some well-known ISHRS members played and continues to play as prominent a role in the public's acceptance of these devices as they did in promoting individual physicians, yet was tolerated and I guess even envied by some. Is anyone surprised that the promotion of a device rather than a surgical technique was the perfect ingredient for the commoditization of hair transplants, the subject of a cautionary *Forum* article I wrote some six years ago? To see how the public is being "educated" that hair transplants are a device and not a doctor, read an airline magazine or watch TV news or daytime talk shows.

This is not an issue that will be won with toothless legislation or certification that lacks any "bite." Calls for such action amongst our members and leaders, while understandable and commendable, unfortunately demonstrate a combination of naiveté and an element of insincerity. While calling for the upholding of the ethics and standards of hair transplants is noble (and one that the ISHRS has in the past declined to do with other transgressions), thinking that this will have any impact in consumer behavior or result in effective legislative controls is naïve, and is insincere if we do not acknowledge the feared financial motives that are considerably at play. Furthermore, defining which providers and assistants are "good" and which are "bad" is both worthless and arbitrary considering that few to none of us can claim to be all "good." This will be no more successful than the futile attempts of prior Plastic Surgery leadership to prevent Facial Plastic Surgeons from performing facial rejuvenation surgery, and no less scary for many of our members of legislation promoted by the medical establishment limiting cosmetic surgery to ABMS-recognized diplomates.

The approach I recommend for each member, and also for our society, is education, recognizing that it is the knowledgeable consumer who will make the best decision. This is a challenge that each of us can meet primarily as individuals if we each take the following steps: first, adhere to the highest standards of care and achieve the best possible results; second, continue to educate our assistants and all interested physicians and stick to the ISHRS's purpose and not utilize it to attempt to control who can perform hair transplants; and third, recognize, acknowledge, and deal with this as an economic not an ethical nor a moral issue, and utilize free market principles of education and transparency, not reactionary calls for restriction of fair trade and claims of taking a "higher road."

Note from Carlos J. Puig, DO, FISHRS: Dr. Epstein makes several good historical observations about the response of the ISHRS to the marginal ethical behavior of some of its members. The ISHRS Code of Ethics, as does that of the medical profession in general, encourages behaviors that put the best interest of the patient ahead of those of the physician. This is a principle espoused first by Hippocrates circa 300Bc. For many of us it was an important part of the Oath to the Profession we took upon graduation from medical school. Yes, it is true that the ISHRS has failed to contain ethical breeches in marketing, fee splitting, and exaggerated claims of expertise. Mainly because of the Board of Governors' realization of the truth of the conclusion Dr. Epstein reaches at the end of his letter: that these issues are economic in nature and are not necessarily violating the physician's ethical responsibility to medical care of the patient. The Board also realized that the ISHRS has no power to effect change, other than through member education that will hopefully result in changed behavior.

Dr. Epstein was insightful 6 years ago to warn us about the possibility of commoditization of hair restoration surgery through the use of automated devices. I agree that it is the responsibility of all of us in the ISHRS to educate our patients and the public about the fact that the hair restoration surgery procedure demands medical judgment and an aesthetically skilled surgeon.

The automation of hair restoration surgery is no different from the automation of heart, gynecological, or kidney surgery. It is still surgery; the machine is to be operated by a licensed physician-surgeon. Unlike the economic "business" issues alluded to above, the physicians who are delegating the operation of these machines to unlicensed technicians are putting patients at risk. Furthermore, they are encouraging their technicians into the practice of medicine without a license. Technicians are not trained to recognize disease or even when to look for it. Nor are they trained to manage unexpected intra-operative complications or modify routine surgical procedures to meet the special needs of those patients with a more complex medical history.

The machine is not the issue. To date, none of these machines have been demonstrated to improve outcomes. However, they are encouraging physicians to delegate important critical-to-quality steps in the hair restoration surgery process; the most dangerous of which are not carefully examining the scalp and not being intimately involved in the donor harvesting process. This is harming patients by not identifying those rare situations where a surgical intervention facilitates expansion of a disease rather than correcting baldness.

Dr. Epstein correctly identified the primary motivation for those encouraging inappropriate delegation of the use of hair transplantation mechanization as money—money for the manufacturers, their contracted technicians and physicians, and the naive physicians deceived into thinking that hair restoration surgery can be performed by a machine just like a venipuncture, ultrasound, or ECG.

The ISHRS encourages physician and patient education and recognizes that technology always moves—sometimes forward, sometimes backward. The ISHRS continues to encourage all physicians—members and non-members alike—who wish to learn the art and science of hair restoration surgery

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Re: Dr. Jerry Cooley's, "Bio-Enhanced Hair Restoration" William Ehringer, PhD Jeffersonville, Indiana, USA* bill.ehringer@energy-delivery-solutions.com

*Dr. Ehringer is owner of Energy Delivery Solutions, Inc., which manufactures and distributes ATPv to physicians.

The addition of liposomal ATP (ATPv) to graft holding solutions was the recent subject of an article entitled, "Bio-Enhanced Hair Restoration," written by Dr. Jerry Cooley (*Hair Transplant Forum Int'l.* 2014; 24(4):121, 128-130). The article provides important insight into the use of specific graft holding solutions, and also the use of ATPv in hair restoration surgery. In 2005, Dr. Cooley became the first physician to test the effects of ATPv in hair restoration, specifically as part of the graft holding solution. Dr. Cooley has tested a number of different compositions and ratios of ATPv over the last 9 years, before we finally determined an optimal formulation for hair restoration. In his recent article, Dr. Cooley suggests a 1:100 dilution of ATPv to graft holding solution. This letter to the editor is to provide information about dilution of ATPv in graft holding solutions.

ATPv is composed of specially designed lipid vesicles, ATP, buffer, salts, and glucose that is manufactured to maintain pH, osmolarity, and a defined ratio of encapsulated ATP inside of

the lipid vesicles, and ATP in solution. The encapsulated ATP is designed to deliver ATP to cells for maintenance of intracellular ATP, while the ATP in solution binds to purinergic receptors on the cell's surface. It is imperative that the dilution of the ATPv with either incomplete holding solutions (e.g., PlasmaLyte A, saline) or in complete holding solutions (e.g., HypoThermosol) be done at specified ratios or the products usefulness can be compromised.

Our studies of cells, tissues, and organs stored in ATPv over the last 12 years indicated that each intended use required specific concentrations and ratios of ATP to be effective. For cells and small tissues, such as hair follicles, the ATPv has been specially formulated to balance the ATP pools mentioned above for maximal effect. The dilution of the ATPv should be 1:10 (ATPv/graft holding solution, v/v) based on our previous and ongoing studies. While the ATPv could be diluted further, such as the 1:100 proposed by Dr. Cooley, it is possible the maximal effect of ATPv on hair graft survival may be decreased. Additionally, using higher ratios of ATPv to graft holding solution can lead to cell apoptosis. Thus, it is imperative that a 1:10 ratio of ATPv/graft holding solution be used to maintain consistent results.

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Re: Graft survival in the later years

O'Tar Norwood, MD, Oklahoma City, Oklahoma, USA nathannorwood@cox.net

It is with great anticipation and pride I read the emails of our friends and the bi-monthly *Forum*. Although I have been out of touch with the organization my heart and head are still involved. The growth and changes are amazing and I am exceedingly proud of the progress that has been made.

I have a comment on careful handling of the grafts and what happens to the grafts in later years.

I'm glad to see the *Forum* emphasizing the importance of more careful handling during harvesting trimming and planting. I have always thought it was important but did little about it, except a few comments to an especially rough assistant.

My question is about survival of grafts in later years. I had my first graft about 50 years ago and I now I notice the grafted hair is becoming very fine and less dense. This might be Senile Alopecia, but the non-grafted hair in the donor area is not as fine and seems to have maintained its density and coarseness. Has anyone else noticed this?

In closing, I'd like to emphasize again how proud I am of the *Forum* and the ISHRS.◆

Note from Editor Emeritus, Dr. Richard Shiell: To members of the ISHRS who have joined our organization in the past decade, the name O'Tar T. Norwood may have an almost mythical ring to it. Let me assure you that this remarkable retired Dermatology Professor from Oklahoma is not only still alive and well, but still maintains a keen interest in the organization of which he was a Founding Father in 1993. He had previously created the newsletter *Hair Transplant Forum International* in 1990. This started as a private venture but he sold it to the newly formed ISHRS in 1995. He generously gifted all the proceeds back to fund the Norwood Foundation, in memory of his first wife MaryAnn.

O'Tar's relationship with hair transplantation stretches way back to 1962 when he received a hair transplant from the equally legendary (and still equally alive), Dr. Norman Orentreich, in New York City. Dr. Norwood went on to perform the procedure, teach, and write many papers, including that in which he revised the 1951 baldness classification system of endocrinologist Dr. James Hamilton. The Norwood Classification is still in constant use some 40 years later. He published the first textbook on HT in 1973. I met him at a meeting in Hot Springs, Arkansas, two years later and had the pleasure of assisting him with the 2nd Edition of his book in 1984.

References

- 1. Hamilton, J.B., Patterned loss of hair in man: types and incidence. *Ann NY Acad Sci.* 1951; 53:708-728.
- Norwood, O.T., Editor. Hair Transplant Surgery. Charles C. Thomas Publishers: Springfield, Illinois, 1973.◆

continued from page 194

to come and learn. But the ISHRS does not endorse, encourage, or sanction the practice of medicine without a license. Putting patients at risk is bad for patients, physicians, and the profession.

I am confident the ISHRS will be following Dr. Epstein's suggestion and focusing on the education of both physicians and the public on dangers of the inappropriate delegation of the use of automated hair restoration surgery devices.

Message from the 2014 Annual Scientific Meeting **Program Chair**

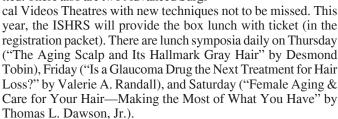
Damkerng Pathomvanich, MD Bangkok, Thailand path_d@hotmail.com

At last we have finalised the scientific program for 22nd ISHRS Annual Meeting in Kuala Lumpur, and it should have reached you by now. As this is my last message, I would like to thank those who submitted the abstracts, the CME Committee who has been working so hard to rate all of the abstracts, Victoria and Melanie for their hard work assisting me through the year till the task is completed, and lastly, Vincenzo Gambino for appointing me to be the chair. There were 115 abstracts submitted, and 33 abstracts were selected for oral presentation, 14 for video presentation, 4 were rejected, and the rest were for e-poster presentation.

I can assure you that the content of the program is rich in education and filled with practical pearls that you might be able to apply to your own daily practice. Hairline design is a priority to teach, especially for the novice; however, experienced hair surgeons can also learn more on how to design the hairline for different ethnicities and for women. Other items of discussion include storage solutions and when you should consider FUE or FUT, or both. Inadequate growth is of concern to all of us and Dr. Mario Mazola will show you how to handle it when it happens. Dr. William Rassman will moderate difficult and complicated hair transplant cases, detailing how to treat central necrosis of the recipient area and numerous cysts after FUE. These are just some highlights and there are many more topics of interest.

The Welcome Reception is on Thursday in the exhibit area. It's a great opportunity to spend time talking with exhibitors and reviewing their products. For those of you who are interested in robotic FUE, there is a company-sponsored Satellite Symposium by Restoration Robotics on Thursday evening as well. There is no charge and seating is limited, so you must advance register.

Those who would like to attend an FUE or FUT mini course on Wednesday should register early since seating is limited. There also are two Advanced Surgi-



Don't forget to attend our popular Coffee with the Expert session either Friday afternoon or Saturday morning. Each table will have a different topic. The topic and leader's name will be placed on the table for you to select on a first-come, first-served basis, and the coffee is available in the exhibit area. At the halfway point, you can switch to another table or you may rotate to as many tables as you like. This might be the best time that you are able to ask more questions.

The ISHRS & ABHRS Morbidity and Mortality Conference is in its second year and in demand, so don't miss out—a ticket is required to attend. Lastly is the Live Patient Viewing. You're able to view the result of hair transplantation from your colleagues. You are welcome to bring your own patient for Live Patient Viewing by contacting Dr. Ali Abbasi at draliabbasi@yahoo.com.

The Gala Dinner/Dance & Award Ceremony is on Saturday night, so please come and celebrate the last day of this memorable annual meeting. I look forward to greeting you in Kuala

Message from the 2014 Surgical Assistants **Program Chair**

Aileen Ullrich, CMA Hillsboro, Oregon, USA aileen@gabelcenter.com

This message will be published just prior to our meeting in Kuala Lumpur, and I hope many of our surgical assistant members throughout the world are able to attend. As a destination, Kuala Lumpur has many offerings including a diverse culture, rich history, modern comforts, and architectural delights. Moreover, we have an outstanding program planned that will be engaging and beneficial for all levels of assistants. We will cover hair sciences, and compare techniques used for graft preparation and placement. Ancillary issues such as staff training, infection control, and instrument care will also be addressed. In addition, we will discuss the role of the surgical assistant during surgery including FUE procedures.

Looking ahead, the 23rd Annual Scientific Meeting will be held in Chicago, Illinois, September 9-13, 2015. Chicago is home to one of the oldest ballparks in major league baseball—Wrigley Field. It also boasts the finest in shopping and dining with over 450 stores within the Magnificent Mile district and over 5,500 restaurants throughout the city. It is no wonder that Chicago is one of the top 10 hospitality, dining, and retail destinations in the world. I highly encourage all our surgical assistant colleagues to attend and now is the time to start planning your contribution to the meeting.

These meetings allow us invaluable opportunities to forge new friendships and meet others who share a similar passion for the field of hair restoration surgery. If you have not been involved before, consider volunteering to help unpack supplies or set up for the hands-on workshops. Challenge your-

self by writing an article for the Forum or

submit a presentation proposal for the Surgical Assistants Program. No matter your experience or comfort level, your contributions are valuable and much appreciated. It is your feedback, ideas, talents, and efforts that make these meetings a success. If you are interested in becoming more involved, please do not hesitate to contact me. I will be happy to help you find an avenue that suites your personality and circumstances.

Lastly, I would like to personally thank all of you who contributed and participated in this year's meeting. Not all were able to attend, but many were able to offer advice and guidance that was invaluable in putting this program together. The planning for this year's meeting started long ago, and the result is a program that covers many important topics that will enhance our knowledge and expertise in the field of hair restoration. Your time, effort, and hard work make our Surgical Assistants Program and the ISHRS stronger and more valuable for all of our members, and, ultimately, enhance patient care and outcomes. Thank you once again!



Nurse Pamela Hulley Retires After 39 Years in Hair Transplants

Richard C. Shiell, MBBS Melbourne, Australia richard.shiell@gmail.com

In a field where staff changes are so frequent, it is rare to find a HT Assistant who stays working with the same clinic for 39 years (unless married to the boss).

Pamela Hulley of Melbourne, Australia, is a rare such "treasure." A young but experienced plastic surgery nurse, she joined me when aged 21 and we worked through the years of transition from 4mm plugs through scalp reductions, single to triple flaps, quarter-grafts, mini and micrografts, and she even became an expert at inserting NIDO artificial hair implants.

Despite living an hour's drive from our office, Pam was punctual in the extreme and I cannot recall her having a day off due to ill health in all the time that she worked with me. Indeed, so important was Pam to functioning of our clinic that, if she needed time off for any reason, she would tell us well in advance and we would plan our operating schedule around her availability.

Pam actually retired twice. The first time in 1980 when she took some years off to have her two daughters, Sarah and Emma, and in

the 8 years before returning to our clinic she worked part-time for other notable Australian HT surgeons including Drs. Bill Pouw, Mario Marzola, Bruce Fox, and Neil McLeod.

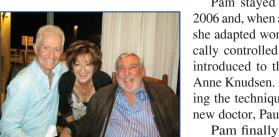


Pam at her first retirement party, August 1980.

Since 1990 she has worked continuously at our Queens Road Clinic in Melbourne and, after the formation of the ISHRS in 1993, was a frequent attendee and occasional speaker at meetings. She went to Toronto, Hawaii, New York, Chicago, Vancouver and Sydney and rarely missed a General Session, except when required at the Assistant's meeting. She co-chaired this with the late Cheryl Pomeranz in Chicago and Helen Marzola in Sydney.



Pam with her "boss," Dr. Richard Shiell, Hawaii 1998.

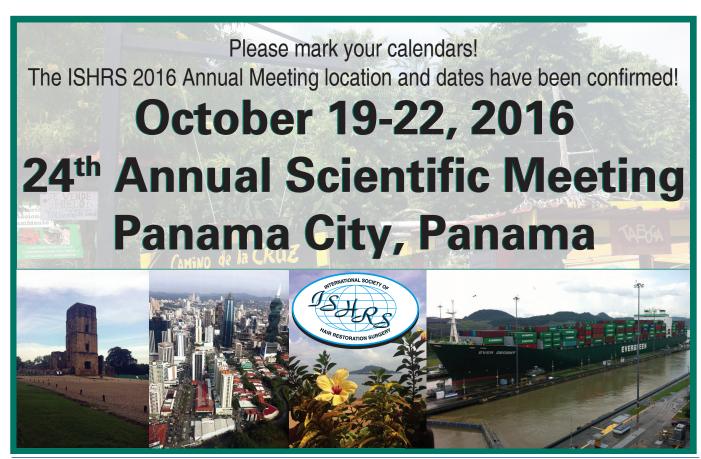


Pam with Russell Knudsen, left, and Richard Shiell, right, at her second retirement party, June 2014.

Pam stayed on after my retirement in 2006 and, when already over 52 years of age, she adapted wonderfully to the microscopically controlled FUT and FUE procedures introduced to the practice by Russell and Anne Knudsen. Indeed, she was soon teaching the technique to new assistants and the new doctor, Paul Spano.

Pam finally retired from Hair Transplant surgery at the end of June 2014 but intends to continue with her job as a specialist skin-care nurse, in an Aged

Care facility within an easy walk of her home in the outer suburbs of Melbourne. She will be greatly missed from the hair transplant fraternity.



Classified Ads

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Prestigious one-day surgery center in Dubai seeking experienced hair transplantation surgeon. Clinic's professionals include highly-trained board-certified plastic surgeons, dermatologists and nurses that combine to form a unique family of specialists dedicated to the care of the skin and body. Our Clinic—located in Jumeira—is formally recognised with full JCAHO accreditation.

Ideally seeking a candidate who is already licensed in Dubai, however, if you have qualified in the USA, Canada, United Kingdom, Australia, New Zealand or Western Europe, and have Western experience, ideally North American Board Certified or equivalent Western training programs, such as those in the United States, Canada and the United Kingdom, then we are keen to talk.

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We really are a team orientated clinic, so large egos or divas need not apply.

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Compensation: Dependent on Experience

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SEPTEMBER 9-13
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ISHRS 23RD ANNUAL SCIENTIFIC MEETING



HAIR TRANSPLANT FORUM INTERNATIONAL

International Society of Hair Restoration Surgery 303 West State Street Geneva, IL 60134 USA

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Dates and locations for future ISHRS Annual Scientific Meetings (ASMs)

2014: 22nd ASM

October 8-11, 2014 Kuala Lumpur, Malaysia

2015: 23rd ASM

September 9-13, 2015 Chicago, Illinois, USA

2016: 24th ASM

October 19-22, 2016 Panama City, Panama Presorted
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Advancing the art and science of hair restoration

Upcoming Events

Date(s)	Event/Venue	Sponsoring Organization(s)	Contact Information
October 23-26, 2014	6th Annual Hair Restoration Surgery Cadaver Workshop St. Louis, Missouri, USA	Practical Anatomy & Surgical Education (PASE), Center for Anatomical Science and Education, Saint Louis University School of Medicine In collaboration with the ISHRS http://pa.slu.edu	http://pa.slu.edu
November 23-24, 2014	19th Annual Meeting of the JSCHR Okayama, Japan	Japan Society of Clinical Hair Restoration (JSCHR) Hosted by Shinsaku Kawada, MD	Dr. Shinsaku Kawada, Program Chair kawada@kawada-keisei.gr.jp www.jschr.org
December 13, 2014	First Seminar of Circadian Rhythms in the Skin and Hair Milan, Italy	International Hair Research Foundation (IHRF) www.ihrf.it	Marta Buffa segreteria@ihrf.eu
February 27-March 1, 2015	ISHRS Asian FUE Hair Transplant Workshop New Delhi, India	International Society of Hair Restoration Surgery Hosted by Kapil Dua, MBBS, MS & Aman Dua, MBBS, M	For details: D www.asianfuehairtransplantworkshop.com
March 3-6, 2105 & May 26-29, 2015	University Diploma of Scalp Pathology and Surgery Paris, France	University of Paris VI Coordinators: P. Bouhanna, MD and M. Divaris, MD www.hair-surgery-diploma-paris.com	Dr. Pierre Bouhanna, Course Director sylvie.gaillard@upmc.fr
June 26-28, 2015	ISHRS 3rd Mediterranean FUE Workshop Istanbul, Turkey	International Society of Hair Restoration Surgery Hosted by Koray Erdogan, MD, Alex Ginzburg, MD, & José Lorenzo, MD	For details: www.3rdmediterraneanfueworkshop.com
April 2015	21st Annual Orlando Live Surgery Workshop Orlando, Florida, USA	International Society of Hair Restoration Surgery Hosted by Matt L. Leavitt, DO	For details: HValarieM@leavittmgt.com
July 8-11, 2015	1st SILTAC Annual Meeting www.congreso-silatc2015.com Buenos Aires, Argentina	Ibero Latin American Society of Hair Transplantation (Sociedad Iberolatinoamericana de Trasplante de Cabello - SILATC) www.silatc.org	Dr. David Perez-Meza, Meeting Chairman drdavid@perez-meza.com info@congreso-silatc2015.com
September 9-13, 2015	23rd Annual Scientific Meeting of the International Society of Hair Restoration Surgery Chicago, Illinois, USA	International Society of Hair Restoration Surgery www.ishrs.org	Tel: 1-630-262-5399 Fax: 1-630-262-1520
November 18-21, 2015	9th World Congress for Hair Research Miami, Florida, USA	North American Hair Research Society www.hair2015.org	For details: info@nahrs.org
December 5-6, 2015	20th Annual Meeting of the JSCHR Kochi, Japan	Japan Society of Clinical Hair Restoration (JSCHR) Hosted by Ryuichiro Kuwana, MD	Dr. Ryuichiro Kuwana, Program Chair der-r-kuwana@mte.biglobe.ne.jp www.jschr.org