

Hair's the Question*

Sara Wasserbauer, MD, FISHRS Walnut Creek, California, USA drwasserbauer@californiahairsurgeon.com

*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.



I got a new toy a few Christmases ago—a magnifier for my iPhone camera. I have to tell you: I LOVE this thing! For diagnostic usefulness during a consult, you cannot beat magnification (Dr. Nicole Rogers even won the poster competition in Alaska with a little device like this)! If you are not already using it for your patients, having a camera like this (or a video microscope) enables instant analysis and feedback for your patient. They will love it and you will, too. Now let's test your skills for diagnosing some of these commonly seen photomicrographs of the scalp.



1. This patient has been:
 - A. Shaving his hair recently
 - B. Plucking out his own hair
 - C. Using keratin hair fibers (aka Toppik®, etc.)
 - D. Getting regular “Brazilian blowouts”



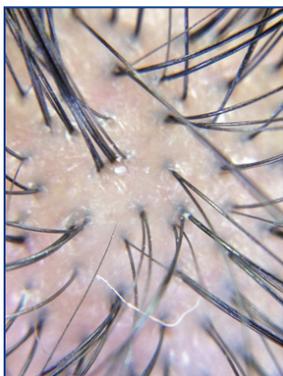
4. The following microscopic photo is an example of:
 - A. An ingrown hair
 - B. Diffuse folliculitis
 - C. Donor area 6 months post FUE hair surgery
 - D. Follicular plugging



2. This patient shows evidence of:
 - A. Exclamation point hairs indicating trichotillomania
 - B. Alopecia areata
 - C. Loss of follicular openings
 - D. Miniaturization



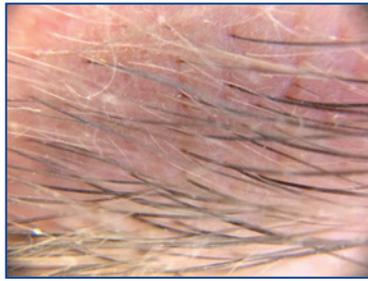
5. What recently happened to the hairs in this photo?
 - A. They were recently backcombed as evidenced by their ruffled cuticle.
 - B. They were recently cut as shown by their blunt (i.e., *not* tapered) ends.
 - C. They show evidence of recent electrolysis.
 - D. They recently experienced a laser hair removal treatment.



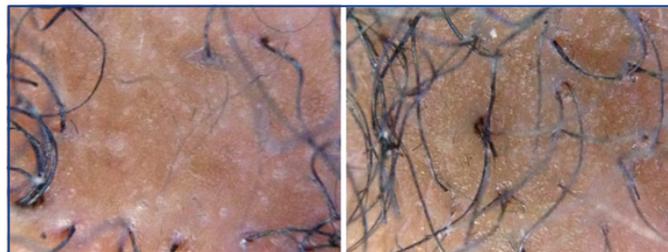
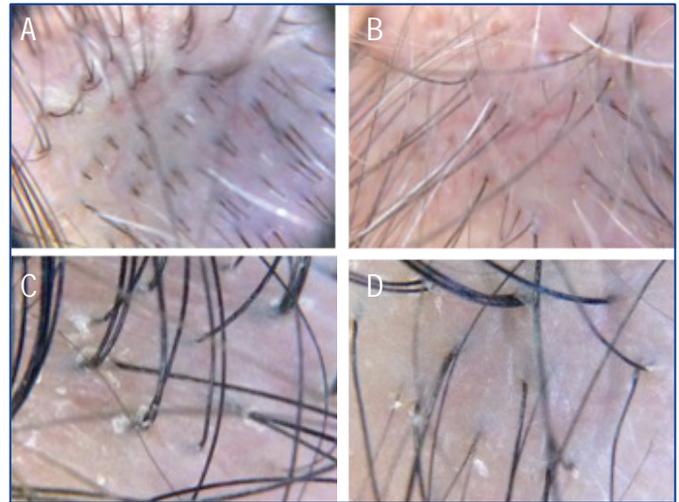
3. The above microscopic photo was most likely taken on which part of the patient's body?
 - A. Hairline
 - B. Chest
 - C. Beard
 - D. Donor area



6. The brow hairs in this photo are evidence of:
 - A. Trichotillomania due to their short lengths in various stages of growth
 - B. Recent trimming due to their blunt (not tapered) ends
 - C. Recent growth from transplantation due to their various stages of growth
 - D. Recent thermal or chemical damage due to their blunt (not tapered) ends



7. The hairs in this photo are:
- A. Almost 100% miniaturized
 - B. Fine women's facial hairs
 - C. Located at the back of the patient's neck
 - D. Brow hairs



8. Compare these two photos of African American hair (same scalp, 1cm apart); one shows affected area of scalp and the other an unaffected area. What might be causing the alopecia in the affected area photo?

Affected:

Unaffected:

- A. Trichotillomania, as evidenced by the hairs of multiple lengths present
- B. Scarring (cicatricial) alopecia, as evidenced by the loss of follicular ostia present
- C. Androgenetic alopecia, as evidenced by the miniaturization present
- D. Folliculitis decalvans, as evidenced by the peri-follicular inflammation present

Bonus Question

9. The following photo pairs A:B and C:D were taken to illustrate the growth of grafts in the transplanted areas. Both patients had androgenetic alopecia. Which of these photos represents the DONOR area?

- A. A and D are the donor areas.
- B. A and C are the donor areas.
- C. B and D are the donor areas.
- D. B and C are the donor areas.

⇒ Answers on page 78



**HAIR TRANSPLANT PHYSICIANS
REQUIRED**

PAI Medical Group is a leading medical **hair transplant** management company in **North America**. We are executing our plan for the expansion of services. We require **physicians** with hair transplant **experience** and able to obtain a license in the **US eastern, southern and/or mid-western** states.

To learn more and to become part of the **growing** resources of PAI Medical Group, provide your **résumé**, certification, license information with a list of your experience in hair transplantation.

Please send to one of the following:

Web : www.paihair.com/en/employment

Email : fcorsale@pa-intl.com

Fax : 613-225-0717

Hair's the Question *from page 77*

1. **C.** When I first saw this through magnification, I thought it was a recent haircut, but since the fibers are so much finer than the rest of the hair answer A is incorrect. Had the hairs been plucked, you might see an empty follicular ostia, but that is not the case. "Brazilian blowouts" can cause breakage, but again, that would be seen further along the shaft and would not leave such fine fragmentary fibers on the scalp surface.
2. **D.** Miniaturized hair among a few robust follicular units is consistently seen in androgenetic alopecia. Exclamation point hairs are narrower at the base and are a characteristic finding in several alopecias including alopecia universalis, totalis, and areata. In this photo, follicular openings can be seen. Trichotillomania would show broken hairs in various stages of growth.
3. **D.** "Dis is Dee Donor Area!" (I think Arnold Schwarzenegger said that). Chest hair contains more single and double-haired follicular units. Beard hair likewise would lack a 5-hair follicular unit and tends to have less uniformity to the hair shaft and a thicker caliber (hair shaft diameter).
4. **D.** A hair is growing OUT, so it is not an INgrown hair. Donor area 6 months post FUE would show small scars and a diffuse folliculitis would involve more of the FUs in this photo than just one!
5. **B.** Recent electrolysis would show a profound lack of hair and recent laser hair removal would either show the same OR some singeing with resultant peri-follicular erythema if in the immediate past. Backcombing does ruffle the cuticle, but that cannot be seen at this level of magnification.
6. **A.** I actually used this photo to prove to a young man that he was actually pulling out his own hair. The ends are blunt, so this is not new growth, and trimming would have left the hairs more or less the same length. For those of you who answered D, you can give yourself a half point, but the answer is incorrect since it would be difficult (though admittedly NOT impossible) to have chemical or thermal damage in brow hair.
7. **D.** Note the predominance of single-haired follicular units and directionality. These are not vellus hairs, as would be found on a female face, they are terminal and do not demonstrate interspersed miniaturization so much as a caliber (i.e., hair shaft diameter) *gradient*. Even hairs at the back of the neck would have some multi-haired follicular units. (Don't believe me? Get some magnification and look for yourself!) However, I will give a half-point for answering C.
8. **B.** These two photos were taken within a centimeter of each other and demonstrate how clear the loss of follicular ostia can give you the diagnosis of a scarring alopecia. Those with sharp eyes will also note a few tiny fibers from a keratin hair concealing powder (Toppik, etc.). There is no peri-follicular erythema in this photo, and although an argument could be made for miniaturization in the "affected" photo, it is clearly not present in the "unaffected" photo, and thus androgenetic alopecia is not the whole answer.
9. **B.** I know this questions seems a little like "alphabet soup," but B is correct since the photos labeled A and C have little to no miniaturization present. Miniaturization is the hallmark of androgenetic alopecia and can readily be seen in a microscopic analysis of a scalp. ♦

Wireless Follicular Dermatoscope

Wirelessly Capture Pictures:

Twelve distinct levels of polarization. Observes and records in real time (30 FPS). Transmits within a range up to 20ft. Built-in snapshot button. 126-FS-1



NEW!

\$349.00*

**When you mention this Forum ad.*

Kenny Moriarty
Vice President

Cell: 516.849.3936
Kenny@georgetiemann.com
www.atozsurgical.com



www.atozsurgical.com

Review of the Literature

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



Long-term Side Effects in Men Taking Finasteride

Singh, M.K., and M.R. Avram. Persistent sexual dysfunction and depression in finasteride users for male pattern hair loss: a serious concern or red herring? *J Clin Aesth Dermatol.* 2014; 7:51-55.

In this commentary, the authors review data about long-term side effects in men who took finasteride. They specifically review the largest randomized, controlled trials to date investigating incidence of sexual side effects with finasteride. The 1992 Finasteride Study Group (895 men) showed no reports of irreversible or prolonged sexual side effects. Kaufman's 1998 study on finasteride for male pattern hair loss (MPHL) (1,558 men for 1 year, 1,215 men in the blinded extension over 5 years) showed that sexual side effects resolved in all patients after discontinuation of the drug and also resolved with time in most men who stayed on therapy. The only double-blind, randomized, controlled trial to report persistent sexual side effects was the PLESS trial (2003), in which only 50% of finasteride users with sexual side effects had symptoms resolve after discontinuation; whereas just

41% of the placebo group had resolution. In the Prostate Cancer Prevention Trial (2007), none of the 17,313 participants reported persistent sexual dysfunction.

In terms of depression, the authors found one retrospective case series of 19 patients who developed mood changes after starting finasteride for MPHL. All resolved after discontinuation of the drug. One prospective study followed 128 finasteride users for depressive symptoms over 1 and 2 months. Although the incidence increased with finasteride usage, all symptoms resolved after discontinuation of the drug. Overall, these large studies stand in contrast to the biased and poorly designed publications by Irwig et al. reporting persistent sexual side effects and depressive symptoms even after discontinuation of finasteride. ♦



Challenges Associated with Eyebrow Transplantation

Umar, S. Eyebrow transplant: the use of nape and periauricular hair in six patients. *Derm Surg.* 2014; 40:1416-1418.

Here the author describes challenges associated with eyebrow transplantation, namely obtaining hairs that are soft enough in caliber to mimic a natural eyebrow. He describes the use of FUE to harvest hair from the nape of the neck and hairline margin. In his report he uses a rotary tool with a modified 19g needle

to transplant 4 women and 2 men. For each patient, 200-600 grafts were harvested from the back of the scalp. He reports good healing in this area but admits that long-term outcomes are unknown and that women who wear their hair in a ponytail should be well-informed prior to surgery. ♦



Outcomes of FUE

Avram, M.R., N. Rogers, and S. Watkins. Side-effects from follicular unit extraction in hair transplantation. *J Cut Aesth Surg.* 2014; 7:177-179.

In this letter to the editor, the authors discuss important outcomes of follicular unit extraction (FUE). Although this technique is favored for its lack of a linear scar, the authors point out that in some cases there can be atrophic white scars measuring less than or equal to 1mm, and patients should be aware that this is not a completely "scar-less" procedure. In addition, the authors point out that in some very large FUE cases, grafts are harvested from outside of the permanent donor zone. If follicles taken together from high risk locations are then transplanted together, the patient

may develop localized loss of grafts in that area. To avoid this, the authors recommend mixing all of the grafts together before placing them back into the areas of thinning. Finally, the authors point out that there are no established guidelines for how many follicular groupings can be safely harvested before the harvested donor area appears too thin. As with all things in medicine, both physician and patient should be aware of the short- and long-term consequences of FUE. ♦

Regional Societies Profiles

In this installment of our ongoing series profiling Regional Societies that are members of the ISHRS, we are pleased to have a report from Dr. Frank Neidel, current President of the Society of German Hair Surgeons.

Society of German Hair Surgeons

Frank Neidel, MD *Düsseldorf, Germany* dr.neidel@t-online.de



Manfred Lucas, MD, Ursula Halsner, MD, and Sibylle Eberle, MD founded the Society of German Hair Surgeons in 1994. We hold annual meetings. Our next meeting will be November 28, 2015.

The current officers are: Frank Neidel, MD, President; Ursula Halsner, MD, Vice president; Danuta Sobczak, MD, Treasurer. There are about 20 hair restoration practitioners in Germany and 10 of them are members in the Society. Drs. Frank Neidel, Ursula Halsner, and Andreas Finner are also members of the ISHRS.

Hair transplantation has become a common procedure in Germany. There is a trend for physicians of many different backgrounds to try offering it; however, too many of them are without basic education in hair transplantation. Advertising is allowed in Germany within a well-defined framework; “before and after photos” are not allowed. Hair restoration is increasingly recognized in the media, and HRS is growing in acceptance by both patients and the medical community. Most of us are quite busy, but may not do procedures every day. Some of the doctors

do not do hair transplant procedures exclusively. In Germany, 80% of the procedures are FUT and 20% FUE. I think this makes sense given that most of our patients have lighter, finer hair. In 2015, 3-4 ARTAS® Robotic Systems are expected to be introduced in Germany.

Currently, I am not aware of any research on cell-based therapy that is going on here. Drs. Frank Neidel, Andreas Finner, and Ursula Halsner are all active in educational programs in and outside of Germany.

We are fortunate in our Society to have an open, collegial atmosphere and easy communication.

How can the ISHRS help us in the Society of German Hair Surgeons? We would like to see ISHRS publications for the media and patients and some of the web site translated into the German language.



Frank Neidel, MD



(L to R) Drs. Frank Neidel, Düsseldorf; Helena Olbrich, Stuttgart; Danuta Sobczak, Freiburg; Andreas Finner, Berlin; Gerd Westphal, Berlin; Joachim Beck, Heidelberg

Dr. Frank Neidel is a specialist hair restoration surgeon with over 25 years experience. He has performed over 6,000 surgeries.

His strong involvement in hair transplantation is evident through being a member in leading medical societies and in his scientific collaboration with teams of experts at the skin clinic of Bochum University, the clinic of Lake Constance in Lindau, the “Rosenpark” clinic in Darmstadt and the “Rosen-gasse” clinic in Ulm.

His primary practice is located in Düsseldorf, Germany. Dr. Neidel also supervises hair transplantation clinics as an advisory doctor abroad in Holland (Transhair NL) and in Moscow (RTH). He is president and a board member of societies for hair transplantation including the Association of German Hair Surgeons in Berlin and the European Society of Hair Restoration Surgery in Paris, and is a member of the ISHRS. His extensive subject knowledge can also be found in several medical specialty textbooks in which Dr. Neidel has contributed as an author. ♦

Letters to the Editors

Re: Transition from forceps to implanters

Francisco Jimenez, MD *Las Palmas Gran Canaria, Canary Islands, Spain* fjimenez@clinicadelpelo.com

After visiting many colleagues and attending numerous meetings and workshops, I have seen and tried a variety of methods for the insertion of grafts into a recipient scalp.

After more than 10 years using fine-tip forceps for inserting grafts, either with the stick-and-place method or with pre-made sites, I decided 5-6 years ago to switch to implanters and I continue to use them to this day. The reason for this letter is to reflect on the issues that could be encountered when making the transition from the use of forceps to implanters.

Readers may recall that the use of implanters started in Korea in the early 1990s, and that for a long time only our Korean colleagues used them. I remember trying Choi implanters in the mid-90s, but for some reason I found them inefficient at that time. I was probably not persistent enough with their use to assess their advantages. At that time (in the mid-90s) in Europe, as far as I know, only the Greek DHI group managed by Kostas Giotis used implanters. In the past 5-10 years, a remarkable increase in the use of implanters has occurred. Those new to the field adapt readily to their use, but even veterans like myself can be persuaded of the advantages they offer.

If you want to start using implanters, I advise you to visit a colleague, watch videos, or read about the techniques required. When I became interested in trying them, I got in touch with my fellow countryman, Dr. Jose Lorenzo, who kindly showed me some of his videos and shared some tips with me for implanter use. These tips are described in detail in a couple of *Forum* articles that I highly recommend.^{1,2} I use basically the same setup Dr. Lorenzo describes in these articles: 2 technicians loading the grafts in four implanters (two of 0.8mm and two of 1mm). The only thing I have changed recently is that I like to use another technician whose role it is simply to pick up the implanter and place it in my fingers. In this way, I do not need to move my shoulder, elbow, hands, or arm, which means less movement, less fatigue, and a consequently faster insertion speed. I saw this technique in a video presented by one of our Korean colleagues at a couple of our ISHRS annual meetings.

When switching to implanters, you will encounter the following issues:

1. How many implanters to buy? At the beginning, just get two 0.8 and two 1.0 implanters and a few needles. Do not spend too much money until you are sure you want to switch to implanters. Then, ask your best technician to take over responsibility for the implanters: he or she has to learn how to assemble the different parts of the implanter, how to sterilize the implanters, how to change new needles for each case, and how to change needles during a case if they become blunt. If the technician takes good care of the implanters, they can last for years.
2. You will also need two technicians able to load the grafts in the implanter needles. With practice, sufficient speed can be quickly attained. The good thing is that they can practice over and over again with just a few grafts that can be saved and placed in formalin.

3. Finally, the third important part is for the surgeon to practice the insertion of the implanter needle into the skin and the hair follicle graft release. Though the use of any new instrument and technique involves a period of adaptation, the learning curve in this particular instance is quite short compared with that for the stick-and-place method with forceps. Use a silicon scalp model to practice and feel comfortable with the implanters in your hands. The most difficult part is insertion of the graft at the adequate depth, because at the beginning there is a tendency to insert the graft too deep by pushing the implanter while triggering the shooter. This might cause folliculitis and cysts.

As somebody who has tried various insertion methods, I am in a position to assess and compare the advantages of the implanters. The most important advantage for me has been that I can now insert more grafts in less time and with less fatigue. Additional advantages of the implanters are less trauma to the hair follicle graft (because the follicle is never grasped at the delicate dermal papilla, but only at the superior dermis during the implanter loading), minimal trauma to the recipient site (the slit made with the needle is immediately filled with a snug-fit graft), and the previously mentioned short learning curve, especially important for those new to the field.

As a final comment, if a colleague were to ask me to recommend one particular graft insertion technique, I would simply recommend the technique that works best in their hands and that most suits their practice. All types of insertion techniques achieve excellent results in expert hands. For me and for my practice, I choose implanters, but if, for example, you do not want to be involved in the insertion part, and prefer to make the recipient sites and delegate to your technicians the task of inserting the grafts, then implanters are not for you. Again, no graft implantation technique is better than any other provided you do not forget that the ultimate goal of graft implantation is to place the grafts with the minimal possible damage and distribute them in the most aesthetic manner and in sufficient quantity to satisfy the patient's expectations when the hair grows.

References

1. Lorenzo, J., and X. Vila. Introduction to the use of implanters. *Hair Transplant Forum Int'l.* 2011; 21(4):121-122.
2. Lorenzo, J. Introduction to the use of the implanter: part II. *Hair Transplant Forum Int'l.* 2011; 21(5):170-171. ♦

Letters to the Editors *from page 81***Re: "State-of-the-Art FUE: Non-Shaven Technique" (*Hair Transplant Forum Int'l.* 2014; 24(5):161, 166-169).****Jae Hyun Park, MD Seoul, Korea jay8384@naver.com**

I have personal experience with more than 10,000 cases of hair transplantation surgery and have used non-Shaven FUE (NSFUE) since 2006. I have no knowledge about the operating technique that Dr. John Cole introduced to Korea in 2008, and have not had the chance to observe the procedure to date.

Most hair surgeons are aware that NSFUE is a delicate and difficult surgery that physically and mentally tires both the patient and surgeon, since it is highly time consuming.

I would especially like to relay a message of gratitude to Dr. Cole, who is greatly advancing FUE surgery around the world, and I would also like to state my personal opinion as follows.

1. Does a sharp punch become dull very soon?

This is not a usual occurrence. If a sharp punch actually becomes dull very soon, it would be an important problem to address. However, there are many factors that affect the degree of punch dullness. Firstly, the company and the product to which the punch tip belongs, is very important. Additionally, hair coarseness, skin texture, punching depth, and method of implantation have an effect as well. Analogously, a knife produced for the purpose of cutting meat does not easily dull on cutting 200-300 pieces of tofu. I have rarely experienced a punch that rapidly becomes dull in my vast clinical experience. Furthermore, if a punch tip actually becomes dull, it is generally changed to a new tip. Changing tips takes approximately just 1-2 minutes.

2. What is the duration of the operation?

There are 3 major steps that take up a long period of the operation time in a typical NSFUE procedure.

The first is pre-trimming the hair prior to surgery. This step does not increase the actual operation time, since it is done by an assistant prior to surgery. However, it is still a time-consuming and laborious step for both the assistant and the patient.

The second is the time required to seek the next target hair to punch after completing the previous one. This step takes a longer time in pre-trimmed cases and requires a very high level of concentration. With fewer amounts to harvest or a wider pre-trimmed area, the time needed to locate the next trimmed hair will be longer. In direct NSFUE, the surgeon visually seeks the next target in the adjacent area while the previous punching is in progress, thus reducing the required time. This leads to a shorter operation time. Critically, it takes much time to find pre-trimmed hair among crowded long hair.

The third time-consuming step is the extraction. Flipping and extracting over long strands of hair to find the punched graft requires expert skill. A well-trained assistant must be assigned for this procedure in order to lower the discard rate caused by capping, as well as to decrease the out-of-body time and injury to hair follicles. There are a few tips to decrease the extraction time. First is the use of an ATOE forceps, which was developed by Dr. Cole for the purpose of FUE.

An ATOE forceps is very useful in NSFUE. It is very difficult to conduct graft extraction by flipping over long strands of hair using the two-handed forceps extraction technique. Using the ATOE forceps makes it much easier to extract the punched graft while

turning over long strands of hair. Second is the fine control of the punching depth. For instance, if 2.8mm is the minimal depth that enables extraction, 3.0mm is the depth that makes easier extraction possible without a significant increase in the transection rate (TR). TR increases if the depth is over 3.2mm, so I mainly choose 3.0mm as the punching depth in such cases, since this can prevent the graft from being dried up or damaged during the extraction process.

My personal target goal is approximately a 10% transection rate in NSFUE. (For reference purposes, I have a target of approximately 5% in total shaven FUE.)

Thirdly, I perform surgery with 2 assistants on my right and left sides. I demarcate 8-10 areas from one ear to the other side according to the amount of grafts to harvest prior to starting the procedure. When I finish punching the left side, an assistant on the left conducts extraction, while I move to the right for punching the next zone. When I move to the next zone to proceed with punching, I skip 2 or more zones in a box zone from the punched zone, in advance. If there is a zone from 1 to 8, I usually start punching from zone 6, and move to zone 3, while skipping zones 4 and 5. This enables easy extraction of grafts without encroaching individual operator hand space when punching the next zone.

There is no similar pre-trimming time in direct NSFUE and the required time to seek the next target to be punched is also decreased. There is no difference in extraction time. Accordingly, shortening of the operation time is possible. This is an important issue in NSFUE where extremely long operation time is crucial.

3. Position for operation.

My personal opinion is that direct NSFUE should be done in the sitting position. This sitting position is essentially required for the direct NSFUE technique, because it is not hindered by long hair, and it is easy to find the hair exit angle.

4. Is tumescence required?

Surgeons usually decides this on a case-by-case basis according to his or her preference. I personally prefer to use tumescence. With tumescence, I can conduct easier and consistent punching. Methods that help with consistent punching can be of great help, especially in situations similar to that of NSFUE where there are many surrounding barriers.

5. Is it difficult to see the angle of the hair emergence with long hair?

This is correct. It is the biggest challenge of the direct NSFUE technique, which requires a long and steep learning curve. I can provide a few surgical guidelines to reduce the learning curve and to get better results, as follows:

- a. Direct NSFUE must be performed in the sitting position.
- b. Use the ATOE forceps and a motorized punch with both oscillating and rotating modes.
- c. Punch from the inferior to superior-ward and upward, because blood flows downward. It is very important to secure a clear operation field.
- d. Use multiple clips to hold the hair within a 1cm-wide area, and undo clips sequentially from the bottom.
- e. Conduct clipping less than 1cm wide, if possible. To adjust the natural hair exit angle, it is more advisable to punch immediately after undoing the clip if possible,

rather than finding hair to be punched by throwing the long hair backwards. Therefore, it is better to have a narrower width of clipping.

- f. It can be difficult to determine the hair exit angle when hair gets tangled and sticks to one another due to blood clot. For such cases, it is advisable to prepare a sterilized saline spray and comb. Lightly spray the saline and comb, thus making the direction of hair more noticeable.
- g. When undoing the clip from the bottom, sometimes the clip indents the hair, resembling a curl. Since it resembles a curl in the hair, it makes it difficult to find the hair's exact exit angle. The saline spray and combing can make it easier to find the direction and angle of the hair strand in such situations.
- h. Despite the prevailing controversy, if tumescence is used, and an assistant conducts a little traction on skin in an upward direction, easy punching and reduced TR are facilitated.

Applying the various surgical tips will permit easier finding of the hair exit angle and direction. However, finding the exact hair exit angle and accurately processing punching is still an extremely difficult process. However, there are always obstacles and hurdles in new operations. The future of hair transplant surgery is leaning towards NSFUE. Many outstanding surgeons worldwide will continue to discuss and discover improved operation techniques and know-how.

6. What is the transection rate?

Every surgeon views TR differently, but I aim for a TR of 10% or below using the NSFUE technique. If the punch is very superficial, the TR can be lowered. However, the extraction takes a long period of time, and the survival rate can be lowered because the proportion of skeletonized grafts increases, and the grafts are out of body for longer. Recently, increasing experience and know-how of the method has led to a generally slightly less than 10% TR.

I anticipate a further decrease in TR.

7. Others

The surgeon can make a direct selection of the hair strand for punching in the direct NSFUE method. Additionally, the hair can be cut according to the quantity sought for extraction, without over trimming. Therefore, even in cases of punching more than 2,000 grafts, the possibility of surgery being obvious due to over trimming is low.

8. Conclusion

It is my personal opinion that non-shaven FUE will be one of the most important future techniques of hair restoration surgery. I anticipate that more discussion and interchange of ideas will promote further innovation of NSFUE.

Reply to Dr. Jae Park from Dr. John Cole

Non-shaven FUE is the future for hair transplant surgery. As Dr. Park states, there are many who want FUE to avoid a strip scar, however, they also are unable to shave their head. For this reason, I introduced non-shaven FUE in 2003. I introduced the totally non-shaven technique in Korea in 2008.

Initially, we offered shaven patches, which is the same thing as Dr. Park's shaven strips. We discovered within the first year that shaven patches limited the number of grafts we could obtain, as much of the donor area was non-shaven. The chief complication of shaven patches was linear areas of thinner density, which resulted in linear patches having a moth-eaten appearance. The result was as bad as a strip scar in the author's opinion. Therefore, I believe that shaven patches or shaven strips should NEVER be performed.

If a physician is going to shave a portion of the donor area, while leaving the remainder of the hair long, the preferred method is to shave the entire safe donor area while leaving the surrounding hair long. Of course, this requires long hair, which is more common in women. Grafts should then be harvested in an irregular, diffuse manner so that there is no resulting extraction pattern.

We prefer the totally non-shaven approach. We require approximately 1 hour to prepare a donor area for a 3,000-graft non-shaven procedure. We do our best to trim only the grafts that we intend to remove, however, we always seem to overtrim. Overtrimming is preferable to undertrimming only because undertrimming decreases the desired graft count. We harvest grafts nearly as fast as if the donor area is not shaven. Of course, my speed is higher because I have performed over 1,000 cases of non-shaven FUE already. We also find that with practice, the follicle transection rate is nearly the same as with a shaven procedure. It simply takes time and practice.

It is always nice to find ways to cut corners. Using the punch to cut hair as you proceed is one way. However, there are problems resulting from this method. Hair follicles are hard. When you use the punch to cut the hair shaft, the hair follicles will accelerate the dulling of your punch. Asian hair is often coarse and the dulling affect is greater with coarser hair. It is far easier to use this technique with fine hair. The second problem is that it is more difficult to approximate the hair shaft exit angle when you leave the hair long. Hair grows along a curve angled down toward the skin. With longer hair, this curve will make the hair appear to exit more acutely from the skin than it actually does. The physician must guess the true angle with longer hair. The coarse nature of the hair requires greater axial force from the physician to cut the hair follicles. This greater axial force displaces the hair follicle and thus further complicates the extraction process while increasing the risk of follicle transection needlessly. The preferred method of non-shaven FUE is to pre-cut the hair shafts so that these risks and complications are avoided. The author feels that saving time is not acceptable when it carries greater risk to hair follicles.

There are many different types of skin. Some are hard, some are soft, and some are rubbery. It is impossible to make generalizations from a limited number of Caucasian cases. One can assume that Asian skin will be firmer and the follicles will be deeper and coarser. There are Caucasians with deep follicles and firm skin, however. In general, I like the firm skin of the Asian patient. I feel it helps limit follicle displacement while excising the graft. ♦

Meetings and Studies

Review of the 6th Annual Hair Transplant 360 Workshop October 23-26, 2014 • St. Louis, Missouri, USA

Marco N. Barusco, MD *Port Orange, Florida, USA* drbarusco@tempushair.com

2014 was the 6th consecutive year of the Hair Transplant 360 Workshop in St. Louis and my first year as faculty. I must say that it was an honor to have been invited and I was very impressed by what I saw. I had heard that the workshop was a huge success every year, and now I know why.

The Organizers

Drs. Sam Lam and Emina Karamanovski are well known for their organizational skills and their hard work. This “dynamic duo” works so well together that they don’t even need to talk to each other. They know exactly what the other one wants and share the same intense passion for education and for our specialty. They made sure all of us felt welcome, valued our input and suggestions, and were very gracious to all of us.

The Venue

St. Louis University is a beautiful university located near downtown St. Louis. The campus is very large, occupying a large geographical area of the city. Old buildings share space with new, modern ones. The PASE (Practical Anatomy and Surgical Education) building is a beautiful 3-story building with a French-inspired interior full of beautiful details and woodwork. The top floor housed the hall where all meals were and coffee breaks were served and where the various exhibitors were set up, allowing for intense interaction with the participants/faculty.

The middle floor contains offices of the university and a large lecture hall with comfortable seating and a large stage area. The audiovisual equipment and resources are great and a unique 3-D system is available for live demonstrations on patients and cadavers right from the stage, with the audience being issued 3-D glasses.

The lower floor of the building houses the anatomy labs, which are extensive and large. One room is equipped with high-quality microscopes for surgical training, and the other with dissecting tables. Cadavers were numerous and the staff incredibly helpful, making sure we always had what we needed.

Transportation to and from the various hotels used to house faculty and participants was offered by the organizers and were always on time and plentiful.



Vance Elliott, Ken Williams, Larry Samuels, Marco Barusco, Jim Harris, Sam Lam, Emina Karamanovski, Nicole Rogers, Tina Lardner, Aileen Ullrich, Heather Steward, Robin Collins (Not pictured: Robert True)



Participants in the Anatomy Lab

The Program

The program was packed and very intense. Drs. Lam and Karamanovski put a lot of thought into creating a program that progressed very well over each day. A physicians’ program ran concurrently with an assistants’ program, with some overlap. Lectures were given in the morning and practical, hands-on activities occupied the afternoon. Opportunity for interaction between faculty and participants were plenty and at the end of each day all of the participants and us were exhausted but happy. The program covered every aspect of the procedure, from consultation to post-op, both for strip surgery and FUE. Hairline design, donor hair removal, recipient site creation, graft preparation, storage, and placement were all well discussed and demonstrated.

Participant and Vendor Feedback

One common comment I heard from participants was how much time they had to interact with the faculty and each other during the cadaver sessions. This is invaluable for a great learning experience. The fact that the lectures were given in a more informal setting, which stimulated active discussion with the participants, was also well received. Vendors also enjoyed plenty of exposure and time with the faculty and participants, and all of them were very happy with the event.

Conclusion

This was an intense but very rewarding event. I would like to personally thank Drs. Lam and Karamanovski for inviting me and for treating me so well. I look forward to next year. ♦



Review of the Japan Society of Clinical Hair Restoration 19th Annual Scientific Meeting and Live Surgery Workshop November 23, 2014 • Okamaya, Japan

Vincenzo Gambino, MD Milan, Italy vincenzogambino@vincenzogambino.com

The 19th Annual Scientific Meeting and Live Surgery Workshop of the Japan Society of Clinical Hair Restoration (JSCHR) was held on November 23, 2014 at Okamaya Convention Center in Okamaya, Japan. The meeting began with the welcome address by Society President Shinsaku Kawada, MD.

The Korea Japanese Friendship Session began with a presentation by Dr. Chang-Hun Huh entitled "Current and Future Surgical Treatment for Androgenic Alopecia." He spoke about various surgical approaches to HRS and his opinion that the ARTAS® Robotic System is the current best option for FUE.

Dr. Gwang Soeong Choi's paper, "Current Perspectives on Medical Therapeutic Options for Androgenic Alopecia," discussed the various current and promising future treatments. Aside from finasteride, dutasteride, and minoxidil, there are cell mediated treatments, such as cell secreted factors, cultured cells of hair follicles, and platelet rich plasma, that are showing positive results. Low level laser and light treatments are being used, but there is little peer review on their efficacy.

Dr. Ralph M. Trueb presented "Patterned Hair Loss, Hair Aging, and Anti-aging Strategies." He theorized that aside from the currently recognized factors in hair loss and hair aging, follicular micro-inflammation and fibrosis could also be co-factors and new strategies could be developed.

Dr. Vincenzo Gambino provided insight in his presentation, "Hair Transplantation on Patients Younger than 25."

In "Clinical Utility and Validity of Minoxidil Response Testing in Androgenetic Alopecia," Dr. Andy Goren noted that sulfotransferase enzyme activity can predict a patient's positive response to minoxidil therapy.

Presenting "Future Restoration Medicine Beginning from Hair," Dr. Yasuyuki Amoh detailed how he developed a system of mass production of follicular stem cells by cell culture, and he studied repair of injured tissue including regeneration of neuron synapse using follicular stem cell in mice.

Dr. Manabu Ohyama presented "Strategy for Optimization of Cellular Components for the Human Hair Follicle." He noted how he used multi-potential stem cell, including human IPS



(left to right) Sotaro Kurata, MD, Mrs. Irene Gambino, Prof. Vincenzo Gambino, MD, Prof. Andy Goren, MD, Prof. Ralph M. Trueb, MD, Kuniyoshi Yagyu, MD



Classic Japanese entertainment made for an enjoyable end to the evening.

cells, and he analyzed the signal conduction pathway in human dermal papilla cells. He also studied the induction of hair follicles using IPS cells *in vivo*.

In his presentation, "Research Strategy and Future Regeneration of the Hair Organ," Dr. Koei Toyoshima detailed his study on the use of fetal epidermal stem cells and mesenchymal stem cells, and how he succeeded in neogenesis of functional hair follicles with hair cycle in mice.

In "New Nano Medical Treatment of Skin and Hair Using Fullerene" Dr. Shigek Inui presented his study on the anti-oxidative effect of fullerene. He studied cell protection of hair follicle cells and epidermal cells using 1% fullerene lotion.

Dr. Yasusuke Ito presented "Treatment for Alopecia Areata." He talked about IFN-gamma signal conduction pathway and suppression of JAK-STAT pathway. He also discussed targeted therapy with JAK1/2 antagonist

and JAK3 antagonist. In addition, he won the Hirayama Award of the JSCHR this year.

At the closing ceremony and gala, Dr. Kwada and incoming President Dr. Ryuichiro Kuwana spoke. Drs. Takahiko Morigudi and Kuniyoshi Yagyu presented awards. A traditional dinner and classic Japanese entertainment was graciously provided by the JSCHR. ♦

SAVE THE DATE

December 5-6, 2015

20th Annual Meeting of the JSCHR

Dr. Ryuichiro Kuwana, Program Chair

Kochi, Japan



ISHRS Annual Giving Fund 2014 Year-End Report

Dear Colleagues:

As we start another exciting new year with ISHRS, it seems appropriate to look back on 2014 and celebrate what has been accomplished through the generous donations made to the Annual Giving Fund (AGF). It is inspiring that so many members care enough about the ISHRS and the AGF mission to make such transforming gifts.

2014

To recap, while the ISHRS Annual Giving Fund fell slightly short of its 2014 fundraising goal of \$47,500, it still supported many valuable ISHRS initiatives. I want to personally thank all who contributed so generously this year making it possible for us to raise \$42,350. Each of you has helped the ISHRS achieve many of its philanthropic and educational goals. Your kindness and ongoing support of the Society through your AGF donation is very much appreciated by the ISHRS leadership.

The proceeds from the year's Annual Giving Fund were used to support several projects. Here is an example of what your gifts helped to fund in 2014:

- Operation Restore Pro Bono Program
- Cicatricial alopecia research
- Communications & public education, including website improvements and SEO
- Support of the 9th World Congress for Hair Research

2015 GOALS

In 2015, we hope to reach our \$40,000 fundraising goal. We will be reaching out to new and old members asking them to carry the torch. It is my hope that many of you will be inspired by the important work that past donations have funded. Your 2015 donation will help continue to fund the OPERATION RESTORE Pro Bono Program, hair research, and additional public education via our www.ISHRS.org website in multiple languages.

PLEASE CONSIDER DONATING: For those who have not yet contributed, it is easy to support the Society. If you choose to donate for 2015 or make another multi-year pledge, please complete the online donation form that can be found at <http://www.ishrs.org/content/ishrs-annual-giving-fund>.

Or, if you prefer, you can contact Kimberly Miller at the ISHRS headquarters office at agf@ishrs.org with your credit card information, amount of donation, and number of pledge years. New donors will receive a lapel pin, and we ask you to wear it proudly at the ISHRS meetings. Those who make a 2015 charitable contribution to the AGF at the Trustee or Leadership Circle levels will receive two complimentary tickets to the Gala in their registration packets and will be acknowledged during the Gala Dinner Dance and Awards Ceremony.

Your generosity in giving makes a concrete statement that you support the ISHRS and its initiatives. Thank you for your consideration of a gift to the Annual Giving Fund. All gifts are tax-deductible within provisions of your national income tax laws. Should you need additional information, please contact the ISHRS Headquarters at 1-630-262-5399.

Most sincerely,

John D.N. Gillespie, MD
Chair, ISHRS Annual Giving Fund



Thank You to Our 2014 Donors

The ISHRS gratefully acknowledges the generosity of the following individuals who have made donations to the Annual Giving Fund.

Trustee Circle: \$2,000

Bernardio Arocha, MD, FISHRS
 Mark A. Bishara, MD
 John P. Cole, MD
 Mark S. DiStefano, Sr., MD, FISHRS
 Vincenzo Gambino, MD, FISHRS
 John D.N. Gillespie, MD, FISHRS
 Sara Wasserbauer, MD, FISHRS
 Kuniyoshi Yagyu, MD, FISHRS

Leadership Circle: \$1,000

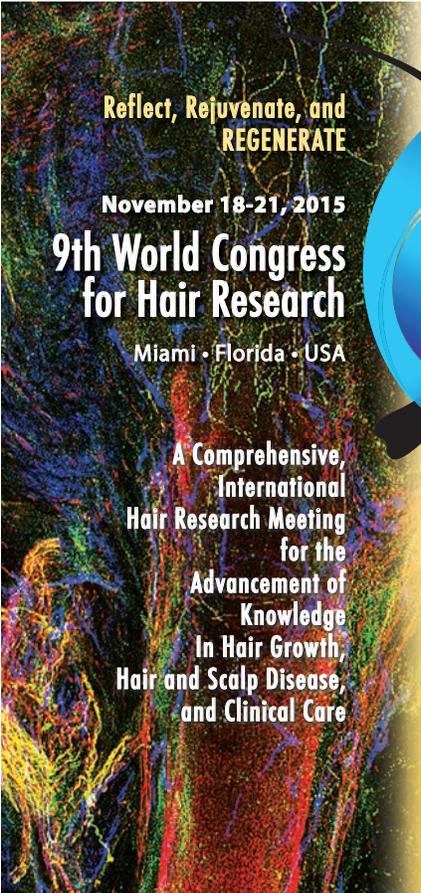
Timothy P. Carman, MD, FISHRS
 Glenn Charles, MD
 Vance W. Elliott, MD, FISHRS
 Edwin S. Epstein, MD, FISHRS
 Koray Erdogan, MD
 Bijan Feriduni, MD, FISHRS
 SungJoo Hwang, MD, PhD, FISHRS
 Grant F. Koher, DO, FISHRS
 Samuel M. Lam, MD, FISHRS
 Jose Lorenzo, MD
 Emorane Lupanzula, MD
 Mario Marzola, MBBS
 William Parsley, MD
 Damkerng Pathomvanich, MD, FISHRS
 Asim I. Shahmalak, MBBS, FRCS
 Piero Tesauo, MD
 Robert H. True, MD, MPH, FISHRS
 Anastasios Vekris, MD
 Kenneth Williams, DO, FISHRS

Supporter's Circle: \$500

Jonathan Ballon, MD, FISHRS
 Michael L. Beehner, MD
 James A. Harris, MD, FISHRS
 Wolfgang Haindl
 Barry H. Hendler, MD, DDS
 Carlos Puig, DO, FISHRS
 Nicole Rogers, MD
 Cagatay Sezgin, MD
 T.K. Shiao, MD, FISHRS
 Arthur Tykocinski, MD, FISHRS
 Conradin von Albertini, MD

Contributor's Circle: \$250

Kulakarn Amonpattana, MD
 Julieta P. Arambulo, MD
 Gerlinde Barnikel
 Hyo Kang, MD
 William J. Woessner, MD
 Wen-Yi Wu, MD, FISHRS



Reflect, Rejuvenate, and REGENERATE

November 18-21, 2015

9th World Congress for Hair Research

Miami • Florida • USA

A Comprehensive, International Hair Research Meeting for the Advancement of Knowledge in Hair Growth, Hair and Scalp Disease, and Clinical Care



Plan to Attend

FOR INFORMATION AND REGISTRATION GO TO:

www.hair2015.org

For all inquiries, please contact
 NAHRS Administrator, Victoria Ceh, MPA
 info@nahrs.org

Hosted by





INVITATION



The North American Hair Research Society (NAHRS), with participation from the Australasian Hair & Wool Research Society, the European Society for Hair Research, the Hair Research Society of India, the Japanese Society for Hair Research, and the Korean Hair Research Society, will host the **9th World Congress for Hair Research**, which will bring together hair biologists, dermatologists, cosmetic scientists and hair transplantation surgeons for this three and a half day comprehensive hair research meeting.

International colleagues will present new research, share experiences, and discuss new directions for the advancement of knowledge in hair growth, hair and scalp disease, and clinical care.

The Congress will include general sessions, scientific posters, pre-Congress workshops, networking opportunities, a full exhibits program, company sponsored satellite symposia, and more.

We invite you to attend!

Sincerely yours,
 Congress Scientific Planning Committee

Wilma F. Bergfeld
 Wilma F. Bergfeld, MD
 CONGRESS CO-CHAIR
 Cleveland Clinic Foundation

Angela Christiano
 Angela Christiano, PhD
 CONGRESS CO-CHAIR
 Columbia University

Maria K. Hordinsky
 Maria K. Hordinsky, MD
 CONGRESS ASSOCIATE CHAIR
 University of Minnesota

Victoria H. Barbosa
 Victoria H. Barbosa, MD, MPH, MBA
 Rush University

Valerie D. Callender
 Valerie D. Callender, MD
 Howard University

Luis Garza
 Luis Garza, MD, PhD
 Johns Hopkins University

Antonella Tosti
 Antonella Tosti, MD
 University of Miami

Ken Washenik
 Ken Washenik, MD, PhD
 New York University/ Bosley

Victoria H. Barbosa
 Victoria H. Barbosa, MD, MPH, MBA
 Rush University

Valerie D. Callender
 Valerie D. Callender, MD
 Howard University

Luis Garza
 Luis Garza, MD, PhD
 Johns Hopkins University

Antonella Tosti
 Antonella Tosti, MD
 University of Miami

Ken Washenik
 Ken Washenik, MD, PhD
 New York University/ Bosley

87

Message from the 2015 Annual Scientific Meeting Program Chair

Nilofer P. Farjo, MBChB, FISHRS *Manchester, UK* dr.nilofer@farjo.com



Preliminary Program

Now that all the abstracts have been received for the Chicago meeting, it's time to work towards completing the program over the next couple of months. The Annual Scientific Committee has been working hard to assess the abstracts and once the scores are collated, I will be putting the preliminary program together. You will be notified in the next 4-6 weeks if your presentation has been accepted, so thank you to all of those who have sent in abstracts. Without your contributions, the meeting would not be a success.

Please remember that if your abstract is chosen you will be asked to submit your PowerPoint or video 6 weeks ahead of the meeting. The moderator for your assigned session will check that both the content of your presentation meets the required guidelines for quality and time limit and also fulfils the learner objectives.

Invited Guest Speakers

We have confirmation of this year's guest speakers. They will cover a number of topics that I hope will be interesting to the members: basic sciences, etiology of female pattern hair loss, the latest research on Post-Finasteride Syndrome, and nutrigenics.

The invited speaker for the Advances in Hair Biology Lecture is Valerie Horsley. She is the Maxine F. Singer Associate Professor of Molecular, Cellular & Developmental Biology at Yale University. She has already received many honours for her work on the cellular and molecular mechanisms that control stem cell activity and function within epithelia. These honours include the Presidential Early Career Award for Scientists in 2012. I have asked her to speak on her work with adipocytes and their role in regulation of fibroblast function.

Another of our honoured speakers is Andrew Messenger, Professor of Dermatology at the Royal Hallamshire Hospital in Sheffield in the United Kingdom. He will give the Norwood Lecture in honour of O'Tar Norwood, a dermatologist, who is a co-founder of the ISHRS and founder of this journal, *Hair*

Transplant Forum International. Dr. Messenger is world renowned as an expert on female pattern hair loss, so I look forward to his update on the latest theories behind the causes of hair loss in women.

Side effects of finasteride are still a controversial topic for our patients. Mohit Khera, Associate Professor of Urology at Baylor College of Medicine, has been invited to present the results of his study on genetic and epigenetic factors in Post-Finasteride Syndrome patients. This syndrome, characterized by persistent sexual, neurological, and physical side effects after stopping finasteride, can be a very devastating condition for patients, but so far there has not been a convincing explanation for its existence. Hopefully, Dr. Khera's study will shed some light on this condition.

Finally, we have a lecture entitled Natural Ingredients for Activating Biological Targets in Hair and Skin that will be given by Ranjit Bhogal, PhD, a research scientist with Unilever Ltd in their Research and Development Division in Colworth in the United Kingdom. Unilever has a long history of working on hair biology research both in their own lab and in association with leading universities. Dr. Bhogal will give us some insight into another under researched topic, namely the interaction of external nutrient factors on hair and skin.

Chicago the Destination

September is a great time of year to visit Chicago. The weather is pleasant during the day with temperatures in the mid-70s Fahrenheit (24°C), but it can get a bit chilly at night 54°F (12°C), so it would be advisable to carry with you a warmer jacket or sweater for the evenings. The milder temperatures also mean that there are no crowds of tourists, which makes it a perfect time to enjoy sight-seeing without the excessive queues. So come a few days ahead of the meeting and enjoy all the sights that Chicago has to offer. See you there!♦



SAVE THE DATE

September 9-13, 2015

2015 ISHRS Annual Meeting



CHICAGO '15
ISHRS 23RD ANNUAL SCIENTIFIC MEETING
SEPTEMBER 9-13

www.ishrs.org/AnnualMeeting.html



Message from the 2015 Surgical Assistants Program Chair

Janna Shafer *Bloomington, Minnesota, USA* janna@shapiromedical.com

Excitement is building as the annual ISHRS conference in Chicago this September will be here before we know it. Sara Roberts, who works with Drs. Bessam and Nilofer Farjo, and I promise to host a wonderful SA Program and Workshop this year. Attending the SA Program and Workshop is the best way to make new friends from somewhere in your own city or from half way across the world. The SA Program and Workshop is geared towards assistants with experienced skills and those brand-new to the field. In 2013, Sara helped organize the surgical assistants training in a very successful ISHRS-sponsored Regional Workshop in Manchester, UK. I have every confidence she'll do the same in Chicago.

We implore upon all the lead techs of each clinic to be more

active in the SA community. How do you go about being more active? Here are few suggestions: 1) empower yourself and your co-workers by reading up on the ISHRS Forum newsletters, 2) share your pearls and wisdom by contributing articles to the Forum, 3) become a faculty member in the SA Workshop or participate in the SA Program by giving suggestions for presentation topics or by giving a presentation.

Please don't hesitate to contact Sara or myself if you would like to participate in the SA Program and/or Workshop at Sara@farjo.com or janna@shapiromedical.com. See you in Chicago! ♦



ISHRS REGIONAL WORKSHOP

SAVE-THE-DATE
May 1-3, 2015



Hosted by: James A. Harris, MD, FACS, FISHRS

Workshop chairs: Emina Karamanovski & Tina Lardner

Sponsored by: Hair Science Center of Colorado

Hands-on Surgical Assistant Training Program *Graft Preparation and Placement (FU-strip & FUE)*

- over 20 hours of hands-on training
- live surgery observation
- learning in "real-life" surgical setting
- intimate group / instant feedback
- **NEW:** after the course, sponsoring physician will receive the student's skill level evaluation



LOCATION The Hair Sciences Center of Colorado, 5445 DTC Parkway, Suite 1015 Greenwood Village, CO 80111 USA

FEE \$ 1,700 per student* **To register** jlmccasky@hsccolorado.com or 1-303-694-9381

Go to: <http://www.ishrs.org/content/educational-offerings>, and scroll to "ISHRS Regional Workshops" for Registration Form

*Includes access to online ISHRS Assistant Resource Center from the date of registration through May 15, 2015 (value of \$2000)

Classified Ads

Hair Transplant Surgeon for NYC

Ziering Medical is searching for an experienced Hair Transplant Surgeon to join our Chicago, New York, and Dubai clinics. Generous compensation package in an established market, with tremendous upside. Interested candidates, please send your CV and cover letter to charmane@zieringhair.com

Seeking Full-Time Physician Assistant

Immediate opening for a Full-Time Physician Assistant for a Hair Restoration Clinic in West Hollywood. Must have experience with anesthetic injections and suturing. Knowledge of cosmetic laser treatments, injectables, and fillers is preferred but willing to train ideal candidate. Some Travel involved and must have excellent communication skills. Candidate will be trained in all aspects of hair restoration including hand-held Follicular Unit Extraction, ARTAS Robotic System, hairline design, etc. Please send résumé to: charmane@zieringhair.com

Seeking Hair Tech

Hair Tech for busy practice just west of Boston, Worcester, MA. Experience not necessary, but very desired. Work 4-5 days per week, your choice, paid at competitive rates. Excellent benefits, 401 K, Vacation 2-3 weeks based on experience, 10 paid holidays, sick time and personal days. Great place to work, people come and never seem to want to leave. Growing office. Please email Bonnie Minardi, Head Technician, DiStefano Hair Restoration Centers, at bminardi@hairman.com.

2014 Basics In Hair Restoration Surgery Lecture Series

ENDURING MATERIAL, ONLINE FORMAT
Sponsored by the International Society of Hair Restoration Surgery

To order your copy, go to:
<http://www.ishrs.org/content/basics-lecture-series>

Anagen (Growth)

- Varies from species to species
- Varies from region to region
- Varies the same species
- Varies from season to season
- Varies with age
- 6 cell stages
- In humans, the growth rate is 0.35mm per day

Orientation

Perpendicular (in the coronal plane)

- Hair is oriented perpendicular to (native) hair growth direction



**INTERNATIONAL SOCIETY OF
ISHRS
HAIR RESTORATION SURGERY**

International Society of Hair Restoration Surgery
303 West State Street, Geneva, IL 60134 USA
Tel: 1-630-262-5399 Fax: 1-630-262-1520 E-mail: info@ishrs.org

The 2014 Basics in Hair Restoration Surgery Lecture Series is an enduring material created by the International Society of Hair Restoration Surgery (ISHRS). The Series can be taken alone or paired with the Basics Hands-On Course at the ISHRS Annual Scientific Meeting. The Series provides the didactic information and the Hands-On Course teaches the core skills. When paired with the Hands-On Course, students are expected to complete the Series prior to the Hands-On Course. Together the overall emphasis is to provide basic and core skills essential for the practice of safe, esthetically sound hair restoration surgery. It is intended for use by those new to the field as well as those who are interested in a refresher. This enduring material was developed as a result of the need for the consistent and comprehensive presentation of the core basic topics. A faculty of well-known and distinguished experts in the field developed the materials and content based on the pre-determined learning objectives and with the guidance of the CME Committee.

LECTURES IN THE SERIES:

1. *Introduction: Course Overview and History of HRS*, Matt L. Leavitt, DO 26:59
2. *Anatomy & Physiology of Hair Growth*, William M. Parsley, MD 38:16
3. *Contemporary Insights into Hair Cycle Physiology and the Genetics of Hair Loss*, Bessam K. Farjo, MChB 26:23
4. *Physiology & Medical Treatment of Hair Loss*, Ken Washenik, MD, PhD 58:28
 - 4.1. *2014 Update on Medical Treatments*, Ken Washenik, MD, PhD 32:09
5. *Identification of Non-Androgenetic Pathological Hair Loss*, Bernard P. Nusbaum, MD 42:13
6. *HRS Patient Consult: Ethics, Expectations, and Pt Selection*, Matt L. Leavitt, DO 51:24
7. *Hairline & Crown Whorl Design*, Michael L. Beehner, MD 40:11
8. *HRS Anesthesia & Hemostasis*, Vance W. Elliott, MD 38:24
9. *Donor Harvesting & Closure*, Melvin L. Mayer, MD 1:00:45
10. *Graft Preparation and Storage*, Robert H. True, MD, MPH 56:59
11. *Recipient Site Preparation & Graft Placement*, Robert P. Niedbalski, DO 35:09
12. *Flaps, Reductions, and Lifts*, E. Antonio Mangubat, MD 1:03:01
13. *Office Emergency Preparedness*, Edwin S. Suddleson, MD 25:53
14. *Office Design and Ergonomic Work Stations*, Carlos J. Puig, DO 19:26
15. *Basic Principles of Staff Training*, Carlos J. Puig, DO 30:15
16. *Staff Training Process*, Emina Karamanovski 39:48

FORMAT Internet/online, computer. The following is a list of user/system requirements in order to participate in this enduring material.

- Internet connection with a minimum speed of 1000 kilobytes per second.
- Microsoft Internet Explorer 6.01 or higher, Firefox 2.0 or higher, Chrome, or Safari 2.0 and higher
- Windows Media Player. This can be downloaded for free at: <http://www.microsoft.com/windows/windowsmedia/player/choices/default.aspx>
- Microsoft Windows® 98 Second Edition, Windows 2000, Windows Millennium Edition, Windows XP Home Edition, or Windows XP Professional
- A 233 megahertz (MHz) processor, such as an Intel Pentium II or Advanced Micro Devices (AMD) processor
- 64 megabytes (MB)
- 16-bit sound card
- Super VGA (800 x 600) or higher resolution
- Speakers or headphones
- Adobe Flash Player

CONTINUING MEDICAL EDUCATION (CME) CREDIT

Sponsored by the International Society of Hair Restoration Surgery. The International Society of Hair Restoration Surgery is accredited by the ACCME to provide continuing medical education for physicians.

The International Society of Hair Restoration Surgery designates this enduring material for a maximum of 11.5 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

To receive CME credit participants must participate in the activity, complete the post-test, and achieve a passing grade (70% or higher). Instructions are included on the webpage.

Plan to Attend



THE ISHRS ANNUAL SCIENTIFIC MEETING is THE premiere meeting of hair transplant surgeons and their surgical assistants. You don't want to miss it.



GENERAL SESSIONS

- Combining FUE and Strip Surgery
- Advances in Hair Biology
- Update on Finasteride and Side Effects
- Hair Loss Diagnostic Dilemmas
- Unique Issues in Ethnic Transplantation
- Live Patient Viewing
- Small Group Discussion Tables
- Interactive Panels
- Female Pattern Hair Loss
- Management of Complex Cases

OTHER OFFERINGS

- FUE Hands-On Mini-Courses
- Lunch Symposia and Workshops
- Basics in Hair Restoration Surgery Course
- Advanced/Review Course
- Surgical Assistants Program & Hands-On Workshop
- M&M Conference
- Exhibits Program
- E-Poster Exhibits
- Social program including optional tours and activities, Welcome Reception, Gala Dinner/Dance

NEWCOMERS ARE WELCOME!

We offer a "Meeting Newcomers Program" to orient those who are new to the ISHRS annual meeting. Newcomers will be paired with hosts. We want to welcome you, introduce you to other colleagues, and be sure you get the most out of this meeting.

2015 ANNUAL SCIENTIFIC MEETING COMMITTEE

Nilofer P. Farjo, MBChB, FISHRS
Chair | UK

Sara M. Wasserbauer, MD, FISHRS
Advanced/Board Review Course Chair | USA

Ratchathorn Panchaprateep, MD
Advanced/Board Review Course Co-Chair | THAILAND

Nicole E. Rogers, MD
Basics Course Chair | USA

Aman Dua, MBBS, MD
Basics Course Co-Chair | INDIA

Samuel M. Lam, MD, FISHRS
Workshops Chair | USA

Marco N. Barusco, MD
M&M Chair | USA

Márcio Crisóstomo, MD
Live Patient Viewing Chair | BRAZIL

Jennifer H. Martinick, MBBS
Newcomers Chair | AUSTRALIA

Janna Shafer
Surgical Assistants Chair | USA

John D.N. Gillespie, MD, FISHRS
Surgical Assistants Co-Chair | CANADA

Damkerng Pathomvanich, MD, FISHRS
Immediate Past Chair | THAILAND

Jeffrey Donovan, MD, PhD | CANADA

Piero Tesauro, MD | ITALY

International Society of Hair Restoration Surgery

303 West State Street | Geneva, IL 60134 USA

TEL | 630 262 5399 or | 800 444 2737

FAX | 630 262 1520

info@ishrs.org | www.ISHRS.org

HAIR TRANSPLANT FORUM INTERNATIONAL

International Society of Hair Restoration Surgery

303 West State Street
Geneva, IL 60134 USA

Forwarding and Return Postage Guaranteed

Presorted
First Class Mail
US Postage
PAID
Mt. Prospect, IL
Permit #87

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

2015: 23rd ASM
September 9-13, 2015
Chicago, Illinois, USA

2016: 24th ASM
October 19-22, 2016
Panama City, Panama



HAIR TRANSPLANT
forum
INTERNATIONAL

Advancing the art and science of hair restoration

Upcoming Events

Date(s)	Event/Venue	Sponsoring Organization(s)	Contact Information
March 3-6, 2105 & May 26-29, 2015	University Diploma of Scalp Pathology and Surgery <i>Paris, France</i>	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
March 28-29, 2015	AAHRS Scientific Meeting & Live Surgery Workshop <i>Bangkok, Thailand</i>	Asian Association of Hair Restoration Surgery Hosted by Damkerng Pathomvanich, MD, FACS www.aahrs.asia	For details: infoaahrs@mail.com
May 1-3, 2015	ISHRS Regional Workshop Surgical Assistant Training Program: Graft Preparation and Placement (FU-strip & FUE) <i>Denver, Colorado, USA</i>	International Society of Hair Restoration Surgery Hosted by James A. Harris, MD, FISHRS Workshop Chairs: Emina Karamanovski & Tina Lardner	For details: http://www.ishrs.org/content/educational-offerings
September 9-13, 2015	23rd Annual Scientific Meeting of the International Society of Hair Restoration Surgery <i>Chicago, Illinois, USA</i>	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 <i>Miami, Florida, USA</i>	North American Hair Research Society www.hair2015.org	For details: info@nahrs.org
November 19-22, 2015	7th Annual Hair Restoration Surgery Cadaver Workshop <i>St. Louis, Missouri, USA</i>	Practical Anatomy & Surgical Education (PASE), Center for Anatomical Science and Education, Saint Louis University School of Medicine In collaboration with the International Society of Hair Restoration Surgery http://pa.slu.edu	Dr. Samuel L. Lam, Course Director Emina Karamanovski, Assistant Course Director http://pa.slu.edu
December 5-6, 2015	20th Annual Meeting of the JSCHR <i>Kochi, Japan</i>	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