



Mark Bishara, MD
Specialty: **Plastics**
Location: **Texas**
Customer Since: **2012**

Dr. Mark Bishara is a member of the American College of Surgeons (ACS), the American Academy of Cosmetic Surgery (AACS), the Dallas County Medical Society, and the Texas Medical Association. He currently holds licenses to practice surgery in Massachusetts, New Jersey, Texas and Florida.

The ARTAS[®] Robotic System Is Transforming the Hair Restoration Industry – Physicians Are Leading the Way

Background

For decades, the primary form of hair transplantation surgery in the United States was strip surgery, also referred to as strip harvesting. This is an invasive surgery that requires excising a band of tissue from the back and/or sides of the scalp (the “strip”) followed by manually hand cutting the strip of tissue into individual follicular units under a microscope. An intact follicular unit consists of one to four hairs surrounded by a small amount of fatty tissue and epidermal tissue. These follicular units are then transplanted into the thinning or balding areas of the scalp. One of the biggest drawbacks of strip surgery is the linear scar it leaves.

Recently, a newer modality called Follicular Unit Extraction (FUE) has become an increasingly attractive alternative to strip surgery. Because surgically removing a strip of tissue from the back and/or sides of the scalp is not necessary for the FUE procedure, it promises patients less, if any, scarring, no need for sutures, less post-procedural pain and numbness and a shorter recovery time with fewer long-term side effects. The advantages of the FUE procedure are attractive to patients, but there are two distinct challenges facing the surgeons performing the procedure: 1) Since FUE extracts each follicular unit individually and manually, it takes longer than strip surgery and 2) Manual FUE requires a proficiency where physicians need months of training and frequent practice to develop the skills and precision for competency. The repetitive nature of extracting the follicular units, associated tedium, fatigue and time required to complete a procedure is a barrier for surgeons performing these cases. New advances in robotic-assisted hair transplantation help physicians overcome these constraints, yielding better clinical results for patients with no linear scar, virtually no downtime, a nearly undetectable donor area and fast recovery. Physician benefits include control, consistency, increased procedure volume capability and greater patient throughput.

The ARTAS[®] Robotic System

The ARTAS Robotic System (Restoration Robotics, Inc., San Jose, California) is the only FDA-cleared, physician-controlled, computer-assisted robotic technology for minimally invasive hair transplantation. The ARTAS Robotic System represents a major improvement in the field of hair restoration. Utilizing high-resolution digital mapping and tracking technology and a minimally invasive dissection system combined with an image-guided robotic



arm, the system locates and harvests the most viable and robust intact follicular units. Precision, consistency, reproducibility and harvest efficiency are all optimized, while operator fatigue and human error are virtually eliminated.

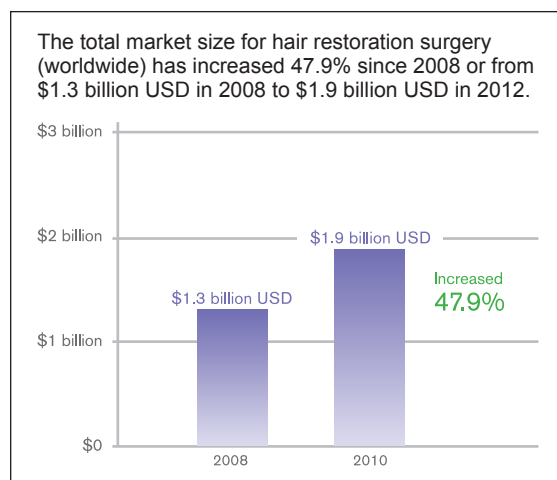
In comparison to the time and training required for manual hair restoration methods, the ARTAS Robotic System shortens the traditional learning curve. Additionally, in contrast to manual harvesting procedures, the ARTAS Robotic System can cut the duration of harvesting time in half. With the robotic precision offered by the ARTAS System, physicians are able to deliver consistent, reproducible patient outcomes.

The ARTAS Robotic System in Practice

The experience of Mark Bishara, M.D., owner of Bishara Cosmetic Surgery & Hair Restoration (Southlake, Texas and Mansfield, Texas), makes the economic case for robotic technology in hair transplantation. Dr. Bishara trained at New York Medical College and Morristown Memorial Hospital, and completed a fellowship appointment in Aesthetic and Reconstructive Plastic Surgery at Harvard Medical School. He also founded the American Plastic and Reconstructive Research Association, a think tank for novel concepts and clinical applications in plastic surgery. Dr. Bishara completed a hair transplantation fellowship with Dr. Mark DiStefano in Worcester, Massachusetts and continued his education with Dr. James Harris, Medical Director of Hair Sciences of Colorado and a pioneer of the FUE technique. Dr. Bishara no longer uses strip harvesting as his first choice for hair transplant surgery; instead he has shifted his practice to focus on ARTAS procedures exclusively. He purchased an ARTAS Robotic System for his Mansfield, Texas office in January 2012; in February 2013, he was the first surgeon to install a second system, this time in his Southlake, Texas location.

Results: Topline Growth, Practice Expansion, Return on Investment (ROI)

Dr. Bishara's solo practice employs eight staff members and a provider in a similar situation as Dr. Bishara likely generates between \$2.5 to \$3 million. Global demand for hair transplantation has been on the rise, according to the International Society of Hair Restoration Surgery's most recent census (2013), "The total market size for hair restoration surgery [worldwide] has increased 47.9% since 2008 or from \$1.3 billion USD in 2008 to \$1.9 billion USD in 2012."¹ As this overall demand increases, consumers will continue to seek out less painful, less invasive, and more personalized alternatives to hair transplantation (as they have done with surgeries such as all-custom laser eye correction). The impact for Dr. Bishara's practice is already clear: In his plastic surgery practice which offers a full range of plastic surgical options, ARTAS procedures now account for 70% of his overall business.



2013 ISHRS Census

¹ 2013 Practice Census Results. International Society of Hair Restoration Surgery, prepared by Relevant Research, Inc., Chicago, IL (July 2013)

Experienced in keeping detailed performance metrics in his practice, Dr. Bishara keeps a close eye on practice economics, procedural growth and their drivers. The ARTAS Robotic System has “totally changed the dynamic” according to Dr. Bishara and has been the cornerstone of his practice’s growth in term of revenue volume, market and geographic expansion. His practice grew from performing three to four hair transplantation cases per month prior to adding the ARTAS Robotic System to performing typically between twelve to fifteen cases per month post-adoption. He reports that 100% of hair transplant inquiries are in direct reference to the ARTAS procedure. This growth in procedure volume has further enhanced his confidence in the technology’s appeal and his investment decision. He expects the monthly volume to increase to about thirty ARTAS procedures by the end of 2013.

Due to the high patient demand for the ARTAS procedure in Dr. Bishara’s practice, he is opening a third and fourth location in the Dallas Fort Worth area as soon as possible. All of his offices are in a single metropolitan area, providing strong evidence of his need to plan for future growth as soon as possible. The rate of this growth is significantly more rapid relative to industry standards for plastic surgeons in the early stages of their private practice careers. Dr. Bishara calculates that with the adoption of the ARTAS procedure his practice growth has accelerated in about one-third of that time.

Differential Demographics: Attracting Affluent Clients

Dr. Bishara’s shift from more commodity-oriented, strip-based surgeries to value-added robotic procedures has caused a demographic shift to a more affluent client base which values the specialized procedure with its range of exceptional features and benefits. The impact of this shift includes a decrease in price sensitivity, the kind of powerful word-of-mouth that having an affluent patient base brings, and breaking out from geographic constraints. A considerable number of patients travel to Dr. Bishara from other cities in Texas and from out-of-state. This is proof that discerning, educated patients will go to significant lengths to seek out a more advanced hair transplant procedure from a trusted, experienced, reputable surgeon.

Education and Patient Outreach

Educating the consumer is a crucial piece of any technological innovation. Dr. Bishara has built a multi-faceted marketing campaign to build his practice. With the ARTAS Robotic System, Dr. Bishara appeals to a more sophisticated consumer, one who is interested in state-of-the-art results with fewer risks. These patients are willing to invest in a higher priced procedure which offers superior patient outcomes. Nearly 40% of his patients fly to Texas solely to have the procedure. He reaches these patients through a variety of strategic marketing approaches (see sidebar).

To attract local patients, he informs and educates existing patients about the procedure via extensive patient database mining, offers complimentary consultations, and relies on patient referrals and word of mouth.

In order to track and measure his marketing success and productivity, Dr. Bishara appointed a dedicated point person to handle all of his ARTAS procedure patients. This staff member is an ARTAS Robotic System expert and records the referral source to the practice. Dr. Bishara personally conducts all the ARTAS procedure consultations, but his

Nearly 40% of his patients fly to Texas solely to have the procedure. He reaches these patients through a variety of strategic marketing approaches:

- Google Adwords
- High quality print publications
- VIP treatment packages tailored to out of town patients
- Blogging
- Patient Education Seminars/Open Houses

dedicated point person handles all incoming ARTAS Robotic System phone calls. Dr. Bishara also conducts extensive field marketing reports and utilizes social media marketing reports to insure that information about the ARTAS Robotic System is communicated accurately and reaches the appropriate target audience to produce tangible, measurable results.

Conclusion

As evidenced by his practice growth and hair transplant surgery success, Dr. Bishara is confident in his investment in the ARTAS Robotic System. With a well-coordinated marketing plan supporting his ARTAS Robotic System hair transplantation procedural focus, Dr. Bishara has expanded his practice at a much quicker rate than is normally achievable in this segment of medicine. Dr. Bishara intends to perform at least 30 procedures per month in the short term and plans to leverage the scalability and that the ARTAS Robotic System provides to increase his hair transplant procedures in the near future.



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