

# HAIR TRANSPLANT 360

3



VOLUME 3

# HAIR TRANSPLANT 360

*ADVANCES, TECHNIQUES, BUSINESS DEVELOPMENT, AND GLOBAL PERSPECTIVES*

EDITOR

**SAMUEL M LAM**



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### **About the Cover**

The circular design on this cover is an enso, a Japanese word that means “circle” and carries the meaning of enlightenment, strength, elegance, and the universe. For me, it has multiple, layered meanings. First, it is a symbol of the 360 concept in that this book and the entire series are meant to be very comprehensive in scope on the subject of hair restoration. Second, as volume 1 is for the physician, volume 2 for the assistant, and this third volume for both, I look at the circle as a symbol of partnership between



the physician and the assistant. Finally, the incomplete circle suggests that we all work on hair transplant, or any subject about which we are passionate, in an ever-improving journey, as mastery is an elusive and receding asymptote. Japanese Zen masters contend that the character of the artist is revealed through his interpretation of the enso, with artists who paint the enso on a daily basis as part of their spiritual journey

There is no passion to be found playing small—in settling for a life that is less than the one you are capable of living.

**Nelson Mandela**

You've got to find what you love. Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle.

**Steve Jobs**





### *Dedication*

I would like to thank two mentors without whom I would never have been able to reach my dream of being a hair surgeon. *Vance Elliott*, thank you for teaching me humility, humor, integrity, skill, and insight; and thank you for being a dear friend of mine. *Emina Karamanovski*, thank you for teaching me creativity, patience, craftsmanship, and diligence; and thank you for being my ongoing partner dedicated to patient excellence in this amazing, rewarding, ceaseless, and lifelong journey of restoring hair and enriching lives.



# Foreword

A new textbook on our specialty is always an exciting event. As a co-editor of a single textbook I have some idea of the vast labor involved in getting a book to press and have enormous admiration for those who do it repeatedly.

I first heard about surgical hair transplantation in 1967 when there were no books on the subject. A small number of surgical papers were published in obscure journals that were almost impossible to obtain in Australia, or anywhere else for that matter. The new surgeon of today has a bewildering array of books from which to choose, as well as countless peer-reviewed papers and editions of the excellent bimonthly newsletter, *Hair Transplant Forum International*.

In spite of my initial difficulties I managed to find a good paper by Los Angeles dermatologist, the late Dr Sam Ayres III, and I was off and running. It was the beginning of a new life for me.

It is clear that Dr Sam Lam of Dallas, Texas, shares not only the first name of the great Sam Ayres but also his passion for hair-transplant surgery. This was obvious in his earlier publications and again in this much larger textbook with his careful choice of authors and fine collection of color photographs. In keeping with modern trends, there are accompanying DVDs, in fact four of them, depicting many hours of meticulous surgery.

This new book compiled by Dr Lam is the work of 70 authors. Not only are all the aspects of modern hair-transplant surgery well covered but also his authors discuss other important topics, such as how to organize and run a hair-transplant practice, how to integrate it with other cosmetic work, and what to do when things do not go as well as planned.

A number of very experienced hair-transplant assistants write about their important role in the surgical office. Furthermore, he dares to cover the business aspects of running a successful hair-transplant office or chain of offices.

The book has up-to-date papers by many of the world experts as well as some authors new to me but obviously very experienced and well informed. New authors are the lifeblood of our profession; and, building on the experiences of those who have gone before, they will take us safely into the future.

Well done all of you.

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(Charles C Thomas, 1984)

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ISHRS Golden Follicle Award, 1997

ISHRS Manfred Lucas Award, 1999

ISHRS Pioneer in Education Award, 2003



# Preface

This journey began two years ago with a germ of an idea that the first two volumes of *Hair Transplant 360* were simply incomplete. As standalone entities, Volumes 1 and 2 offered a very comprehensive single-surgeon and single-assistant perspective on the practical, non-theoretical nature of how to perform hair transplants. However, after attending numerous meetings of the International Society of Hair Restoration Surgery (ISHRS) as well as other conferences, I decided to embark on the arduous mission of compiling a comprehensive hair book that stood uniquely in many ways so as to represent other perspectives not covered in the first two volumes.

Over the past few years since the publication of the first two volumes, I wanted to incorporate a multi-author perspective that I felt was as important as the voice of a single author. Nothing compares to the clarity of vision imparted by a single-author textbook, and that is why almost all of my previous books were written from a single perspective. But in the world of hair restoration, there are a lot of topics that I simply do not perform or I believe are performed better by a colleague of mine. This book fulfills that need within me to reach out on a global scale to pull in the world's most esteemed hair-transplant surgeons, assistants, consultants, staff, and business-thought leaders to compose a unique volume that stands apart from anything written before.

What this book strives to achieve I hope it has accomplished in some measure. Perhaps the easiest way to understand my vision for the book is to explain each section. Section I of the book, "Hair-Transplant Techniques 360" covers a wide-spectrum of techniques that complement and expand upon methods discussed in Volumes 1 and 2 of this series. Section II of the book, "Hair-Repair Techniques 360", covers many methods and strategies to improve bad results from previous hair work. Section III, "Business Considerations for the Hair-Transplant Surgeon 360", showcases the first ever in-depth review of practice-management issues that an early or seasoned hair surgeon should face. Section IV, "Ancillary Measures 360", covers a wealth of adjunctive techniques and advances in technology that are worthy of inclusion. Section V, "Difficult Cases 360" arose from my St Louis University course that I run every year and the value that I obtain each time I think through a difficult case; and I believe this can be valuable for a hair surgeon at any level of experience. As any honest hair surgeon will attest, the team is integral to the success of the transplant results. Accordingly, the last two Sections were edited and written by Assistant Staff. Section VI, "Surgical Assistant 360", focuses on the practical issues that confront assistants. Finally, Section VII, "Business Considerations for the Surgical Assistant 360" mirrors the practical information on professional development that is in the physician section. Whereas the first two volumes were geared toward the beginner to intermediate surgeon, this book will have appeal for surgeons at all levels. As an introduction to each section, I have summarized which chapters would be helpful for what level physician as a general guideline, which I hope you will find helpful.

I yearn with my deepest passion that this book will help you grow as a physician, surgeon, assistant, consultant, or staff. If there is a nugget or gem that you get out of it, please let me know and that will bring a smile to my face.

**Samuel M Lam**  
Dallas, Texas



# Acknowledgments

I would like to thank all of the many authors and editors who have been a constant presence in my life these past 2 years during the initial, middle, and late phases of development of this book project. Vance Elliott and Emina Karamanovski, to whom I have dedicated this book, were particularly instrumental as sounding boards and vetting agents for my crazy idea of undertaking this prodigious effort when we met together in Alaska at the International Society of Hair Restoration Surgery (ISHRS) conference then shortly thereafter in St Louis at my hair workshop. I appreciate the great patience with me of the 69 other contributors who have exchanged numerous emails with me, especially toward the tail end of this project, during which time I fervently implored and at times cajoled them for text revisions, better photographs, and video submissions. Thank you Emina for the final push to the finish line and for helping me to get this book to a standard that the readership deserves. Finally, I would like to thank Ms Chetna Malhotra Vohra (Senior Manager-Business Development) and Ms Saima Rashid (Development Editor) of M/s Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, India, and their production team: Mr Arun Sharma, Mr Shakiluzzaman, Mr Parveen Kumar, Mr Hoshank, Mr Prabhjeet Singh, and Mr Abhas Mukherjee. All of them worked tirelessly behind the scenes to make this project a reality.





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5. **Surgical Female Hairline Lowering** *Mario Marzola*
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10. **The No-Shave Technique for Follicular-Unit Extraction** *Marco N Barusco*
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12. **Strategies for Business Development of a Hair-Restoration Practice** *Michael S Ramsey*
13. **Expanding a Cosmetic Practice to include Hair Restoration** *Samuel M Lam*
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16. **Update to Hair Transplant 360, Volume 2**, *Emina Karamanovski* (*This video is divided into 4 parts: Video 1: Critical Thinking During Slivering, Video 2: Critical Thinking During Graft Dissection, Video 3: Critical Thinking During Graft Placement, Video 4: Slivering and Graft Dissection of African Hair*)

# A Few Words About Design

It is rather fitting that I am writing this section on board a flight from Copenhagen to Stockholm, as I believe Scandinavian design represents the pinnacle of aesthetic expression in the world. Yesterday, as I meandered through the cobblestoned streets of Copenhagen I was inspired to write this section upon reading the inscription in the window of a Danish Design studio: “Passionate Craftsmanship”. I believe that these two words describe this project in a succinct way. Without passion, no venture in life merits pursuing, as life is too short to engage in meaningless activity. The craftsmanship that is expressed in this book flourishes at two levels: first in the art and science that each author has expressed in his or her pioneering work in the field of hair restoration and second in the design of this book.

I would like to thank the publisher, Jaypee Brothers, for their generous latitude in accommodating my passionate appeal that the design of the book was an essential construct of the enterprise. Part of the challenge of the project for me was to ensure that this book felt part of the larger series of the first two volumes but at the same time reflected a more refined and evolved aesthetic. As each iPhone that is launched expresses the design legacy of the previous generation, it also imparts a new, sometimes radical, development that separates it from its past. For me, form does follow function. It adds meaning to life in subtle but profound ways. The choice of color, font, and layout has been rendered to enrich the learning experience and enjoyment when a reader interacts with this book. I endeavored that the book feel both as a single larger project but at the same time with the use of color and specialized divider pages also feel like 7 separate mini-books. I wanted the reader not to be lost in the larger scope of 80 chapters but feel the purpose and point of the chapter in the immediate context of its section. I hope that the design should enhance the experience of the reader in a delightful way that imparts both enlightenment and pleasure.

**Samuel M Lam**

# Reference Guide

*Throughout the book, there are abbreviations for key terms that are repeated. This short summary, which is by no means exhaustive, is intended as a useful reference for the reader who should require it. The Norwood Classification is also shown in detail as a reference for the reader.*

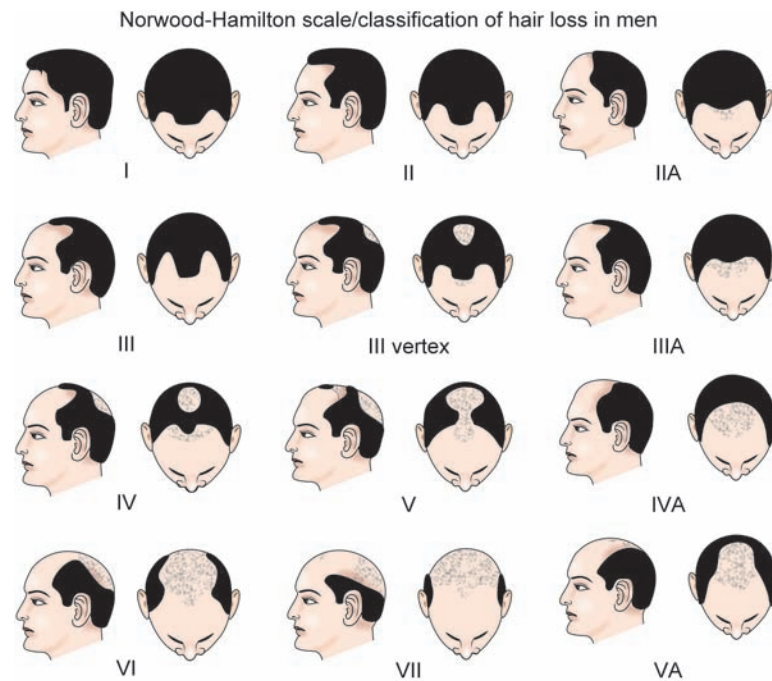
**AGA** stands for Androgenetic Alopecia, which is a shorthand for the process of male pattern baldness, as exemplified by the Norwood scale (see below).

**FU** stands for Follicular Unit, which describes how clusters of hairs grow on the scalp in natural bundles of 1 to 4 hairs. FU is also used as a shorthand in this book at times to describe a hair graft that consists of a follicular unit, also known as a follicular-unit graft (FUG).

**FUT** stands for Follicular-Unit Transplant, or Follicular-Unit Transplantation, and describes a hair-transplant procedure in which a linear strip harvest is performed from the donor area and in which the harvested strip is then dissected into individual follicular-unit grafts (FUG)s to be transplanted in the recipient sites created for them.

**FUE** stands for Follicular-Unit Extraction and describes an alternative method to donor harvesting than FUT in which FUGs are individually removed using a punch instrument by various specific methods including motorized versus manual, robotic versus non-robotic, and dull versus sharp.

**The Norwood or Norwood-Hamilton Scale** grades degrees of male pattern baldness. *Type I* shows minimal to no hair loss along the frontotemporal expanse. *Type II* exhibits both frontotemporal recession that does not extend farther than a line drawn through a coronal plane 2 cm anterior to the external auditory canal. *Type III* hair loss refers to frontotemporal recession that extends posterior to the coronal plane that lies 2 cm anterior to the external auditory canal. *Type III Vertex* indicates hair loss that primarily affects the vertex (or crown) region with or without accompanying frontotemporal recession that does not exceed that described in Type III. *Type IV* reveals greater frontotemporal loss than exhibited in Type III along with marked hair loss in the crown area but with a moderately dense swath of hair that bridges the intervening expanse between the two areas. *Type V* hair loss shows more extensive alopecia in both the frontotemporal and vertex areas with only a small bridge of dense hair between the two areas that remains. *Type VI* hair loss reveals a complete absence of any remaining hair that separates the two now confluent areas of alopecia. In addition, the hair loss is more extensive laterally and posteriorly. *Type VII* represents the most severe expression of male pattern baldness with only a narrow horseshoe configuration that remains along the posterior and lateral border of the hairline. Norwood also classified a variant of hair loss that afflicts approximately 3% of male patients with alopecia in which the frontotemporal recession marches progressively posteriorly in a uniform fashion without a central, anterior peninsula of hair. *Type IIA* refers to a condition in which the entire anterior hairline is receded uniformly across the forehead but does not extend any farther posteriorly than 2 cm anterior to the midcoronal line. *Type IIIA* reveals alopecia that extends to the midcoronal line. *Type IVA* signifies alopecia that has extended past the midcoronal line. Finally, *Type VA* indicates significant recession of the hairline into the vertex, and severer forms of this variant become indistinguishable with Types V and VI.





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