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FORUM

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IN THIS ISSUE

A Retrospective Study on the Safety of Systemic Minoxidil for Hair Loss in the Older Population

How I Do It: Clinical Observations on the Use of Adipose-Derived Stem Cells Harvested from FUT Strip Fat



Hair Restoration with Non-Ablative Er:YAG Laser

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ABSTRACT

Introduction: Hair loss is one of the most common aesthetic concerns in women and men worldwide. Laser therapy, including low-level laser therapy, has demonstrated potential efficacy in hair restoration; however, not enough is known about the effect of Er:YAG laser monotherapy.

Methods: Four female patients with Ludwig scale classification level I-3 to I-4 androgenetic alopecia (AGA) were treated with 8 sessions of non-ablative Er:YAG laser (2940nm). The outcome was assessed objectively using trichoscopy analysis of the frontal, vertex, temporal, and occipital scalp regions, and subjectively by means of a patient satisfaction questionnaire using the 7-point Likert scale from 1 (very unsatisfied with hair appearance) to 7 (very satisfied with hair appearance). All metrics were assessed at baseline, after the fourth session, after the eighth session, and at the 1-month and 3-month follow-up visits. At each session, patients were monitored for potential pain during the laser treatment by means of an 11-point pain scale.

Results: Compared to baseline, average hair count, cumulative hair thickness, and number of follicular units (FUs) at different time points demonstrated relatively large fluctuations. Nevertheless, at 3-month follow-up all patients exhibited an increase in trichoscopy parameters from baseline in all scalp regions, with a statistically significant increase in the vertex and frontal regions, indicating an improvement of AGA symptoms after treatment. Median patient satisfaction increased on the Likert scale from a 3 at baseline to a 6 at the 3-month follow-up.

Conclusion: Treatment results of this small case series suggest that monotherapy with non-ablative Er:YAG laser is a promising treatment for AGA; however, more studies are needed to confirm the efficacy of this modality.

Keywords: Er:YAG laser, hair loss, hair restoration, trichoscopy

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INTRODUCTION

Hair is an important component of identity and self-image, and some patients with hair loss can experience a distorted body image and a decrease in quality of life.[1] Androgenetic alopecia (AGA), also known as male pattern hair loss (MPHL) or female pattern hair loss (FPHL), is the most common form of alopecia worldwide, and it is characterized by progressive terminal hair loss after puberty.[2] It is a multifactorial disorder caused by genetic factors, excessive response to androgens, environmental and systemic factors, and aging.[3] AGA is estimated to affect 50% of Caucasian males and females by the age of 50 and 80, respectively.[4] The incidence of AGA increases with age in both genders across all ethnicities.[5] It has been noted that early onset of AGA in young adults is a source of depression.[6] Additionally, an early onset of AGA has been associated with a variety of chronic conditions such as metabolic syndrome, which is a cluster of metabolic abnormalities including obesity, hyperlipidemia, insulin resistance, and hypertension.[7]

There are several available treatment options for AGA. These include different oral and topical pharmaceuticals, nutraceuticals, low-level laser therapy (LLLT), platelet-rich plasma (PRP) therapy, and a variety of surgical transplant procedures.[8] The only FDA-approved drugs include oral finasteride for men and topical minoxidil for men and women. Many patients seek alternatives to pharmacological treatment, which can display plateauing in the response and also cause undesirable side effects.[6]

The distinctive features of AGA include a gradual and progressive miniaturization of hair follicles and a decrease in the ratio of the active growth stage to the resting stage of the hair cycle.[6] Hair follicle stem cells regenerate in continuous cycles consisting of three stages: 1) growth (anagen), 2) involution (cata-

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President's Message

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Dear Colleagues:

I recently had the privilege of attending the African Society of Hair Restoration Surgery Workshop. This educational event, hosted by Dr. Shady El Maghraby—an ISHRS Board of Governors member and ABHRS Treasurer—was organized in collaboration with the Arab Association of Hair Restoration, a Global Council sister society of the ISHRS. This workshop united doctors from across Africa and beyond, representing the core pillars of the ISHRS and emphasizing the importance of achieving diplomate status with the ABHRS.

What struck me most during this workshop was a humbling realization: as I grow older and, hopefully, wiser, I often find there is much I don't fully understand about other cultures. This underscores the importance of expanding my own cultural knowledge and stepping outside my personal bubble. It was enlightening and inspiring to engage with different doctors from different cultures.

Unity and Inclusivity in the ISHRS Community

As president of an international society, I realize that we must always think beyond traditional boundaries, champion diversity and inclusivity, and create educational opportunities for all physicians. I met many eager young talented doctors who displayed a great passion to learn hair. I was particularly impressed by the enthusiasm of Dr. Charles Otieno, who expressed his desire to organize an ISHRS regional workshop in Kenya. His passion was evident as he immediately contacted the director of the health ministry to ensure he could secure the necessary permissions and licenses for a future workshop in line with established ISHRS guidelines and principles.

Our society is blessed to have many talented physicians dedicated to advancing our specialty through academic research, technology, and education. But beyond the educational achievements, it is the friendships and bonds within the ISHRS community that set our field apart. This unity, transcending past residencies or specialties, is of vital importance to the growth and success of our field.

In today's polarized political environment, it can be difficult to maintain unity with our colleagues who have differing opinions and beliefs. However, as professionals, we must rise above politics to focus on advancing the field of hair restoration. We should be able to learn from each other, regardless of our personal views.

Non-ISHRS Educational Workshops: Purpose and Innovation

Learning opportunities are offered at various ISHRS workshops, as well as those organized by our esteemed device owner members. Two upcoming workshops, led by ISHRS members—the Long Hair FUE workshop in Malaga, Spain, on February 21-22, 2025, and the workshop in Tashkent, Uzbekistan from September 5-7, 2025—are typically not endorsed by the ISHRS due to potential conflicts of commercialization. As a 501(c)(3) organization, the ISHRS exists for the public good, aiming to improve patient outcomes and advance the field. We achieve this by providing education, maintaining ethical guidelines, and promoting research, which are core pillars of our mission.

Although supporting our members' business ventures doesn't align with the core purpose of the ISHRS, which makes promotion in WhatsApp groups challenging, the upcoming educational event in Malaga led by ISHRS Past President Paco Jimenez and distinguished board members like Marie Schambach, is noteworthy. FUE owes much of its current success to the contributions of our members who have developed key devices and techniques. The advancement of long hair FUE, though complex, has significantly improved, and these commercial workshops—coordinated by ISHRS members such as Jean Devroye (WAW), Sanusi Umar (Zeus), Jae Park (graMAX), and Roberto Trivellini (Mamba)—serve as valuable resources for doctors to learn the latest innovations and enhance patient care.

While the educational component of the above workshops typically includes devices from other manufacturers, the ISHRS does not endorse or promote any one company or product. Our primary focus remains on education, not on promoting any single business venture or product. I am honored as ISHRS President to be invited to these workshops in Spain and Uzbekistan where I will be able to encourage doctors to join the ISHRS, discuss our theme of "unity," and promote the message of our Fight The FIGHT campaign.

Looking Ahead to 2025: Strengthening Our Bonds

As we move forward in 2025, let us continue to foster our friendships, strengthen our bonds, and expand our collective knowledge in unity. I am grateful to everyone who has volunteered their time and expertise—whether through contributing to this journal, accepting a committee assignment, or any number of ways—to make our ISHRS family stronger. For those not yet involved, please know there is always an opportunity to contribute.

Our goal for the Berlin 2025 meeting is to deliver not only a cutting-edge educational program but also to bring together colleagues with diverse talents and perspectives to advance our field. Equally important is creating an environment for social engagement and fun. My thanks go to Sam Lam for his efforts in organizing a high-quality academic agenda and to Nina Otberg, our "fun chair," for ensuring an engaging and enjoyable experience.

This is a meeting not to be missed. ■





Co-Editors' Message

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We wish you all a very happy New Year! We are very excited to serve as co-editors for the *Forum* for our third and final year. Our goal for 2025 is to ensure that our final six issues are as impactful and educational as possible for our ISHRS colleagues.

This first issue gets us off to a great start! The lead article by Dr. Ana Maletić is a case series reporting the potential efficacy of monotherapy with non-ablative Er:YAG laser for androgenetic alopecia (AGA). Laser therapy for AGA is an important emerging area of study, and we encourage other physicians to consider reporting their results with these modalities.

In Notes from the Editor Emeritus, Dr. Russel Knudsen highlights important considerations on the potential pitfalls and risks of the recent trend towards larger and larger cases. Dr. Knudsen clarifies that the goal of a hair transplant should shift from obtaining the highest number of grafts or greatest density possible to achieving the minimum coverage needed to meet the patient's needs. He discusses the importance of this concept in saving grafts for the future given the need to plan for the worst-case scenario in terms of hair loss progression. Dr. Knudsen points out that it is better to err on the side of a smaller procedure and need to do a second procedure than it is to use more grafts than needed to achieve the desired result. This is a great reminder to consider long-term planning and the potential for future hair loss progression in the era of the increasingly popular "mega" and "giga" sessions.

The Notable Articles Project revisits a 2009 interview with Dr. Rodney Sinclair, posing the same questions about female pattern hair loss (FPHL) for him to answer in 2025. His responses from both years are presented side by side, highlighting how perspectives and treatments have evolved over time. This engaging read covers topics such as first-line treatments, topical minoxidil, anti-androgens, supplements, ferritin levels, and photobiomodulation in FPHL.

Dr. Russel Knudsen's Controversies column highlights the benefits of avoiding a full scalp shave for hair transplants, such as maintaining discretion and using recipient hair as a guide during the procedure.

In How I Do It, Dr. Jerry Cooley explores the use of adipose-derived stem cells (ADSCs) harvested from FUT strip fat to enhance hair transplantation outcomes. By using the Rigenera® system to process the fat, ADSCs are injected into the recipient area, promoting angiogenesis, reducing fibrosis, and improving graft survival and hair quality. Dr. Cooley shares four years of observations, noting accelerated growth, thicker non-transplanted hair, and overall improved results, particularly for patients with challenging hair characteristics. While acknowledging the lack of controlled studies, he emphasizes the potential of this technique as a valuable bio-enhancement in FUT procedures.

The Literature Review by Dr. Guillermo Guerrero summarizes recent articles focusing on hair transplant for post-operative secondary scarring alopecia, the efficacy of histidine-tryptophan-ketoglutarate (HTK) solution for the preservation of grafts, and clinical features of patients with FPHL who underwent hair transplant.

This issue also includes Notes from the 2024 AMA Interim Meeting by Dr. Sara Wasserbauer, who succinctly summarizes several important issues discussed at the meeting attended by our delegates, Dr. Wasserbauer and Dr. Carlos Puig. Notable topics summarized in the notes include scope of practice, updates on non-American Board of Medical Specialties board recognition, and artificial intelligence regulation in medicine. Dr. Wasserbauer's update provides good information on where we are and where we are going in these areas—as a specialty and as a society.

In other columns in this issue, Dr. Wasserbauer's Hairs the Question covers the topic of Afro-type hair restoration, reviewing important considerations in patients with this hair type. In his 2025 World Congress Program Chair message, Dr. Sam Lam provides more details on the innovative structure of the upcoming meeting, including offering a number of new short and long videos and masterclasses. Dr. Rana Irfan, newly appointed ABHRS president, fills his section with a discussion on the organization's goal of uplifting global standards of hair restoration.

As our tenure as co-editors comes to an end, the search for the next set of co-editors, set to begin their term in 2026, is now underway! This issue features an important Call for Co-Editors. If you're passionate about serving the ISHRS community by contributing to the exchange of knowledge, ideas, and expertise as a *Forum* Co-Editor, we encourage you to apply by June 1, 2025. For details on qualifications and the application process, see page 9.

As you plan for 2025, we encourage you to consider contributing to the *Forum*. Before submitting a scientific article, column submission, or letter to the editors, please download and complete required forms found here: **https://www.ishrs-htforum.org/content/authors**. Please email the forms along with your submission to **forumeditors@ishrs.org**.

We extend our heartfelt thanks to everyone who has shared their work with us—it has been an honor to collaborate with you in bringing your contributions to publication. ■



Notes from the Editor Emeritus, 1999–2001

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How Much Hair Is Enough?

Having just returned from the Denver ISHRS Annual Scientific Meeting, I was again struck by the continued focus on supplying an ever greater number of grafts to our patients. This is a trend that has been happening for some years, particularly with the development of FUE harvesting that allows harvesting of areas other than the scalp, most often beard.

With strip harvesting, the density of the donor area and the patient's scalp flexibility limited the maximum size of the harvest. Combined harvesting using both strip and FUE has been championed by some surgeons for a number of years as a way to expand the number of scalp grafts being harvested in a single session. For those who practice exclusively utilizing FUE harvesting (the majority of surgeons worldwide these days), non-scalp hair harvesting, particularly beard in men, has become an increasingly popular second choice of donor to expand graft numbers. At first glance, this seems beneficial, but I believe many surgeons fail to consider the long-term implications of their decisions.

> ***I learned long ago not to predict exactly what patients would require to achieve their goals. They will usually surprise you, and I think this is because they prize uniformity of coverage at least as much as the degree of coverage.***

Let's start by thinking about the philosophy of what we are doing for our patients. Given that we cannot increase the number of transplantable hairs from the scalp, we must redistribute the limited available donor hairs to their best advantage. Our goal is to achieve "cosmetic density," which is determined not just by the number of hairs but also by hair quality (caliber, curl, color). Our goal should, therefore, not be to maximize graft and hair numbers necessarily, but to achieve adequate coverage that meets the patient's needs.

When I talk to patients about outcomes, I describe the goal as providing the patient with a *minimum comfort level*. By this, I mean the patient is happy with the result but knows that more density could be achieved. I also explain that it is hard to describe what this level might be, but the patient will know it when they see it. I learned long ago not to predict exactly what patients would require to achieve their goals. They will usually surprise you, and I think this is because they prize *uniformity* of coverage at least as much as the *degree* of coverage.

I first learned this lesson many years ago when Japanese Nido synthetic fibers were introduced into Australia. I was surprised by how few fibers were required to satisfy patients and it dawned on me that the uniformity of coverage was the key. The development of follicular unit grafting reinforced this insight as again I realized that uniform placement of the FU grafts did not require huge densities to achieve patient satisfaction.

Why is this important? We must realize that we still have no guaranteed long-term stability strategies through medications or regenerative medical therapies. In other words, expect our patients to continue to thin and lose hair as they age. Adherence to long-term medication is variable at best. In addition, we must recognize that not all our grafted hairs survive in perpetuity. Many of my surgical colleagues who had also undergone hair grafting continued to thin, even in the grafted areas, as I met them at meetings over the years. It is, therefore, imperative for our long-term management strategies, especially in our younger patients, to keep donor hairs in reserve for anticipated future needs.

The use of ever greater numbers of hairs to meet current hair loss, especially at very high densities, reduces the "reserve" that we might need in the future. I would especially describe beard donor hairs as "future donor reserve hairs" that would be "plan B" when we run out of scalp hairs to deal with progressive hair loss.

When surgeons describe grafting densities of 50-60 grafts per cm^2 or describe the use of 8000 scalp hairs in conjunction with 3000 beard hairs as their solution for their young patients, I am left to wonder how any future hair loss will be managed if we have exhausted their donor supply in an attempt to give them maximum numerical density rather than adequate cosmetic density?

It is my philosophy that I would rather use the smallest number of grafts to achieve patient goals. If that requires a "top-up" surgery to achieve this 12 months later, then I would rather this than use an unnecessarily larger number of hairs that leaves the patient with a smaller donor reserve for future needs. I suggest you will be surprised by how happy patients are with grafting at 30-35 grafts per cm^2 if evenness of coverage is achieved and how many of them will not ask for that top-up at this stage.

The fact that something is possible does not necessarily make it advisable and should never make it compulsory. ■

CONTINUED FROM PAGE 1

gen), and 3) rest (telogen), all of which are largely affected by the Wnt/β-catenin signaling pathway.[9,10] The dermal papilla of the hair follicle is a major regulator of the hair cycle, including progenitor cell activation.[9] Interestingly, the upregulation of Wnt/β-catenin signaling pathways has been linked to the effectiveness of several AGA treatment options, including minoxidil,[11] PRP therapy,[12,13] and laser treatment.[14]

In numerous studies, laser therapy for AGA has demonstrated effectiveness in absence of adverse effects.[4,9,15-17] Laser therapy utilizes photobiomodulation mechanisms to induce cellular metabolism,[18] and photothermal effects[8,9] to induce tissue regeneration. Studies on murine models suggest that laser irradiation affects the hair cycle by promoting telogen to anagen transitions[19] in both non-ablative (1550nm erbium-glass[19]) and ablative treatment (2940nm erbium-YAG14 and 10600nm CO2 laser[20]). Laser therapy also increases blood flow at the dermal papilla.[21] Both ablative and non-ablative lasers have already been successfully used in monotherapy to treat AGA in men and women, including 1540nm Er:glass,[22] 1550nm Er:glass,[19,23,24] 2940nm Er:YAG,[25-27] 1927nm thulium,[28] and 10600nm CO2[20] laser.

In this study, we employed a non-ablative 2940nm Er:YAG laser treatment in SMOOTH™ mode, consisting of trains of sub-ablative laser pulses. A key feature of the Er:YAG laser used in SMOOTH mode is that the laser light is absorbed in the most superficial (< 10μm) layer of the skin, while heat diffuses to deeper layers, resulting in activation of fibroblasts to initiate regenerative processes in the skin.[29,30] The aim of this study was to assess the efficacy and safety of non-ablative Er:YAG laser use in female patients at the early stages of AGA.

METHODS

Intervention

Four female patients with a clinical diagnosis of AGA (based on visual exam and dermatoscopic findings) with Ludwig scale level I-3 to I-4 hair loss underwent 8 sessions of treatment using a 2940nm non-ablative Er:YAG laser (SP Dynamis, Fotona, Slovenia) in super long pulse (SMOOTH™ mode) with an X-restart handpiece. The X-restart handpiece was moved from one site on the scalp to the next, in 3-5mm (10mm maximum) intervals, in the direction that is indicated on top of the handpiece with either of the two crossing lines of the X. At each site, one SMOOTH pulse was delivered. Several passes were performed to achieve treatment of the whole scalp. Laser sessions were administered at 2-week intervals using the following parameters: SMOOTH pulse, 3.5-4.5J/cm^2, 1.6Hz, and X-restart handpiece with 16 spots with spot size of 1.8mm. Fluence was adjusted to the patient's tolerance level and monitored by means of the visual analog scale (VAS) pain scale. Each session lasted approximately 20 minutes, with 2000-3000J of cumulative energy delivered. Patients returned to the clinic for follow-up assessment at 1 month and 3 months post treatment.

Evaluation of Treatment Efficacy

We used objective and subjective outcome measures to evaluate efficacy of treatment. The objective measures included an average number of hairs, cumulative hair thickness, and number of follicular units assessed with trichoscopy. For the subjective, patients were given a satisfaction questionnaire that used the following 7-point Likert scale: 7 = very satisfied, 6 = moderately satisfied, 5 = slightly satisfied, 4 = undecided, 3 = slightly unsatisfied, 2 = moderately unsatisfied, 1 = very unsatisfied. Global pictures were taken at every time point. Trichoscopy analysis was used to assess four scalp regions: 1) frontal, 2) vertex, 3) temporal, and 4) occipital. Trichoscopy data was obtained for all patients, and averages were calculated for each trichoscopy parameter (hair number, cumulative hair thickness, number of FUs, trichoscopy-derived Sinclair scale) at each time point. Trichoscopy data was checked for normality. As the data followed a normal distribution, a t-test was used to determine if changes between baseline and different time points were statistically significant. A change from baseline was presented in percentage (Table 1). Statistics and data analysis was performed using GraphPad Prism.

Evaluation of Treatment Safety

All patients were monitored for potential adverse events throughout the study period with a maximum follow-up of 3 months.

RESULTS

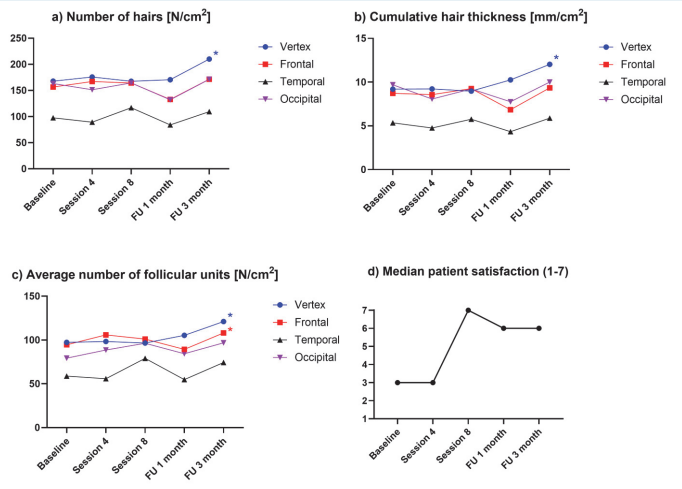
Compared to baseline, all trichoscopy parameters at different time points demonstrated considerable variability (Table 1). Average hair count in different scalp regions at baseline ranged from 97.5 ± 58.0 to 167.8 ± 26.4 hairs/cm^2, being highest in the frontal region and lowest in the temporal region. A similar trend was observed in the other two trichoscopy parameters, with the temporal region of the scalp exhibiting the smallest cumulative hair thickness and number of FUs. The cumulative hair thickness ranged from 5.4 ± 3.8 to 9.7 ± 5.3mm/cm^2 and the number of FUs from 58.8 ± 22.9 to 97.3 ± 9.0N/cm^2. At subsequent time points, the trichoscopy parameters in different scalp regions fluctuated around the baseline value, with a maximum of 34.5% increase and maximum of 20.1% decrease. At the 3-month follow-up, the average number of hairs, cumulative hair thickness, and FUs increased compared to baseline in all scalp regions (Table 1). This increase was statistically significant ($p < 0.05$) in the vertex region for all three trichoscopy parameters (Table 1, Figure 1 A-C), and in the frontal region for the average number of FUs only (Figure 1C).

Treatment was well tolerated by all patients, with VAS pain scores ranging from 0 to 1, with a median of 1. Median patient satisfaction at baseline was at a 3, and this increased to a 6 at the 3-month follow-up (Figure 1D). No adverse effects were observed during treatment or at follow-up visits.

DISCUSSION

In this study, we used a non-ablative Er:YAG laser therapy (2940nm) to treat four patients with AGA Ludwig classification level I-3 to I-4. At the 3-month follow-up, a significant increase in the average number of hairs, average number of FUs, and average cumulative hair density compared to baseline was seen in the vertex region of the scalp, and a significant increase in the average number of FUs was seen in the frontal region (Table 1, Figure 1 A-C). However, at

FIGURE 1. Trichoscopy parameters and patient satisfaction at different time points. Statistically significant change from baseline is marked with an asterisk (*). Patient satisfaction was measured using a 7-point Likert scale corresponding to increasing levels of satisfaction.



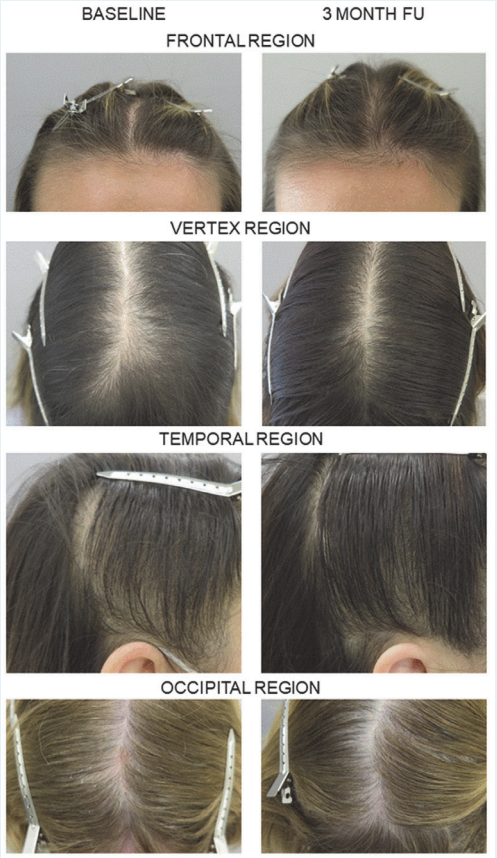
earlier evaluation time points, relatively large fluctuations in parameters could be observed on trichoscopy (Table 1). It is not clear whether this variability is due to a physiological process or a methodological constraint associated with small sample sizes. Accordingly, we cannot conclude that the parameters improved in other scalp regions, although an absolute increase from baseline was seen there as well (Table 1). What we can conclude, however, is that symptoms of AGA improved in the frontal and vertex regions of the scalp. Treatment was well-tolerated and no adverse events occurred. Patient satisfaction increased during the study period (Figure 1D), from slightly unsatisfied at baseline to moderately satisfied at the 3-month follow-up. Additionally, visual improvement in hair appearance could be seen on follow-up photographs (Figure 2).

This study corroborates the effectiveness of non-ablative Er:YAG laser for AGA as reported in studies by Day et al (2021)[25] and by Dekeyser (2021).[31] Non-ablative Er:YAG laser therapy effects on the scalp presumably include improved blood supply to hair follicles,[21] stimulation of the hair cycle by promoting faster telogen to anagen transitions,[19] increase in hair density and thickness,[31] and prevention of further hair loss.[25]

TABLE 1. Trichoscopy Parameters: Average Values for Four Patients

	Baseline	Session 4	Session 8	1-month FU	3-month FU
	Average Hair Count (average ± SD) / Average change from baseline (* significant at p < 0.05)				
Vertex	167.8 ± 26.4	175.8 ± 33.2 / ↑ 4.8%	167.5 ± 30.6 / 0.0%	170.5 ± 33.1 / ↑ 1.6%	210.0 ± 22.0 / ↑ 25.2% *
Frontal	156.5 ± 42.6	167.3 ± 27.2 / ↑ 6.9%	164.3 ± 31.2 / ↑ 5.0%	132.8 ± 28.5 / ↑ 15.2%	171.5 ± 28.9 / ↑ 9.6%
Temporal	97.5 ± 58.0	89.3 ± 45.8 / ↓ 8.5%	117.0 ± 42.7 / ↑ 20.0%	84.0 ± 35.2 / ↓ 13.8%	109.5 ± 35.0 / ↑ 12.3%
Occipital	163.3 ± 61.7	151.3 ± 50.7 / ↓ 7.4%	164.5 ± 27.6 / ↑ 0.8%	132.3 ± 27.4 / ↓ 19.0%	171.3 ± 27.9 / ↑ 4.9%
	Average Cumulative Hair Thickness (average ± SD) / Average change from baseline (* significant at p < 0.05)				
Vertex	9.2 ± 2.2	9.3 ± 2.2 / ↑ 0.3%	8.9 ± 2.6 / ↓ 2.4%	10.3 ± 1.8 / ↑ 11.4 %	12.0 ± 1.8 / ↑ 30.1% *
Frontal	8.7 ± 2.3	8.6 ± 1.5 / ↓ 1.7%	9.3 ± 2.1 / ↑ 6.0%	6.9 ± 2.0 / ↓ 21.5 %	9.4 ± 1.7 / ↑ 7.2%
Temporal	5.4 ± 3.8	4.8 ± 2.6 / ↓ 11.2%	5.8 ± 1.9 / ↑ 7.5%	4.3 ± 1.9 / ↓ 19.2 %	5.9 ± 2.1 / ↑ 9.8%
Occipital	9.7 ± 5.3	8.1 ± 3.0 / ↓ 16.8%	9.2 ± 2.8 / ↓ 4.9%	7.8 ± 2.6 / ↓ 20.1%	10.0 ± 2.1 / ↑ 3.1%
	Average Number of Follicular Units (average ± SD) / Average change from baseline (* significant at p < 0.05)				
Vertex	97.3 ± 9.0	98.3 ± 9.9 / ↑ 10.0%	96.5 ± 10.3 / ↓ 1.0%	105.3 ± 13.0 / ↑ 8.2%	121.0 ± 4.4 / ↑ 24.4% *
Frontal	94.5 ± 8.0	105.8 ± 13.4 / ↑ 11.9%	101.0 ± 13.3 / ↑ 6.9%	89.3 ± 8.8 / ↓ 5.6%	108.3 ± 4.8 / ↑ 14.3% *
Temporal	58.8 ± 22.9	55.8 ± 17.7 / ↓ 5.1%	79.0 ± 20.5 / ↑ 34.5%	54.8 ± 22.0 / ↓ 6.8%	74.3 ± 21.5 / ↑ 26.4%
Occipital	79.3 ± 25.5	88.5 ± 18.4 / ↑ 11.7%	96.3 ± 7.2 / ↑ 21.5%	84.3 ± 9.1 /↓ 6.3%	96.8 ± 18.9 / ↑ 22.1%

FIGURE 2. Representative photographs taken of the frontal, vertex, temporal, and occipital regions (from top to bottom) at the 3-month follow-up.



CONCLUSION

The results of this small case series suggest that monotherapy with non-ablative Er:YAG laser is a promising treatment for hair loss, however, controlled studies with larger sample sizes are needed to confirm the efficacy of this modality.

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FORUM
HAIR TRANSPLANT FORUM INTERNATIONAL
2026 - 2028

Call for Co-Editors

Applications Due June 1, 2025

Interested members are invited to take part in this exciting opportunity to influence the future of the ISHRS's official publication, *Hair Transplant Forum International* (the *Forum*). The bimonthly *Forum* is a vital resource for sharing knowledge and advancements in the field of hair restoration. Co-editors play a crucial role in shaping the content and direction of this prestigious member-only journal.

We are looking for two (2) ISHRS physician members to fill the positions of ***Forum* Co-Editors** for the term **2026-2028**, which equates to eighteen (18) issues. The *Forum* is not peer-reviewed and is considered a newsletter.

These are uncompensated, volunteer positions, but very rewarding nonetheless. The role of *Forum* co-editor not only enhances your professional profile, it also allows you to contribute to the education and engagement of your colleagues.

DUTIES

- The co-editors produce six (6) issues of *Hair Transplant Forum International* per year and provide leadership and direction for the newsletter. Co-editors can expect to spend 20-40 hours per issue.
- The co-editors manage the organization and review of articles submitted via email to **forumeditors@ishrs.org**, ensuring they are complete (required release forms/author checklist), accurate, and suitable for publication. Staff at ISHRS headquarters provides copy relating to ISHRS announcements.
- The co-editors, either individually or together, write a short "Message from the Co-Editor(s)" that appears at the start of each issue. They will also reach out to six (6) past co-editors/year to submit copy for each issue's Editor Emeritus column.
- The co-editors review and edit all articles for medical correctness and appropriateness. Co-editors have the discretion to determine which articles to include in each issue and whether they should be run as stand-alone scientific articles or under any of the various columns, such as "How I Do It" or "Complications & Difficult Cases." Additionally, co-editors may choose to add or end columns based on their discretion and vision for the newsletter.
- The co-editors must be able to contact fellow ISHRS members considered "experts" on a technique/subject and ask them to write a commentary to a submitted article to enhance the article or provide commentary on a controversial point.
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QUALIFICATIONS

The co-editor must

- be an experienced hair transplant surgeon and member of the ISHRS;
- have excellent organizational skills to be able to meet tight deadlines;
- have the ability to read and write fluently in English, and have excellent grammar and editing skills
- be able to provide unbiased evaluations of other researchers' work and be open to different methods and approaches to hair restoration;
- be able to work collaboratively with others and encourage contributions from members by maintaining a diverse and inclusive journal that covers various perspectives in hair restoration;
- have experience in publishing papers in the *Forum* or in other peer-reviewed journals or textbooks, which gives you familiarity with the reviewing process of papers;
- appreciate the diversity of approach represented by members of the ISHRS and not show favor to any particular "niche" technique; and
- be able to work with the co-editor and managing editor via e-mail directly (and not rely on a secretary or intermediary) and not only during workday hours.

If you are passionate about advancing the field of hair restoration and fostering collaboration within the ISHRS community, we encourage you to apply.

The Executive Committee will review all candidates and make a determination at its June 2025 meeting. Candidates will be notified in July.

To apply, please forward an email indicating your interest, qualifications, and current CV to Victoria Ceh at vceh@ishrs.org and info@ishrs.org by June 1, 2025.

The Notable Articles Project

The *Forum* in Review, 1990–2020: Revisiting the Articles That Helped Shape the Specialty

In this column, an important *Forum* article from the past is republished along with commentary from a respected expert. If you have a suggestion for an article that you'd like to see re-examined here, we invite you to send it along with your commentary to forumeditors@ishrs.org. As a reminder, you can find all previously published articles and all back issues of the *Forum* on ePUB at www.ishrs-htforum.org.

As knowledge and understanding continually evolve, the questions we ask during any period in time often remain timeless, however, the answers can shift with each new insight and discovery. We felt it would be thought-provoking to revisit a Q&A session from more than a decade ago featuring Professor Rodney Sinclair, who originally tackled a set of critical questions on female pattern hair loss that continue to resonate today. We invited Dr. Sinclair to reflect on those same questions once more to provide his updated perspective that draws from 15 years of progress (his updates appear in blue). Supplying the introduction again is Dr. Nilofer Farjo, who looks back at how today's knowledge reshapes our understanding of yesterday's inquiries.

Commentary by Nilofer Farjo, MBChB, FISHRS | *Manchester, United Kingdom*

When I first interviewed Dr. Rodney Sinclair on female pattern hair loss 15 years ago, he was already considered an expert on this topic. Today, he continues to advance our knowledge on treatment for both male and female genetic hair loss especially with the use of oral minoxidil and, more recently, sublingual minoxidil.[1-4]

Dr. Sinclair has been publishing papers since the early 1990s, and you can see the extent of that work in the biography from 2009. Recently, I did a publication search and found 780 items with 26,000 citations for Rodney Sinclair—an incredible feat for any clinician and researcher (https://scholar.google.ca/citations?user=Sw84KV8AAAAJ&hl=en). As clinicians, we should challenge existing dogma but back it up with research. A clear example of research influencing practice is Dr. Sinclair's changing perspective on the use of low-level lasers for hair loss. He previously held a different view, but a study he participated in demonstrated results consistent with other controlled studies on photobiomodulation, the updated term for this treatment. Antiandrogen use has also changed in the intervening years, with multi-centre studies becoming part of the validity of scientific publications.[5]

As in the original article, Dr. Sinclair continues to challenge some of our conventional thinking on the need for blood testing in female pattern hair loss (FPHL) with a look at the clinical signs first. Additionally, his view on iron and ferritin levels in women is a divergence from that which I was taught, so I feel this needs further research.

Some dermatologists have differing opinions on the protocol for frontal fibrosing alopecia (FFA). Dr. Sinclair outlines his treatment, including the advice to refrain from sunscreen. A 2016 study (Aldoori et a.l) suggested that the use of sunscreen could be a relevant factor in the development of FFA.[6] More recently, multi-centre studies (including Dr. Sinclair's clinic) have looked at genome-wide association studies that suggest FFA is a "genetically predisposed immuno-inflammatory disorder."[7]

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Hair Sciences



Nilofer Farjo, MD *Manchester, England*

In this article we have asked dermatologist Rodney Sinclair of Melbourne, Australia, to give some of his opinions on female hair loss. He has collaborated on this with his senior scientist Dr. Nick Rufaut. We have chosen some more clinically based rather than purely scientific questions for this edition. It is interesting to read his method of diagnosis and first line treatment of female pattern hair loss as this differs from that which some of us follow. Dr. Sinclair's clinical grading system seems more comprehensive than the traditionally used Ludwig scale (see Figure 1). Some of the more recent work on genetics is discussed also. This is an area of some very interesting developments: not only will we be able to give patients a prediction of their likelihood of developing AGA but also the understanding of the mechanisms involved in the balding process itself may lead to novel treatments.

An interview with Dr. Rodney Sinclair on female pattern hair loss

Rod Sinclair, MBBS, MD, and Nick Rufaut, PhD *Department of Dermatology, St Vincent's Hospital, Melbourne, Australia*

1. What is your first line of treatment for women with androgenetic alopecia?

Oral spironolactone 100-200mg per day, as lifelong therapy.

In 2009, my first treatment was spironolactone. We rarely, if ever, use that today. My most common therapy is sublingual minoxidil. I commence therapy at a dose of 0.45mg twice daily and rapidly increase the daily dose up to 2.5mg once or twice daily depending on tolerance and, in particular, the presence of facial hypertrichosis.

Sublingual minoxidil is better tolerated than oral minoxidil with fewer women reporting palpitations or postural dizziness. Efficacy is also better than oral minoxidil.

2. Do you think that minoxidil 5% is more effective than minoxidil 2% in women? Once a day vs. twice a day?

I think that twice daily 5% minoxidil has a more rapid onset of action than twice daily 2% minoxidil; however, the difference after 12 months of continuous use is probably negligible. I believe that once daily 5% minoxidil is probably equally effective to twice daily 2%. I advise my female patients to begin treatment with the 5% solution twice a day for the first 6 months and then cut back to once daily use. The data for once daily use is purely anecdotal, but most women find twice daily use difficult, and I would rather they use it once daily than not at all.

The simple answer is yes. Hair growth is dose dependant. The higher the dose, the more scalp hair growth.

But, as we have learned, most women find it difficult to apply a lotion to their hair once a day. Very few women manage twice a day. Most women prefer oral or sublingual minoxidil to topical minoxidil

Furthermore, only about 30% of women who use topical minoxidil are satisfied with the quantity and quality of their hair growth, and within a year, over 80% will have abandoned topical minoxidil treatment. The effect of the 5% topical solution cannot be enhanced due to low solubility and saturation absorption kinetics. Applying minoxidil solution 5 or 10 times a day is no more effective than twice daily application.

As minoxidil is weakly soluble, concentrations higher than 5% are unstable in solution, and the minoxidil precipitates out in solution and powder deposits on the hair fibres.

For that reason, in the vast majority of my female patients, I start treatment with sublingual minoxidil and skip the minoxidil solution all together.

3. Many patients complain about itching with the continuous use of minoxidil. How do you manage this common complaint?

The 5% foam for men is better tolerated than the lotion. Once daily use is better tolerated than twice daily. The 2% solution is less irritating than the 5% solution. Daily shampooing, especially with an antidandruff shampoo, can help. Occasionally I resort to topical steroids. If all else fails and the patient has been a good responder to topical minoxidil, and there are no relative contraindications, I use very low dose oral minoxidil, such as 2.5mg daily. I generally stop the spironolactone first.

In 2009, that was difficult. Today, it's easy. I switch the itchy patient to sublingual minoxidil.

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4. In which female patients would you use antiandrogens and for how long?

I would use it in women with female pattern hair loss (FPHL). I ask them to use it for as long as they want hair.

My preferred antiandrogens these days is bicalutamide. It is a non-steroidal antiandrogen that does not cross the blood brain barrier and does not cause mood disturbance. The main role for bicalutamide is in patients who have associated vertex hair loss or patients who develop hypertrichosis with sublingual minoxidil. Regarding duration, I ask them to continue to use it for as long as they need to have hair. There is no stop date.

5. What type of antiandrogen works best for FPHL—diane 35/yasmin, androcur, finasteride, or spironolactone?

I find spironolactone to be equally effective to cyproterone acetate, and somewhat more effective than finasteride. The contraceptives Dianne and Yasmin are useful adjuncts to therapy, but I rarely use them as monotherapy.

These days, I rarely use spironolactone, cyproterone acetate, finasteride, or dutasteride in women. My treatment of choice is bicalutamide.

6. There are some anecdotal reports of the use of finasteride in premenopausal women. Would you recommend it and at what dose?

I generally avoid finasteride in women who may become pregnant. It has a very long biological half life and so even if a woman stopped it immediately on discovery that she were pregnant, there is still a risk of birth abnormality. I also find it less effective than spironolactone.

I avoid all androgen-directed therapies in women who are contemplating pregnancy. I advise them to stop antiandrogens at least 3 months prior to stopping their contraception. The risk is feminisation of a male fetus.



Figure 1. Dr. Sinclair's clinical grading system.

7. What do you think about the role of vitamin supplements, such as biotin or others, in FPHL?

Nutritionally or genetically mediated biotin deficiency can cause alopecia, among other symptoms that include dermatitis. Deficiencies of other vitamins such as vitamin A or or zinc may similarly cause alopecia; however, these are different entities from FPHL. Similarly, hypervitaminosis A causes hair loss.

The rate-limiting step in wool growth is incorporation of the sulphur rich amino acid cysteine into the growing hair fibre. We know that minoxidil enhances incorporation of cysteine into the hair bulb. Dietary supplementation of cystine may enhance minoxidil therapy. The role of all other nutritional supplements remains uncertain.

8. What do you personally think about the role, if any, of ferritin levels in female androgenetic alopecia?

Reports of correlations between low ferritin levels and FPHL or other forms of hair loss are equivocal, and are complicated by debate as to what level of ferritin can be considered normal.[1,2] Similarly, the benefits of iron supplementation are unclear.[3,4] Individual women may vary in their sensitivity to ferritin levels with respect to hair follicle behavior.[5] Low ferritin levels may be a risk factor for hair loss, rather than a primary cause.

The benefits of iron supplementation on hair growth remains unclear; however, it's prudent to assume that individual women may vary in their sensitivity to ferritin levels with respect to hair follicle behaviour, and low ferritin levels may be a risk factor for hair shedding rather than a primary cause.

9. What is your opinion of low level laser therapy for FPHL?

This is an over marketed modality. I am yet to see any convincing trial data.

In 2009, I was skeptical due to the absence of convincing trial data. Since then, we've actually performed a controlled clinical trial with over 100 participants where we did show a benefit. The quantum of the benefit was similar to that seen with 5% minoxidil solution. I now think some, but not all, low level laser devices have a role. We tested the Revian red light laser, used for 10 minutes every day. We demonstrated hair growth with the protocol we used. This data, however, cannot be extrapolated to different lasers, different light spectrum, or different treatment protocols.

10. What is the lab work-up that you normally use for the female patient who comes to your clinic complaining of hair loss?

I often do no investigations. If I plan to use spironolactone, I like to confirm normal renal function. If the pulse rate is below 60, I do thyroid function tests. If the patient is a vegetarian, I order a serum ferritin. If the patient also has menstrual irregularity or hirsutism, I investigate for polycystic ovarian syndrome and screen for diabetes and hypercholesterolaemia.

If I'm using sublingual minoxidil as a monotherapy, then no investigations are routinely required. However, if the pulse rate is below 60, I do thyroid function tests. If the patient is a vegetarian, I order iron studies; if the patient has menstrual regularity or hirsutes or low fertility, I investigate for polycystic ovarian syndrome and screen for diabetes and high cholesterol. If I plan to use bicalutamide, then I will also do liver function tests at baseline and repeat every three months.

11. What kind of devices do you use for examination of patients with hair loss: just visual inspection, phototrichogram, photographic documentation, or something other?

I use my clinical grading scale to score the hair loss (Figure 1).[5a,5b] If visual inspection does not enable a diagnosis, I take a couple of 4mm punch biopsies and have those both sectioned horizontally.

Every one of our patients has standardised digital photography with their head positioned in a Canfield stereotactic device. We use digital trichoscopy and are now implementing hair counting software. We have two systems: Tricholab and the Canfield Scientific HairMetrix. I also use the clinical grading scales for quantifying the mid frontal scalp and to score daily hair shedding.

12. Why do you think that the hair loss pattern in women is more diffuse than in males?

In males, all follicles within a follicular unit are miniaturized in affected regions of the scalp. In females, however, it appears that only some follicles within each follicular unit are miniaturized, so that at least one terminal hair remains.[6] The affected and unaffected follicles may equate, respectively, to the lateral and central primary follicles seen in other species.[7] Why the later-developing lateral follicles should be more susceptible to miniaturization is unclear.

In part, this is because women present earlier. Women are more observant than men. Women who have long hair tend to notice the telogen effluvium that precedes the baldness, and they also notice the reduction in the thickness of their ponytail. As men tend to wear their hair shorter, they don't tend to notice anything until the baldness is well developed. While telogen effluvium also occurs as a precursor to baldness in men, most men do not notice the hair shedding because their hair is short.

13. Male pattern hair loss has been clearly linked to the effects of dihydrotestosterone. Do you have any theories regarding the etiology of FPHL at the molecular level?

FPHL is responsive to oral antiandrogens, suggesting a role for androgen signaling.[8] However, the response is variable. This could indicate either that the antiandrogens we are using lack potency or that there is disease heterogeneity. I suspect both to be true. In some women, I suspect estrogen is also toxic to the hair and that estrogen signaling may prove to be involved in the etiology of FPHL.

Over recent years, since we've started to use potent anti-androgens, we regularly see significant improvement in hair density. In my mind, this confirms the importance of the androgen pathway in the pathogenesis of female pattern hair loss.

We did do a lot of work over the years trying to ascertain whether polymorphisms in the androgen receptor gene were also associated with female pattern hair loss. We were unable to confirm this in our patient cohort, but I understand others may have found an association, which further supports the roles of androgens in the pathogenesis of female pattern loss.

14. There are two chromosomes recently found to be linked to male pattern hair loss and prediction of the severity of balding. Do you think the genetics in women is similar or completely different and does this explain the difference in patterns that we see?

Genes encoding the androgen receptor,[9] 5α-reductase type 2,[10] ornithine decarboxylase,[11] and an unidentified gene on chromosome 3q26[12] have been found to be associated with male pattern hair loss. The first two are involved in androgen metabolism or signaling. One study, albeit small scale, has found an association between FPHL and polymorphism in a CAG repeat in the androgen receptor gene,[13] however, we have not been able to conclusively confirm this association in a larger study of over 500 women. Difficulties proving the association arise because the androgen receptor gene is on the X chromosome and women have 2 X chromosomes, one of which is randomly inactivated in each cell due to lyonization.

Our research, however, has yielded 2 other candidate genes with a strong association with FPHL that suggest similar genetics, to the extent that our genes are involved in androgen and/or estrogen signaling (manuscript submitted, but not yet accepted for publication). Conceivably, differences in the relative contribution of androgen and estrogen signaling may underlie the differences between male and female follicle miniaturization patterns.

We haven't done any gene discovery work for over a decade, so I don't have an update on my 2009 answer.

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15. In my experience, nothing works for frontal fibrosing alopecia. Is there any treatment pearl that you recommend?

I use plaquenil and topical minoxidil and intralesional triamcinolone to arrest further progression.

In 2009, I was using a lot of plaquenil and topical minoxidil and intralesional triamcinolone. The results were underwhelming. In fact, I am not sure that strategy ever worked. I no longer use those agents.

Today, I use sub minoxidil either alone or together with bicalutamide. I found this treatment arrests progression in the vast majority of women, but it does not initiate regrowth, which is not unexpected.

I also advise my FFA patients to avoid sunscreen and in particular sunscreen that contains titanium dioxide. I'm convinced that sunscreen contributes to the pathogenesis of frontal fibrosing alopecia. I'm less confident on what the specific causative ingredient is. My preferred sunscreen is zinc.

16. How frequent do you see patients with chronic telogen effluvium and how do you manage them?

They account for around 40% of my patients who present with increased hair shedding,[5b] but no loss of volume over the mid-frontal scalp (stage 1 on my clinical grading scale). I photograph them and watch and wait. I review them every 6 months. After 3 or 4 years they come to the conclusion they are not going bald despite the fact that they are shedding vast numbers of telogen hairs.

In recent years, we have quite clearly demonstrated that telogen effluvium is a universal precursor to the development of baldness in both men and women. We have documented that quite clearly using serial phototrichogram in a large cohort of patients. Based on our experimental results, my treatments for CTE now looks very similar to my treatment fort FPHL. Specifically, I use sublingual minoxidil, usually as a monotherapy as there is no vertex balding.

I find that minoxidil reduces the hair shedding in both my CTE patients who have no visible balding as well as my FPHL patients with increased hair shedding.

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Controversies

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To Shave or Not to Shave? That Is the Question

Interestingly, nearly every new male patient who consults with me about a possible FUE procedure expects the entire scalp to be shaved. When I explain to them that this is not compulsory, they are mostly surprised but usually also grateful, as they want to minimize the post-operative visibility of the surgery. For men who in their professional lives are client-facing, this is a real concern. I reassure my patients by describing this preference as "secret men's business"!

Also, interestingly, I can only think of fewer than ten patients in the past 40 years who actually asked me to shave their entire scalp on the day of surgery! So why this expectation of shaving the entire scalp? Well, of course, the internet is saturated with videos of FUE surgical patients with complete shaves of their scalp. It is worth considering why this has happened.

Let's consider the pros and cons of pre-operative shaving of the scalp:

Pros:

1. A uniform haircut that doesn't look weird.
2. "The graft hairs grow back at the same time as the rest of the hair."

Cons:

1. Very obvious change in overall appearance for at least 1 month.
2. Very visible scabbing of the grafted and donor areas.
3. Patchiness of the grafted areas as some transplanted hairs shed after 2-3 weeks before the original hairs are long enough to conceal this phase.

I am of the view that although clinics claim these "Pros," they are really looking for an easier, faster surgical time. I would also argue that the non-shaven recipient areas with normal-length hair act as a "guide" for hair direction and flow, which is an advantage to the surgeon during recipient site creation and implantation. In men with restricted donor areas, the advantage is that they can style their hair normally and tell you their area of greatest concern.

Given that most of my patients want minimal post-operative visibility, it seems that insisting upon shaving the entire scalp is a potential disincentive for these patients to proceed to surgery. I suggest that trying to make our patient's post-operative course as minimally visible, comforting, and minimally disruptive as possible is in both their and our interests. ■

Help advance the specialty!

Proper research is extremely important in advancing the field. A pillar of the ISHRS is to promote and encourage research.

As such, the ISHRS offers research grants for the purpose of relevant clinical research directed toward the subject of hair restoration. Research that focuses on clinical problems or has applications to clinical problems will receive preferential consideration.

Grant submission deadlines are quarterly: February 10, April 10, July 10, and November 10.



Next deadline: February 10, 2025

The ISHRS Scientific Research, Grants & Awards Committee oversees the ISHRS research grant process including rating the proposals and determining the awardees. Research grant recipients are recognized at the Annual Business Meeting at the next World Congress of the ISHRS.

For more information: **https://ishrs.org/physicians/research/**

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Literature Review

Guillermo A. Guerrero, MD | *Monterrey, Mexico* | guillermoguerrerog@gmail.com

Zhu L, Niu Y, Chi L, et al. Optimal treatment for post-surgical cicatricial alopecia: autologous hair transplantation? *J Craniofac Surg.* 2024 Dec 9. Online ahead of print.

The aim of this recently published study was to investigate the effectiveness of hair restoration surgery on postoperative secondary scarring alopecia. Satisfaction levels of the included 14 patients varied, with half of the group reporting moderate to high satisfaction and the other half low to no satisfaction. Reported adverse effects included low or uneven hair density and poor aesthetic outcomes. The authors conclude that follicular unit transplantation in postoperative scars may have limited effectiveness, and more than one session may be necessary.

COLUMNIST'S NOTE

Hair transplantation is only one of the many tools available to treat postoperative scalp scars, and sometimes a combination approach may be appropriate. Hypertrophic scars can benefit from intralesional steroid injection, wide scars may benefit from surgical revision, and we have seen how some of our plastic surgeon colleagues manage big scars using tissue expanders. Platelet-rich plasma (PRP) injections, microneedling, and fractional lasers may help prepare a scar and make it more suitable for hair restoration surgery.

Huang J, Zhou Y, Li H, et al. Preservation solution protects isolated hair micrografts by inhibiting apoptosis of hair bulb. *Life Sci.* 2024 Dec 4;361:123292.

The authors of this study aimed to evaluate the effectiveness of histidine-tryptophan-ketoglutarate (HTK) solution compared to Ringer's solution for preserving isolated hair follicles during a period ranging from 2 to 12 hours. HTK solution was more effective in preserving the morphologic structure, with maintained collagen organization, less intracellular edema, and sustained cell membrane integrity. An overall reduced rate of apoptosis was also found when compared to Ringer's solution. The authors concluded that HTK was more effective in preserving hair follicles, especially during extended times, making it a useful option in large surgeries.

COLUMNIST'S NOTE

The search for the perfect storing solution continues, and this time the authors use what is known as the gold standard in solid organ preservation. With the advent of larger sessions, we now worry more about ergonomics, team management, and, of course, graft survival. HTK could take graft preservation and survival off of our list of worries.

Yun D, Kim D, Juhyun C, et al. Clinical features of patients treated with hair transplants in female pattern hair loss. *Ann Dermatol.* 2024 Dec;36(6):341-347.

In this study, the authors included 195 female patients who underwent hair restoration surgery in a 10-year period. Mean age was 49 years, and the majority of patients had hair loss type F1 and F2 using the BASP Classification. Overall satisfaction was high, with the number of implanted hairs correlating directly to the level of satisfaction. Of note, patients undergoing follicular unit excision (FUE) received fewer grafts than those undergoing linear strip excision, and fewer than 25% of the patients had medical therapy for hair loss before surgery.

COLUMNIST'S NOTE

Hair transplantation is a useful tool in female patients with hair loss. Pitfalls include the many diagnoses besides androgenetic alopecia that may go unnoticed, miniaturization also affecting the occipital and lateral areas and the difficulties of implanting hairs in non-shaved areas. Similar to male patients, a hair restoration surgery should only be considered in a female patient with the correct diagnosis and only after hair loss has been stabilized through medical therapy. In many cases, this treatment can lead to significant improvements in hair diameter and density, potentially satisfying the patient's expectations. ■

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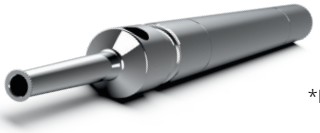
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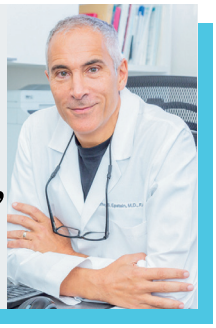


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Dr. Sara Wasserbauer,
California Hair Surgeon, USA

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Dr. Jeffrey Epstein,
Foundation for Hair Restoration, USA



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A Seat at the Table: Notes from the 2024 AMA Interim Meeting

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

Carlos Puig and I were your ISHRS AMA Delegates at the November 7-11, 2024, American Medical Association (AMA) Interim Meeting. Admittedly, there was a moment of feeling overwhelmed by the sheer volume of medical issues that had relevance to our tiny medical society, but this was immediately followed by our gratitude for being able to be a part of the conversation. Thank you to all the U.S.-based ISHRS members who have paid their AMA dues so we could maintain our seat in the "House of Medicine." Even though our society is overwhelmingly international (about 70%!), we all benefit directly from the legitimacy provided by this influential organization. Below is a synopsis of the issues we worked on at the meeting.

SCOPE OF PRACTICE

The ISHRS's concerns for the improper delegation of hair restoration surgery were highly relevant. In the language of legislation and policy, the issue of non-physicians performing surgery is termed "scope of practice." Scope of practice was the second most important issue for AMA advocacy, and an entire two-hour confidential session—called the "Scope of Practice Summit" (SOPP)—was devoted to it. There were also multiple scope of practice resolutions (policy proposals) considered during the meeting that became AMA policy related to optometrists performing surgery, psychologists (non-MD) prescribing medications, and pharmacists performing procedures. Having watched the expansion of non-physicians performing surgery in countries around the world, we hair surgeons know how urgent the need for action is.

As an update to the AMA's lobbying efforts on this front, more than 14 legislative bills in multiple states that would increase the ability of non-physicians (nurse practitioners, optometrists, physician assistants, and pharmacists) to practice medicine and perform surgery were defeated with one exception—Iowa—and the AMA is working to restrict the implementation of that law for nurse practitioners. Our dues and efforts to remain a part of this conversation are both relevant and timely.

The ISHRS's surgeons are even more on the front line since med spas and cosmetic surgeries like hair transplant are gateways for non-physicians to practice medicine without a license, establish a foothold, and then proceed to claim that a doctor is unnecessary for the success of the procedure or the safety of the patient. Clearly, this is false logic that endangers our patients; only a large organization such as the AMA has the operational capacity to work in all states and to influence global policy on a macro scale.

For future meetings, Carlos and I discussed drafting a resolution that would add the non-delegation of hair surgery to AMA policy. To raise awareness of this issue, we also floated the idea of addressing the Dermatology delegation (American Academy of Dermatology [AAD])—and I contacted two people here and will follow up with them—as well as the Plastic Surgery delegation. Being from two of the biggest states—Texas and California, respectively—Carlos and I have solid contacts in several of the state delegations. I spoke with Kim Horvath, JD, who is the Senior Attorney for the AMA, specifically about this issue. I also spoke with Molly Reese who is working on scope of practice. They suggested raising awareness at the society level as well. I will keep in touch with them, and I have already shared our efforts through the Fight The Fight Campaign with them.

RECOGNITION OF NON-ABMS MEDICAL BOARDS (That means us!)

Since our organization is small, it is difficult to obtain recognition on the scale that other specialties enjoy. To give a little background, I should explain that, up to this point, membership in a "Board Society"—which are organizations like the American Board of Medical Specialties (ABMS) or the American Osteopathic Association (AOA), among others—were the default standard according to medical boards in all 50 states.[1] But this left several legitimate (but smaller) societies out of state-recognized board authorization. Some states have codified legal wording that, while it does not outright prohibit, does not explicitly embrace and legitimize the expertise of small specialty societies.[2]

In 2022, Resolution 316 defined the components of a legitimate specialty medical society with criteria that includes a certifying Board, like ours (the American Board of Hair Restoration Surgery, or "ABHRS"), and prohibited discrimination against smaller boards that were not members of a "Board Society."[3] The new definition also includes having a well-organized fellowship or residency program.[4] The ISHRS has this in place through our Fellowship Training Program, but it would be helpful to work with the ABHRS to have graduates of ISHRS Fellowship Training Programs be granted "Board Eligible" status.[5] These minor issues notwithstanding, having this newly approved AMA language allows smaller but admissible specialty societies with boards (like those offered by the ABHRS as well as the American Academy of Cosmetic Surgery [AACS]) to be given equivalent status, despite our smaller size.

Therefore, the goal is to get this wording that describes components of a legitimate specialty medical society to be the language used by all medical boards (instead of membership on a "Board Society"). This is an area where we can help ourselves and build some alliances. At the SOPP meeting, I spoke with Charles Sheffield (Associate Vice President for Government and Public Affairs from the ABMS). He expressed his willingness to help replace language in all state societies that still specifically refer to a Board Society (ABMS- or AOA-type societies) with this actual definition that the AMA worked out in Resolution 316 (and I have followed up with him via email).

The AACS is another partner we can rely on to further this goal. Clarifying this wording will help our U.S. membership initially, but will then provide a template for how other countries can regulate the quality of their hair transplant practitioners and maintain the highest standards for our patients. In other words, the ISHRS is poised to become the de facto standard if we can move in this direction.

ARTIFICIAL INTELLIGENCE (AI) REGULATION IN MEDICINE

No ethical rules currently exist regarding the use of AI in medicine, but the AMA Council on Ethical and Judicial Affairs is the body that will develop them. Those of us who were at the 2024 World Congress in Denver and in attendance for the "ice water on the face" lecture on AI understand the impact this could have on our patients–both the good AND the bad. When doctors think of AI, they think—rightly so—that it needs to get the diagnosis correct. But AI is not just being used to diagnose, and it is already being used in direct contrast to the best interest of patients. For example, insurance companies are using the technology with algorithms that are known to be faulty to deny care. More relevant to hair surgery are the online marketing materials that are being presented as fact and confusing our patients. With existing medical AI already tilting in this direction, it is clear that the patient–physician relationship is in jeopardy.

Two of the massive risks for unregulated use of AI in our niche profession are:

1. **The proliferation of marketing materials that represent bogus innovation as true progress** (e.g., "direct hair implantation (DHI) is better than any other hair implantation," or "FUE has better results than strip surgery," or that any hair transplant device is superior to any and all others).
2. **The minimization of the physician's involvement in evaluating, planning treatments, making judgments, and performing surgical techniques in hair surgery**—again usually through misleading marketing materials from the forces that would promote the use of unlicensed techs to perform surgery.

To combat these threats, we must not only increase awareness among patients and other doctors, but tout our expertise so that the AI that is currently in use will have the correct data set to give accurate recommendations. I have already contacted some of the doctors who are involved on the advisory committees doing this work, and I hope to give our input into the process. Additionally, our ISHRS website revamp, which includes the addition of updated hair-related content and our designation as an "authority" website (thank you, Blanca Mejia), also works toward this goal.

As a part of the AMA, we will have input on defining the correct data, we will have advanced knowledge of the rules that are being considered, and we will be able to influence the eventual regulations in a positive direction that benefits our patients.

Thank you for the honor of representing the ISHRS at this important meeting.

…More relevant to hair surgery are the online marketing materials that are being presented as fact and confusing our patients. With existing medical AI already tilting in this direction, it is clear that the patient–physician relationship is in jeopardy.

Footnotes

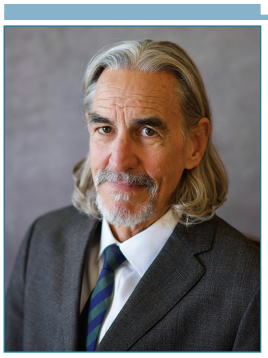
1. You can read the ABMS "Medical Specialty Boards Admission Guidelines" here: https://www.abms.org/newsroom/policy-on-admission-of-new-medical-specialty-boards-to-membership-in-abms/
2. Medical Board regulations vary by state in the United States.
3. Medical Specialty Board Certification Standards H-275.926 can be read in its entirety here: https://policysearch.ama-assn.org/policyfinder/detail/316%20Interim?uri=%2FAMADoc%2FHOD.xml-0-1904.xml
4. For historical context, the ISHRS's Fellowship Training Program with the ABHRS exam could have been recognized through the AAD, which would have allowed membership in the ABMS, but would have only allowed dermatology residents to go through the certification process in the future, a situation that the ISHRS/ABHRS rejected about 5-10 years ago, per Dr. Puig's recollection.
5. The ISHRS program standard case completion requirement may also have to increase to 100 or 120 cases. ■

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How I Do It

Timothy Carman, MD, FISHRS | *La Jolla, California, USA* | tcarmanmd@mac.com

Historically over the last three decades, it has been clinically shown that there is a greater consistency in graft survival and growth when follicular unit (FU) grafts exhibit a "chubby" morphology following dissection from surrounding tissue. The dermis, subdermal tissue, and subcutaneous fat help preserve the natural environment in which follicular units (FUs) typically exist. This preservation is believed to protect the grafts while they are outside the body and, importantly, ensures that the stem cells within the FUs travel with the graft to its new location.

Here, Dr. Jerry Cooley draws on his experience using adipose-derived stem cells (ADSCs) harvested from FUT strip fat, building upon our current understanding of the critical role the local FU microenvironment plays. Sharing our ideas with one another makes us clinically stronger as a collective group in the ISHRS.

If you have a suggestion or tip you employ in your practice that you would like to share with your ISHRS colleagues, please email me at tcarmanmd@mac.com for consideration of publication.

Clinical Observations on the Use of Adipose-Derived Stem Cells Harvested from FUT Strip Fat

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BACKGROUND

The success of hair transplantation depends on numerous factors, but I believe graft integrity is the most important component for producing optimal growth. This umbrella term covers avoiding issues such as transection, crushing, and dehydration. In my experience, the use of stereoscopic graft dissection, which was adopted in the late 1990s, produced the most significant improvement in graft survival rates.[1,2] As time went on, I also began to study additional factors that could enhance outcomes; these were referred to as "bio-enhancements." This term, coined by Dr. Robert True, refers to various products and treatments derived from regenerative medicine, which I reviewed in a prior publication.[3]

The second most important factor for successful transplantation is ensuring adequate blood flow to the grafts, both immediately and in the long term. Blood flow is essential for providing oxygen to the hair follicles, which is necessary for ATP production. It typically takes about one week for a new capillary network to form around each graft. During the first week post-op, frequent application of liposomal ATP spray provides the necessary cellular fuel needed to keep grafts viable until they can live on their own. Although hyperbaric oxygen is an alternative, it is less convenient. In my own practice, I have observed that there were significant variations in scalp oxygen levels among patients.

Building on the importance of blood flow to grafts brings us to stem cells and growth factors as key bio-enhancements in hair transplantation. This covers a range of products and techniques, including ACell, platelet-rich plasma (PRP), exosomes, and adipose-derived stem cells (ADSCs). I believe these treatments can improve outcomes through numerous modes of action. They promote angiogenesis by releasing growth factors and cytokines such as VEGF, FGF, and others, ensuring long-term vascular health for the grafts, although they do not contribute to the short-term ATP needs during the first week post-op (hence the need for ATP applications remains crucial). Additionally, stem cells and growth factors can augment the natural phenomenon of follicle regeneration, and their presence may promote graft repair following transection and crushing. They also help minimize subtle fibrosis that occurs in the recipient area; in particular, ADSCs have been shown to have potent anti-fibrotic effects.[4] In my opinion, this is an underappreciated issue in graft survival. Furthermore, ADSCs secrete growth factors that can even thicken non-transplanted miniaturizing hair.[5]

THE TECHNIQUE

For the past four years, I have been using the Rigenera® system (Rigenera HBW, Italy) to harvest ADSCs from the FUT strip fat. The technique has also been used in a variety of other applications, including using hair follicles as a non-transplant hair-thickening injection treatment.[6-8] Laboratory assays have confirmed the presence of ADSCs when fat is used in the Rigenera system.[9] An initial report by Zanzottera indicated that using FUT strip fat with Rigenera resulted in accelerated healing and improved outcomes.10 Inspired by these findings, I set out to determine whether I could replicate these results.

Isolating ADSCs from FUT strip fat has become a routine part of my FUT procedures, except when there is insufficient fat, which is uncommon. Often, the strip will contain an abundance of fat. During slivering and graft dissection, I separate the fat and keep it in holding solution until the end of the procedure (Figure 1). Once graft dissection is complete, I collect and separate the fat into small groups because placing all of the fat at once into the Rigenera cartridges will result in clogging. I use the larger Adipecons® cartridges rather than the smaller Rigeneracons® cartridges that are used for hair-thickening treatments. Also, if there

FIGURE 1. Fat is separated from strip during slivering and dissection and kept in holding solution.

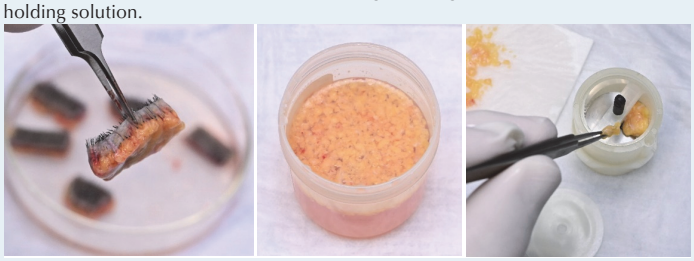
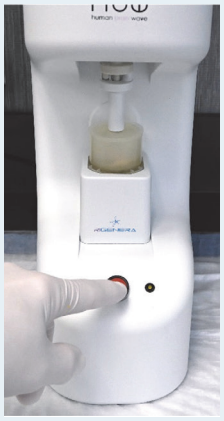


FIGURE 2. Motorized microtome



is an excess of single-hair follicle grafts that are not needed for the case, I place them in the cartridges and run them first.

The device uses a motorized microtome to mechanically break down adipose tissue, allowing it to remove the smaller cellular components that contain ADSCs without crushing them or needing enzymatic digestion (Figure 2). The cellular components drop into the saline at the bottom of the cartridge and then are aspirated using a syringe. Once graft placement is complete, they are injected into the recipient area. Typically, the aspirate should appear cloudy; if it is completely clear, something has gone wrong. In a typical case, I use 5-8cc of saline in the cartridge. I then transfer this to 1cc syringes and inject using a 25g needle. You must be careful when injecting into a recipient area containing grafts; place the index finger of your non-injecting hand on the grafts to prevent them from popping out. I inject the solution into the grafted area and in areas of miniaturizing hair. (See Figure 3.)

FIGURE 3. Aspirate should appear cloudy before being transferred to syringe and injected carefully into the recipient area.



When I first started using this technique, I had no expectations regarding its effects. However, after reviewing the results from my initial patients, which exceeded my expectations, I felt motivated to continue and assess the consistency of these outcomes. After four years of experience, I am now convinced that this technique is effective and yields improved results in my practice, especially among patients with less-than-ideal hair characteristics.

My Observations

With my patients, I've noticed the growth appears to be accelerated and more robust, often showing good growth at 6 months (Figure 4). Non-transplanted hair appears thicker; even hair distant from the injection site appears healthier and more pigmented (Figure 5). As an example, I had a woman with diffuse unpatterned alopecia (DUPA) who I initially saw and

FIGURE 4. FUT results show good growth at 6 months.



FIGURE 5. Non-transplanted hair appears thicker; even hair distant from the injection site appears healthier and more pigmented.



rejected for hair transplantation. I started her on dutasteride and oral minoxidil. After one year of treatment, her hair characteristics had improved enough that she was aware that she might only see moderate benefit transplanting only her frontal core and part with 2,200 grafts (Figure 6). This patient was one of my first cases using this technique and the results spurred me to continue with it. Another example shows results of a patient with suboptimal donor characteristics (1.3 hairs/graft) with good results (Figure 7). Another example shows the results of transplanting frontal fibrosing alopecia (FFA) (Figure 8); theoretically, the ADSCs may have a beneficial effect in countering any inflammation present in FFA (although all of my FFA patients are on maintenance immunomodulating medications).

FIGURE 6. Results after treatment and 2,200 grafts in frontal core and part.



Discussion

Admittedly, these are subjective observations and do not constitute "proof." It would be extremely difficult to design a controlled study to determine the degree of improvement. A split scalp study would not work because there is significant spill over from the treated side to the non-treated side. Comparing one patient to another seemingly similar patient is always difficult because there is significant variation among patients and results in comparing apples to oranges. Our field has evolved tremendously based solely on sharing subjective observations. This technique should be considered by any surgeon practicing FUT.

➤ PAGE 24

CONTINUED FROM PAGE 23

FIGURE 7. Good results shown in patient with suboptimal donor characteristics.



FIGURE 8. Results shown of patient with FFA.



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Hair's the Question

Sara Wasserbauer, MD, FISHRS | *Walnut Creek, California, USA* |
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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.

The 2024 Denver World Congress had a unique session: Half-Day Course—Afro Hair Restoration. Due to the international nature of our specialty and the distances everyone must travel, not everyone could attend, so Dr. Luis Nader summarized this fascinating topic for the General Session in his "Highlights of the Half Day Course on Afro Hair." Remember, curly and Afro-type hair is widespread around the world, and your next patient might need you to have these skills! Let's see what you know, or remember, or at least can guess![1]

Hair's the "Half-Day Course—Afro Hair Restoration" Questions

1. If a patient has curly Afro-type hair, which of the following tools/treatments is considered essential for the surgeon to evaluate if they are a surgical candidate?
   A. Trichoscopy
   B. Biopsy to rule out frontal fibrosing alopecia (FFA) and central centrifugal cicatricial alopecia (CCCA)
   C. Hair curl category (1, 2A, 2B, 3, 4, 5)
   D. 6 months of treatment with oral minoxidil

2. Which of the following Afro-type hair characteristics is more beneficial when using the follicular unit excision (FUE) technique to transplant Afro-type hair (i.e., rather than linear excision)?
   A. Lower hair density in native donor hair
   B. Afro & curly hair appear more dense when transplanted
   C. Grafts splay and curl under the skin, so FUE is a better harvest method
   D. Thicker dermis and strong attachment of hair follicle to surrounding dermal tissue

3. Which of the following has a higher risk among patients with Afro-type hair?
   A. Thicker skin with deeper follicles
   B. Hypertrophic scarring and keloid scarring
   C. Post-operative development of alopecia areata
   D. Higher average number of hairs per follicular unit leading to higher transection rates for FUE surgeries

4. Which of the below are effective methods for initial first-line treatment for hypertrophic scarring and keloid scarring?
   A. Steroid injections
   B. Avoid it in the first place
   C. Surgical resection and cryotherapy
   D. 5-fluorouracil (5FU), lasers, and radiation

5. Which of the below is a surgical adjustment to make when using the FUE method in Afro-type and curly-hair patients?
   A. 90° (perpendicular) punch placement
   B. Smaller-sized punch to reduce the risk of scarring
   C. Larger-sized punch to accommodate curly hair splay
   D. More grafts to counter the reduced density available in the donor area

6. Which of the following is generally true of Afro-type hair?
   A. It has lower density, generally ~50-60 FU/cm^2 versus 70-80 FU/cm^2.
   B. It is less susceptible to alopecia due to hair styling practices.
   C. It is more common than Asian-type straight black hair.
   D. It is unsuitable for preview long hair transplantation.

7. Which graft extraction technique works well to reduce transection rates in coiled (not wavy) Afro-type hair?
   A. Using high rotation speeds
   B. Limiting excision depth
   C. Decreasing punch diameter
   D. Adjusting the punch entry point angle to 70° to 65°

8. When choosing between extraction methods in FUE versus linear (strip) follicular unit transplantation (FUT), which is true about Afro-type hair surgery?
   A. The usual benefits of FUE are all applicable.
   B. If linear excision is used, the blade should incise the skin at a 15° angle to account for curly hair exit angle.
   C. If FUE is used, the punch should be incised at a 15° angle to account for curly hair exit angle.
   D. It is important to understand the relationship between Afro-type hair shaft direction and follicle direction below the skin.

9. Which of the following is a more frequent alopecia diagnosis in patients with Afro-type hair?
   A. Hair straightening and dreadlocks
   B. Alopecia areata and FFA
   C. Traction alopecia and CCCA
   D. Linear coup de sabre and lichen planopilaris (LPP)

➤ PAGE 26

CONTINUED FROM PAGE 25

ANSWERS

1. **A.** The faculty at the half-day session emphasized the need to use trichoscopy to rule out scarring alopecias and other common contraindications for surgery. If the exam indicates concerning findings, a biopsy is indicated. Hair curl categorization (per Reyes[2]) and pre-treatment with medical therapy are both useful but may not be essential in all cases.
2. **B.** Afro and curly hairs do appear more dense when transplanted, which is a clear advantage for our patients. This is good because the generally lower densities found in the donor areas of these hair types makes harvesting high numbers of FUE grafts problematic, so care must be taken not to overharvest. Graft splay and thicker skin make FUE more difficult in Afro-type and curly hair, resulting in higher transection rates[3] The attachment of hair follicles to surrounding dermal tissue is not necessarily a benefit for FUE over linear surgery in these patients.
3. **B.** Darker skin types and those associated with Afro-type curly hair have a higher risk of both hypertrophic scarring and keloids. Hypertrophic scarring is much more common and easier to treat, but prevention is best in both cases. Afro-type hair is associated with thicker skin and with splayed follicles, not necessarily with deeper follicles, so A is incorrect. There is no association with higher number of hairs per follicular unit in curly hair, but a higher transection rate is well-known and likely due to the angle changes between the exiting hair and the underlying follicle.[4] There is no higher association with the post-operative development of alopecia areata; however, alopecia areata is more common in individuals with Afro hair types.
4. **B.** This is a difficult question because clearly, the first thing to do is to avoid this type of scarring in the first place. Even if the history does not indicate a higher risk patient, minimizing wound tension and using a smaller punch size would both be surgical adjustments to consider. Most would consider steroid injections as a first-line therapy, with subsequent surgical resection, 5FU, and the rest as secondary options. However, these cases can be difficult to treat, even with every option available, which is why alternatives like botulinum toxin and mitomycin C are being explored.[5,6]
5. **A.** This is another tricky question because both B and C can be correct, and yet they contradict each other–so what to do? Well, the definite answer is to NOT overharvest and get more grafts as in D, and that is because there is reduced density in the donor area in these patients. Besides, curly hair looks denser when transplanted, so fewer grafts may be needed to achieve the desired improvement than in other hair types. But choosing which punch size works to reduce scar risk AND transection rates is why our profession needs to exercise good judgment in these cases. Some surgeons use an arc movement to help extract grafts, but some do not so there is no consensus.
6. **A.** Lower density is the correct answer. Afro-type hair is more susceptible to alopecia induced by hair styling practices—often diagnosed with traction alopecia due to dreadlocks and tight hairstyles and breakage or chemical damage due to straightening. However, preview long hair transplantation can be accomplished (answer D). Asian-type straight black hair (answer C) is the most common.[7]
7. **B.** The suggestions for reducing graft transection in FUE for Afro-type curly hair include aligning the punch near vertical for initial penetration (entry point 90° to 85°), limiting excision depth, and maintaining low speeds with short duration if using rotation (or small arc if using oscillation). While decreased punch diameter may help reduce risk of abnormal scarring, it will definitely increase transection rates.
8. **D.** Afro-type hair shaft direction and follicle direction should be considered a continuum of one another. In a patient with Afro-type hair, not everyone can benefit from the advantages of FUE over other hair transplant methods. Curly hair will splay distally, like a bunch of flowers, and if linear excision is used, the blade should be close to a 90° angle, almost perpendicular to the skin. Likewise, a punch should be positioned nearly perpendicular to the skin.
9. **C.** Hair straightening and dreadlocks are more common in Afro and curly hair types, but they are NOT a diagnosis and do not always cause hair loss. Answers B and D are not completely correct since FFA and linear coup de sabre (typically found in children) are not more common in Afro hair types. C is correct, and in case you are studying for the ABHRS boards, traction alopecia, alopecia areata, and CCCA are more frequent in patients with Afro-type hair.

References

1. Special thanks to Dr. Luis Nader for directing the workshop and also summarizing this tricky subject, and to Dr. Maria Marta Zollinger for co-directing. A thank-you also goes to the rest of the faculty for sharing their expertise: Ozlem Biçer, Christian Bisanga, Flavia Dias, Jean Devroye, Alejandro Gonzalez, Natalie Kash, Juan Carlos Maldonado, Leoncio Moncada, Patrick Mwamba, Marwan Noureldin, Achiamah Osei-Tutu, Felix Popescu, Alba Reyes, Asim Shahmalak, Luis Trivellini, and Sanusi Umar.
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4. There is NO "higher number of hairs per follicular unit in curly hair" that I was able to find—but I am happy for a reader to correct me with evidence! Please email drsara@californiahairsurgeon.com.
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Message from the ISHRS 2025 World Congress Program Chair

Samuel M. Lam, MD, FISHRS | *Plano, Texas, USA* | drlam@lamfacialplastics.com

A lot of planning has gone on for the 2025 World Congress since the Denver meeting concluded. I want to dive deeper into a core strategy that I have developed for Berlin: video-centric, surgical-focused sessions. I briefly alluded to them in my last message, but I now have the design and leaders in place, so I can provide more in detail.

These video sessions will be used to break up the day; there will be 30-minute short-format videos between 30 seconds to 3 minutes every morning. These sessions will be curated and chaired by Emina Vance, David Josephitis, and Marie Schambach. For easier digestion, I will have them group the videos each day into categories such as donor area, recipient area, etc. In the afternoons, Jae Hyun Park and Sharon Keene will be running a 1-hour, long-format video session. I was inspired to create this new section after being invited to lecture in South Korea in June 2024. Jae came up with this idea and I thought it was brilliantly executed. In 5- to 10-minute video segments, the moderator will interact with the surgeon who is narrating his technique and also field questions from the audience. It will be a novel way to present highly precise surgical techniques in a very clear, expository fashion and permit discussion, debate, and interaction. I think you will be blown away, as I was.

If you have ANY great ideas that you want to present of a surgical nature or that are clinically pragmatic, please reach out to Emina, David, or Marie if they are short format or to Jae and Sharon if they are a better fit for the long-format section. The co-chairs will decide if a video may be better for the other section or, in rare cases, can be shown in both sections. I am working with Melanie Stancampiano, ISHRS Programs Director, to procure the highest resolution projection possible so that these videos will run as clearly as possible for the audience.

Another video-intensive section that will be new is "Master Classes." This section will be replacing Focused Sessions and will be headed by Steven Gabel. While I have a preliminary idea of how I envision this structured, until I have a more comprehensive understanding, I will save a discussion of it for a future message. I have so many ideas that extend far beyond the meeting that if you miss this meeting, you will without a doubt have FOMO (fear of missing out) when you see the social media posts.

So, DON'T MISS IT! Mark your calendar for the 33rd ISHRS World Congress, October 23-25, 2025, in Berlin, Germany. I like to say that I am putting the "S" back into "ISHRS," meaning the meeting will be heavily focused on advanced, innovative Surgical techniques. Please plan on joining us, and tell your colleagues that this is the meeting not to miss. ■

Short-Form Video Submissions

To submit a video for consideration in the short-format video session, please upload it to:
https://www.dropbox.com/request/0J4bz9R4DCDyK46csSJj

VIDEO SPECIFICATIONS

- Share a "pearl" or clinical nugget that is unique, helpful, and easily demonstrated. We are more inclined to include SURGICAL techniques and tips.
- Record your video in landscape mode (horizontal), not portrait.
- Keep it concise (30 seconds to 3 minutes max). Run your idea by the chairs before recording to ensure it fits!
- Narrate your video (live narration during the presentation won't be available).
- Make sure it is in English. If you feel unsure about pronunciation, you can get someone to help you.
- Provide the raw file. Do NOT add any titles, subtitles, captions, or branding of your clinic. We will provide all the editing.
- Provide the video title and your clinic information separately in a document (do NOT include these in the video).
- Use good lighting and clear audio. Smartphones work well, but ensure the quality is top-notch.
- Check your settings on your smartphone to make sure you are recording at a minimum of 1080p.

For additional information, contact one of the Short-Format Video Co-Chairs:

David S. Josephitis, DO, FISHRS | USA | drjosephitis@shapiromedical.com
Marie A. Schambach, MD, FISHRS | Guatemala | mas@schambachmedical.com
Emina Vance, MD | USA | emina4friend@yahoo.com



ABHRS President's Corner

Rana Irfan, MBBS ,FISHRS | *Islamabad, Pakistan* | ranairfan4@icloud.com

I am honored and thrilled to address you as the newly appointed President of the ABHRS. It is with great pride and enthusiasm that I take on this role, following in the footsteps of our dedicated past Presidents who have worked tirelessly to establish and maintain the credibility of our organization.

I would like to extend my heartfelt gratitude to all past presidents including Dr. Steven Gabel, our immediate Past President, for his hard work and dedication in standardizing the ABHRS. Under their leadership, our board has made significant strides in ensuring that only the highest standards are upheld in the field of hair restoration surgery.

As we move forward, I am committed to fostering a closer relationship with the International Society of Hair Restoration Surgery (ISHRS), the global leader in hair education. The ABHRS is the only certifying board recognized by the ISHRS, and I believe that collaboration between our organizations is essential for the advancement of hair restoration surgery worldwide.

In line with ISHRS President Ricardo Mejia's theme of "Unity" for the year 2025, I am proud to announce our theme of "Uplifting Global Standards." I firmly believe that unity is key to elevating the standards of hair restoration surgery on a global scale, and I am excited to work hand in hand with the ISHRS to achieve this goal.

I am dedicated to ensuring that our diplomates are kept informed and educated on the latest advancements in hair restoration surgery. I encourage all our members to participate in ISHRS educational programs, such as online CME webinars, regional workshops, and the 2025 ISHRS World Congress in Berlin, Germany. I will work closely with the ISHRS Program Chair, Dr. Samuel Lam, to ensure that ABHRS diplomates have a dedicated session at the annual meeting.

I am grateful for the support of my Past Presidents, Executive Committee, Board of Directors, office staff, and diplomates from around the world. Together, we will strive to uphold the highest standards in hair restoration surgery and work towards a unified approach with the ISHRS to uplift the global standards of our field.

Thank you for your continued support and dedication to the ABHRS. I look forward to working with each and every one of you to achieve our shared goals. ■

IMPORTANT DATES

August 9, 2025: Written Examination (Pearson VUE computer-based testing)

October 21, 2025 | Berlin, Germany: Oral Examination

https://abhrs.org/certification/certification-exam-dates/

Congratulations from ABHRS

American Board Of Hair Restoration Surgery

The following doctors recently passed the written and oral examinations conducted by the ABHRS. We would like to congratulate each of them on their accomplishment.

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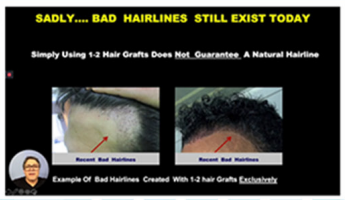
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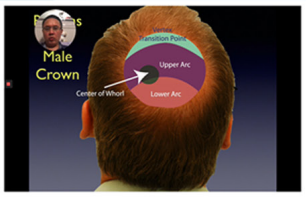
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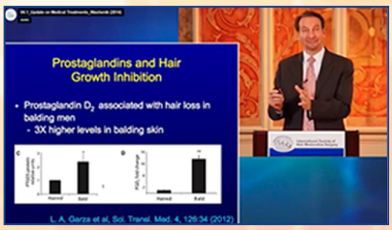
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The On-Demand Basics Bundle provides more than 80 lectures for a combined 24 hours of education. It is a self-paced, online learning program for those who are new to the field of Hair Restoration Surgery as well as for those who are interested in a refresher course. The On-Demand Basics Bundle is the perfect way to learn about all aspects of hair restoration from the comfort of your home or office. The bundle includes:

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Calendar of Hair Restoration Surgery Events

http://www.ishrs.org/content/upcoming-events

DATES	EVENT/VENUE	SPONSORING ORGANIZATION(S)	CONTACT/INFORMATION
FEB 19, 2025 9AM Central Time/ Chicago	CME Webinar: Latest Advances in FUE and FUT Techniques	International Society of Hair Restoration Surgery	https://ishrs.org/ishrs-2025-cme-webinar-series/
APR 4-6, 2025	HAIRCON 2025, 15th Annual Conference of Association of Hair Restoration Surgeons of India *Srinagar, India*	Association of Hair Restoration Surgeons of India	https://haircon2025.in/
APR 13, 2025	S.I.Tri. National Congress *Florence, Italy*	Italian Society for Hair Science and Restoration (S.I.Tri.)	https://www.sitri.it/eventi-sitri/
MAY 10-11, 2025	International Congress of the KSHRS *Seoul, South Korea*	Korean Society of Hair Restoration Surgery (KSHRS)	http://www.ikoreanhair.or.kr/
JUL 3-6, 2025	9th Scientific Meeting of the AAHRS *Bangkok, Thailand*	Asian Association of Hair Restoration Surgeons (AAHRS)	https://aahrs-asia.com
JUL 5-7, 2025	ISHRS Regional Workshop, Comprehensive Hair Transplantation: From Patient Selection to Successful Outcomes *Tbilisi, Georgia*	International Society of Hair Restoration Surgery Hosted by Vazha Vadachkoria, MD	vadachkoriavazha@gmail.com
JUL 18-19, 2025	16th Annual Hair Transplant 360 Cadaver Workshop *St. Louis, Missouri, USA*	Saint Louis University School of Medicine, Practical Anatomy & Surgical Education In collaboration with the International Society of Hair Restoration Surgery	https://slu.edu/medicine/pase
AUG 9, 2025	ABHRS Written Exam *(online)*	American Board of Hair Restoration Surgery www.abhrs.org	https://abhrs.org/certification/certification-exam-dates
OCT 16-19, 2025	CAHRS Annual Meeting *Xi'an, Shanxi Province, China*	China Association of Hair Restoration Surgery (CAHRS)	http://www.cahrs.com.cn/
OCT 21, 2025	ABHRS Oral Exam *(in person)* In conjunction with the 33rd World Congress of the ISHRS *Berlin, Germany*	American Board of Hair Restoration Surgery www.abhrs.org	https://abhrs.org/certification/certification-exam-dates
OCT 23-25, 2025	33rd World Congress of the ISHRS *Berlin, Germany*	International Society of Hair Restoration Surgery www.ishrs.org	https://33rdannual.org/
OCT 26, 2025	ISHRS Live Surgery Workshop *Potsdam, Germany*	International Society of Hair Restoration Surgery www.ishrs.org	https://33rdannual.org/
NOV 8-9, 2025	30th Annual Meeting of the Japanese Society of Clinical Hair Restoration *Tokyo, Japan*	Japanese Society of Clinical Hair Restoration	https://jschr.org/
NOV 11, 2025	11.11 ISHRS World Hair Transplant Repair Day Fight The FIGHT Public Awareness Campaign	International Society of Hair Restoration Surgery www.ishrs.org	https://fightthefight.ishrs.org/media-kit/
MAY 28-31, 2026	14th World Congress for Hair Research *Seoul, Korea*	Korean Hair Research Society (KHRS)	www.hair2026.org

Educational Maintenance Requirements for Full Members and Fellow Members

Beginning in January 2024, a new POINT SYSTEM was introduced to allow more choices for full Members and Fellows Members to meet the requirements. Details can be found at:

https://ishrs.org/physicians/list-ishrs-approved-meetings-meet-additional-minimum-educational-requirement/

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1. Articles should be written with the intent of sharing scientific information with the purpose of advancing the art and science of hair restoration and improving patient outcomes.
2. If results are presented, the medical regimen or surgical techniques that were used to obtain the results should be disclosed in detail. If intra-operative or immediate post-operative photos are presented, please submit photos that show results (at least 6 months after surgery) of the procedure being presented.
3. Articles submitted with the sole purpose of promotion or marketing will not be accepted.
4. Authors should acknowledge all funding sources that supported their work as well as any relevant corporate affiliation.
5. Trademarked names should not be used to refer to devices or techniques, when possible.
6. Although we encourage submission of articles that may only contain the author's opinion for the purpose of stimulating thought, the editors may present such articles to colleagues with experience in the area in question for the purpose of obtaining further opinions to be published alongside the original article. Occasionally, a manuscript might be sent to an external reviewer who will judge the manuscript in a blind fashion to make recommendations about its acceptance, further revision, or rejection.
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11-17. For the complete list of instructions and downloadable *Article Submission Guidelines Checklist* and *Author Authorization and Release Form*, go to: **https://www.ishrs-htforum.org/content/authors**.

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