Hair Transplant Forum International

INTERNATIONAL SOCIETY OF HAIR RESTORATION SURGERY

forum

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The Hair Loss Profile and Index: A New Classification System for Pattern Balding

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For 50 years, the Hamilton-Norwood system has been used to characterize the stages and severity of baldness. In 2000, James Arnold, MD, introduced an alternative system based on the natural principles of biodiversity. Building on Dr. Arnold's insightful (and unpublished) observations, I introduced a new classification system at the 2002 Chicago ISHRS meeting. The full manuscript was published in the October issue of *Cosmetic Dermatology*. Reprints are available.

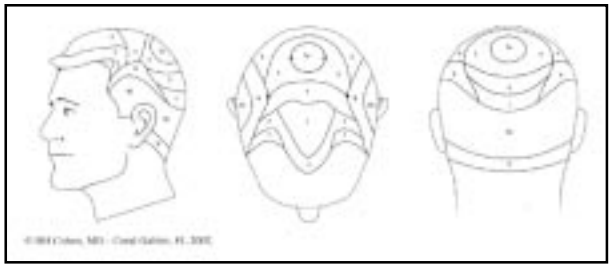

Figure 1. Ten-zone map of scalp (standardized template). Three sets of dots indicate dimensions to be measured.

The new system is nothing more than a single sheet of paper that is printed with two *standardized* templates—a map and a chart. All that's required is a patient and a pencil. The system can depict the density, distribution, and total hair mass of every possible balding pattern. The first template is a 10-zone map of the scalp (see Figure 1). The zones are sequentially numbered to reflect the usual progression of male pattern hair loss. Their mosaic combinations conform to the classic Norwood renderings. The second template is a 100-cell weighted bar graph with 11 fields (see Figure 2). Each field represents one of the 10 zones. The number of cells assigned to each field is proportional to the relative size of that zone. The vertical axis defines the terminal hair density. The horizontal axis defines the fields.

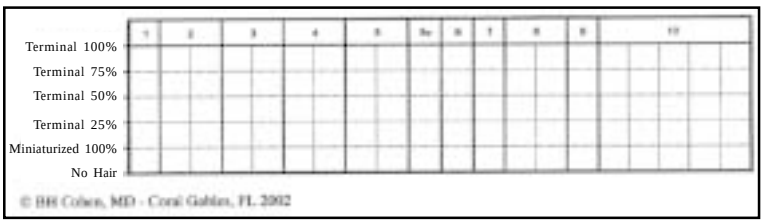

Figure 2. Blank bar graph (standardized template). The bar graph matrix contains 100 cells and 11 fields. The number of cells assigned to each field is proportionate to the size of the zone.

Method (Briefly)

The examiner identifies the location of Zones 1 through 10 and the three pairs of dots on the patient's scalp (see Figure 3). Typically, the forehead measurement is 8.5 to 9.5cm. If it is greater than 11cm, one may assume that Zone 2 is hairless. The distance

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Regular Features

Feature Articles

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The ISHRS Golden Follicle Award sculpture, as seen on the cover of this issue, was designed by Francisco Abril, MD. Dr. Abril offers for sale, copies of a small bronze hair follicle sculpture (10" high). For more information, please contact: Clinica Dr. Francisco Abril, PO dela Habana, 137, 28036 Madrid, Spain. Phone: 34-1-359-1961; Fax: 34-1-359-4731.

President's Message

Robert S. Haber, MD
Mayfield Heights, Ohio

One of the privileges of serving as president of the ISHRS is the opportunity to let my voice be heard on this page. My principal task is to shepherd the Society through the year, keeping it healthy and strong. But lurking in the shadows are elements of danger! Internet sites that may not serve our best interests. Fractured alliances amongst our members that could bring a negative spotlight on our field. Business practices that may be unethical, or worse. Pretending that these problems do not exist serves no useful purpose, and I therefore must make this message a call to arms! A challenge not to let complacency defeat us. A warning not to ignore the risks that face us. A reminder that only united in the common goal of our patients' best interests will we continue to grow and flourish.

You can take up arms in a number of ways. Ensure that in all your actions you adhere to principles of ethics and decency that go well beyond the tenets of our code of ethics. Critically examine your advertising, your approach to the consultation, your surgical technique, and your expressed and implied attitudes regarding your colleagues and competitors. Responsibly remind those colleagues who are going astray of the better pathway, without initiating a war. We can lift each other up, and we can just as easily drag each other down.

We are challenged by Internet sites that sometimes do not serve our best interests. We must therefore learn to educate them and see to it that visitors to these sites obtain accurate information. We are challenged by powerful groups that can out-market the rest of us. We must therefore learn to market ourselves more wisely. We are challenged by unethical competitors. We must therefore lead by example and, when necessary, allow the due process available within the Society to address and correct these problems. We are challenged by our own anxieties that there will be fewer patients around the corner. We must therefore spread the word to the public and create more patients for us all.

By staying united, by staying true to high ethical standards, even when others do not, by educating the press and the lay public, these challenges will wither for lack of room to grow. We must each fight for our future!✧

Bob Haber, MD

To Submit an Article or Letter to the *Forum* Editors

Please send submissions via a 3½" disk or e-mail, double space and use a 12 point type size. Remember to include all photos and figures referred to in your article as separate attachments (JPEG, Tiff, or Bitmap). For e-mail submissions, be sure to ATTACH your file(s)—*DO NOT* embed it in the e-mail itself. We prefer e-mail submissions with the appropriate attachments. *Send to:*

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Submission deadlines: March/April issue, February 10; May/June, April 10.

Co-Editors' Messages

Michael L. Beehner, MD
Saratoga Springs, New York

One of my favorite columns in our local Sunday paper is "Mackay on Business." He recently related the story about a news reporter who once complimented Thomas Edison on his inventive genius. Edison replied, "I am not a great inventor."

"But you have over 1,000 patents to your credit," protested the reporter.

"Yes," Edison replied, "but about the only invention I can really claim as absolutely original is the phonograph. I'm an awfully good sponge. I absorb ideas from every source I can and put them to practical use. Then I improve them until they become of some value. The ideas I use are mostly the ideas of other people who don't develop them themselves."

In the same issue, Mackay observed that "if I give you a dollar and you give me a dollar, we each have a dollar. But if I give you an idea and you give me an idea, we each have two ideas. A candle loses nothing by lighting another candle." I couldn't help but think of our field of hair transplantation as I read these words. I think his message was that everyone benefits when we share ideas with one another. Our patients certainly benefit from the expanded knowledge and skills we have when we share our insights with our colleagues at meetings, in our offices, and in print.

It may be naïve to assume that, as practitioners of the same trade, we are not in competition with each other to some degree, or that we are not businessmen and women as such. However, it is nice to think that we consider ourselves first and foremost as *colleagues* and also as *physicians*. If each one of us thinks back to when we got started, who helped us, and how we improved our skills over the years, we would realize that if the leaders in the field at that time held all of their cards close to their chest and pursued an "elitist" philosophy to keep us out, we wouldn't be practicing in this wonderful specialty today. When someone who is just getting started in hair surgery comes to my office, I find it valuable to imagine myself five years from now bumping into that person at a hair meeting. Do I want him to warmly greet and thank me as we approach each other? Or do I want him to bruskly walk by, remembering back to when I tried to push him off the park bench and didn't offer him a seat? Similarly, if I come up with what I think is a better way to do a hair transplant procedure, should I keep it to myself, create an "exclusive mystique"

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William M. Parsley, MD
Louisville, Kentucky

Every profession needs them. They drive us forward. They inspire us. They seem to have special gifts. They make us say: "I should have been able to come up with that idea myself!" These are the "lateral" thinkers, those innovators who seem to have shed the constraints of institutionalized thinking and are able to think "outside of the box." Instead of being satisfied with slow, steady progress, they make their field jump forward. Our field has some of these special people, and we are the better for them. While impossible to mention all of these innovators, I would like to point out a few.

In the 1930s and 1940s, early innovations were predominantly found in Japan. Drs. Sasagawa, Okuda, and Tamura not only discovered that full-thickness autographs would work, but also used single-hair grafts in work similar to some of our advanced work today. Language barriers and conflicts prevented the work of these valuable innovators from reaching and influencing the rest of the world. John Greenleaf Whittier's words are most appropriate here: "For all sad words of tongues or pen the saddest are these: It might have been." So many problems for the first 25–30 years of transplantation could have been avoided with knowledge of these studies. After years of delay, Dr. Norman Orentreich performed studies with scalp autographs and proved the donor dominance of male pattern alopecia. His studies were not appreciated by the major medical journals and were published in the Annals of the New York Academy of Science in 1959. From that day forward, there was no stopping the development of hair restoration.

Scalp reductions were started in the mid-1970s, but overcoming tension and removing a significant amount of tissue were a problem. Enter Dr. Patrick Frechet in the early 1990s. His idea of the stretchy rectangular material with hooks (the Frechet extender) was a major innovation and is still used to stretch the skin and avoid the use of unsightly expanders. While it can be painful, the patient doesn't have to hide for a few weeks. When slot deformities of the crown after multiple reductions were creating significant problems, Dr. Frechet developed the triple transposition flap. His work is done without assistants, giving further evidence that he has never been shackled by traditional medical process.

With the development of minigrafts and the multibladed knife, most physicians were trying to put rectangular grafts into round holes or distorting the skin to place them into slit incisions. Dr. Gary Hitzig decided

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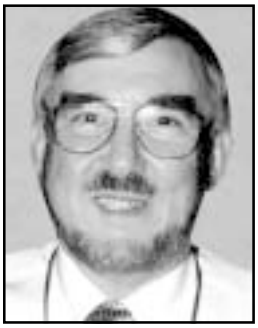
Notes from the Editor Emeritus



Richard C. Shiell, MBBS
Melbourne, Australia

Here we are into another year, my 36th in this intriguing field of hair restoration surgery. Although we have many fine textbooks (and another edition from Walter Unger about to appear), we could still fill books with what we DON'T know about the human hair growth cycle.

An Internet discussion between a dozen members of the ISHRS concerning the numbers of hairs per square mm on various parts of the scalp recently brought this to my attention. There was further disagreement on the distinction between transitional and vellus hairs and how they should be counted (and did it really matter anyway!).

To the layman, hair seems such a simple structure, yet nothing could be further from the truth. Unlike a homogeneous nylon fibre of similar diameter, the human hair is incredibly complex. It has an outer cuticle made of a single layer of overlapping cells, like roof tiles. Inside is a cortex made of packed macrofibrils arranged around a central medulla. Each of the macrofibrils (diameter 200nm) is comprised of hundreds of microfibrils of diameter approximately 7n. Each of these in turn is comprised of rope-like strands of keratin, which are made from polypeptide chains arranged in an alpha helix.

The mechanism that produces the hair fibre is unbelievably complex and the interactions between the dozens of growth factors and inhibitory factors are only just beginning to be unravelled. The vascularity of the skin and hair follicles is well-known by cutaneous surgeons, but the reason for the myriad nerve fibrils that surround each hair follicle can only provoke speculation and wonder. No doubt much of this is vestigial and would be useful in creatures that change the density, texture, and color of their coat on a seasonal basis. Remember also the chameleon, which can change its skin color in seconds to match that of its environment.

While human scalp hairs are relatively coarse at around 50 microns and sparse at 1–5 per sq mm, merino sheep produce fibres at 5 microns (up to an incredible 50 per sq mm). The record seems to be held by the Australian platypus, however, which has fur with an amazing 900 fibres per sq mm.

Hair Research

There are a number of Societies and journals for scientists with an interest in hair, wool, and feathers. The major journals are *J. Investigative Dermatology* and *Experimental Dermatology,* but there are dozens of other specialty journals, such as *Cell*, *J. Cell Biol*, *J. Cell Sci*, and *J. Biol Chem*, that carry articles of interest to hair researchers.

We often forget that wool and feathers share the embryology of hair and have many features in common. In Australia, wool research at the CSIRO (Commonwealth Scientific and Industrial Research Organisation) has been going on for well over 70 years, funded by a levy on every kilogram of wool sold and every egg laid. There are other wool research centres in the UK, Germany, South Africa, and New Zealand. It is a pity that more of this immense accumulation of scientific knowledge and experience in genetics, molecular structure, endocrinology, and physiology cannot be channelled into human hair research, but the wheels of bureaucracy turn slowly.

Research centres in the USA, England, Europe, and Asia are often University-based, but may be funded by large cosmetics manufacturers. Human hair cloning will be under investigation at many centres, large and small, but is highly secretive and the difficulty of the process must not be underestimated. Even if solved tomorrow, the practical application of such technology to the treatment of human baldness may take a further decade.

Dutasteride

Dutasteride is on sale in Sweden under the brand name *"Avolve."* In the USA, it has been approved by the FDA for use in benign prostatomegaly and is being marketed as *"Avodart."* Judging from the Internet, it is already doing a roaring trade amongst the members of the balding population who have been anxiously awaiting its release for several years. David Whiting reported in Chicago that dutasteride in a dose of 2.5mgm daily reduced serum DHT by 93% (compared with 65% for finasteride). At this dose, serum testosterone levels rise by an average of 19%. Dutasteride is being marketed in 0.5mg tablets so patients will need to multi-dose to achieve these levels. Sexual side effects are about double those of finasteride at around 4%. By the way, for those of us over 60 and interested in its effects on the male urinary system, it is said to improve the urinary flow within 1 month, rather than 6 months or more for finasteride.

Cost of Meetings

In the September/October *Forum*, I commented on how few doctors from the continents of Asia, Africa, and India attended our meetings. In Chicago, an Indian doctor politely pointed out to me that the cost of meetings in North America was a serious inhibiting factor. Not only is the financial exchange a great disincentive but the price one can obtain for a transplant operation in many countries is very low in US dollar terms. While a 1,000-graft procedure in the USA will provide a first-class ticket around the world, a similar operation in Australia will only buy a business-class ticket, and in India you may need several such procedures to buy an economy ticket

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