

Robotic Hair Transplantation: Changing the Hair Restoration Industry

Abstract

The ARTAS[®] Robotic System gives physicians an opportunity to improve patient care, grow their practices and increase their practice revenue by offering patients the most advanced hair transplantation technology available. The ARTAS procedure has become the minimally invasive procedure of choice because it offers increased follicle unit extraction precision, speed and high quality hair grafts. Patients incur no linear scar or stitches as with other hair restoration options, and experience quicker healing and less downtime. The ARTAS Robotic System gives physicians the technical advantage, precision and control they need to provide the best possible results.

Physicians who have implemented the ARTAS Robotic System in their practices have seen significant increases in the number of patient consultations they receive and hair transplantations they perform. Increasingly, better educated, more discerning prospective patients are seeking advanced, sophisticated technology to insure the most natural outcome possible. Restoration Robotics provides ongoing clinical and marketing support to all its physician users. Physicians using the ARTAS Robotic System have been successful in finding new patients through their websites, using targeted local advertising campaigns and through word of mouth. Both patients and physician practices have benefited from the increasing demand for this new technology.

Introduction

Each year, millions of individuals seek treatment for hair loss. In 2012, global revenue for hair restoration procedures exceeded \$1.9 billion, and patient demand continues to grow.¹ More than ever before, prospective patients are actively seeking new options for a permanent, minimally-invasive, natural-looking hair restoration solution.

Until recently, the most common option for hair restoration involved strip surgery (FUT), whereby a strip of skin is surgically excised from the scalp and individual follicular units (hair grafts) are generated via bench-top dissection. An alternative method, manual follicular unit extraction (FUE) uses small dermal punches to extract single follicular units (hair grafts) from donor sites by hand and then implant them in the balding areas of the scalp. Manual FUE requires extensive training and is a laborious, time-consuming, and fatiguing procedure.

The ARTAS Robotic System is the only FDA-cleared, physician controlled, computer assisted robotic technology for minimally invasive hair transplantation. The ARTAS Robotic System utilizes advanced digital imagery to map and analyze hair in its natural scalp groupings to extract the most viable and robust intact follicular units.

The quality of grafts obtained using the ARTAS Robotic System is a major benefit, exclusive to the ARTAS Robotic System, and represents a significant advancement compared to other available methods.

Over the past year, a number of U.S. and International physicians have incorporated the ARTAS Robotic System into their practices. Using information obtained from detailed interviews with five of these early adopters, this paper summarizes how the ARTAS Robotic System has helped these clinicians provide better care for their patients and, in turn, helped their practices grow.

Why Physicians Chose the ARTAS Robotic System

Transitioning to the ARTAS Robotic System is a straightforward process, with great rewards. The physicians interviewed for this paper work in a range of settings - from solo practitioner clinics to multi-physician / multi-site specialty centers. All had prior hair transplant experience before adopting the ARTAS procedure, and all were able to successfully integrate the ARTAS Robotic System into their practices within two to three months. Dr. Young Hong states, "My staff has responded very well to the ARTAS System, and they are quite comfortable working with the robot. The learning curve was much better than I had anticipated."

The ARTAS Robotic System lets physicians take hair restoration technology to an entirely new level, and transforms patients' hair restoration experience. Using advanced imaging technology and robotics, the ARTAS Robotic System can routinely extract over 500-750 follicular units per hour.² The ARTAS Robotic System eliminates the need for sutures or staples and delivers permanent, natural-looking results with minimal scarring, short recovery time, and high patient

satisfaction. Following the ARTAS procedure, patients can confidently wear their hair in any style, long or short, and not concern themselves with hiding a linear scar from strip surgery. Additionally, built-in safeguards in the ARTAS Robotic System preserve the natural look of the donor area.

When adopting a new technology, the cost-benefit of investing in additional capabilities is a big consideration. The ARTAS Robotic System saves practitioners' time by letting them transition from manual FUE or less efficient, older approaches. Based on input from one physician interviewed, it takes approximately five to seven hours for a fully trained physician and his team to complete a hair transplantation procedure with the ARTAS Robotic System. This is a unique differentiating benefit for physicians. One physician shared, "I was hoping to do more FUEs, but was limited by less-than-perfect techniques. The ARTAS robotic technique has helped a lot."

According to Dr. Robert Bernstein, "The ARTAS Robotic System delivers greater accuracy and better quality grafts, and decreases inter-patient variability in results." This translates into reproducible, predictable outcomes from patient to patient and higher quality patient care. "The ARTAS procedure allows surgeons to focus on critical aspects of the surgery, such as how technicians are handling the grafts, recipient site-making and patient comfort," says Dr. Mark Bishara.

Restoration Robotics also provides ARTAS Robotic System physicians with substantial clinical training, marketing tools, and assistance to help them grow their practice. Dr. Hong shares, "The ARTAS System comes with great support. Everyone on the Restoration Robotics team has been very helpful and professional. Making the switch to the ARTAS System is one of the best decisions I've made in the last ten years."

Patient Awareness

Another key concern for most physicians adding a new technology or procedure is attracting new patients. Patients researching hair transplant procedures are looking for the most effective, state-of-the-art approach available. Physicians' marketing campaigns have varied in intensity, but all experienced an increase in their patient volume after introducing the ARTAS Robotic System.

Physicians primarily market the ARTAS Robotic System via their web sites - for example, using patient testimonials and Frequently Asked Questions (FAQs) regarding the technology, as well as targeted search engine optimization (SEO). Dr. Bishara reports, "Our web site brings in hundreds of leads." Some physicians have had great success with blogging or starting newsletters to reach out to patients. All physicians contact their patients regularly using targeted email

blasts – emails focused on the ARTAS Robotic System's benefits are an excellent way to recruit new or existing patients seeking hair transplantation.

Other physicians have launched marketing and public relations campaigns, including advertisements in local magazines and newspapers. Physicians with offices near airports have reported success by advertising in airline magazines.

However, word of mouth referral may be the most substantial driver of new business. Increasingly, patients are doing their own research and seeking out physicians who perform the ARTAS procedure. Dr. James Harris mentions, "More and more patients are visiting the ARTAS web site to learn which physicians provide it; then they locate me."

The ARTAS Robotic System also provides physicians with an opportunity to cross-market and generate word of mouth excitement. Physicians reported receiving referrals to patients who previously investigated hair restoration, but dismissed the idea after learning the details of strip harvesting procedures.

Physicians indicate that patients' response to learning about the ARTAS procedure is very consistent: They are intrigued by the technology, comfortable with the procedure as it is explained to them, and excited by the procedure's minimally invasive nature, no linear scarring, no stitches, and natural-looking results. Patients report satisfaction with how well the donor area heals and how their new hair looks.

All physicians reported that their consultation rates were up, with one physician noting that he had seen an "explosive" increase in the past year, with numbers growing on a monthly basis. One multi-site center eventually had to hire a dedicated marketing expert to help with the large influx of new consumer calls.

The Economic Impact of the ARTAS Robotic System on Physician Practices

After acquiring the ARTAS Robotic System, all of the physicians interviewed hoped that their number of hair restoration cases would increase, and they were not disappointed. Physicians who routinely collected lead generation data for their practices reported increased rates of monthly consultations and patient inquiries ranging from 20% to 25% in the year following their introduction of the ARTAS Robotic System.

One physician discloses, the ARTAS Robotic System "totally changed the dynamic" of his practice. This doctor has gone from performing one to two hair transplantation cases per month to twelve to fifteen; within three months, he anticipated performing an average of thirty-two cases per month (Figure 1). To handle this increased case volume, he has added several new staff members. Hair

restoration now represents approximately 70% of his practice, and he is another physician working in solo practice was able to increase his caseload from one patient per day to two patients per day. Because of strong demand, he was able to set appointments further in advance, making for a more predictable and solid caseload. Once this was in place, he transitioned from working five days a week to four days; his gross annual income is now approximately 50% higher since he introduced the ARTAS procedure to his patients.

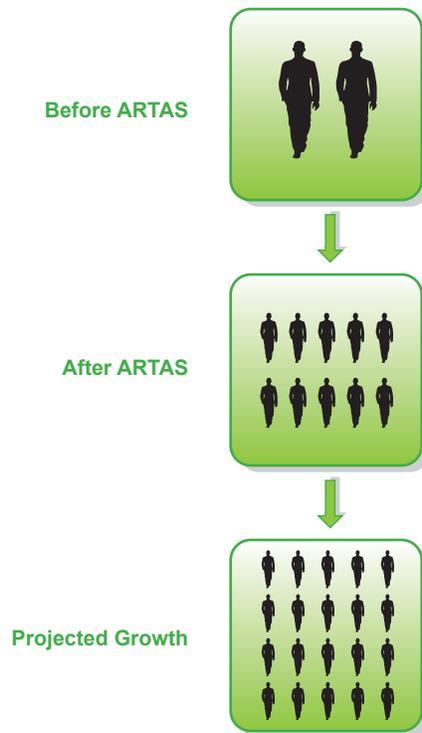


Figure 1. One Physicians' Monthly Growth In FUE Cases with the ARTAS Robotic System

In terms of overall income, physicians indicated that their revenue increase since introducing the ARTAS Robotic System has ranged from 20% to 50% (Figure 2). Most physicians increased their hair restoration pricing when they started offering the ARTAS procedure, and charged a somewhat higher or even premium price point for the ARTAS procedure. Price has not been a major barrier for most patients. "I am providing both robotic and low-tech FUE procedures. As it turns out, nine out of ten patients prefer the ARTAS robotic procedure, even though the price is a little higher" Dr. Hong said. Patients find the ARTAS Robotic System appealing, and the opportunity for premium pricing with ARTAS procedures helps physicians increase revenue. This strong patient response to the ARTAS Robotic System signals the potential for substantial practice growth.

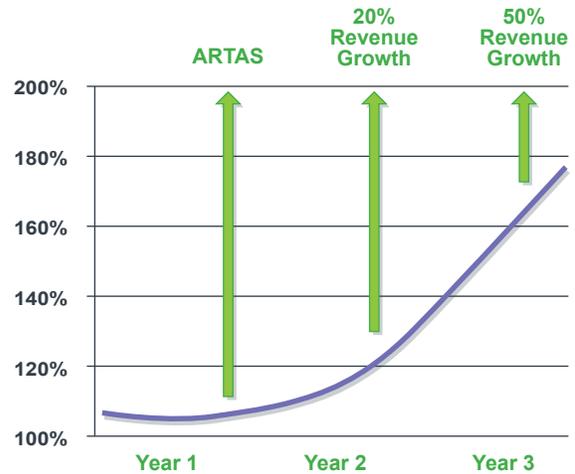


Figure 2. Visualization of Physician Revenue Increases Following the ARTAS Robotic System Introduction

Restoration Robotics Customer Support

All physicians emphasized that the excellent assistance they received from Restoration Robotics was a key component of their success. Dr. Glenn Charles was particularly impressed with the multi-faceted service he received when implementing his ARTAS Robotic System. "Restoration Robotics' customer service is unmatched. I've never seen anything like it. Buying expensive equipment is always risky - you worry about customer support. But Restoration Robotics is on top of every detail; it is really very impressive. I've never come across a company run this well in the medical device industry."

Conclusion

Physicians using the ARTAS Robotic System are excited for the ongoing growth of their practices and for the future of the hair restoration industry in general. In the coming year, more patients than ever before will seek and receive hair transplant procedures using the ARTAS Robotic System.

The ARTAS Robotic System gives physicians the precision and control they need to provide reproducible, reliable, high-quality follicular transplant results. Physicians who have adopted the ARTAS Robotic System report that patients are very pleased with the cosmetic outcomes, and some have referred friends for the procedure.

Patients are responding to the ARTAS Robotic System because they want better hair transplant options. The ARTAS Robotic System offers them an opportunity for an advanced hair transplantation procedure with no linear scar or stitches and permanent, natural results. "There are so many benefits for patients with the ARTAS System," says Dr. Bishara. "It is minimally

invasive, involves far less pain and discomfort, requires little to no downtime, and there is virtually no scarring in the donor area. Overall, my patients are extremely happy with their results.”

Physicians who already use the ARTAS Robotic System have strong confidence in this approach, and have experienced bottom-line growth as well as improved clinical practice efficiency. Sometimes,

practice expansion has been necessary just to accommodate new patients specifically seeking robotic hair transplants. In Dr. Harris’ opinion, “At some point, patients are not going to want strip procedures anymore. ARTAS gives very good and consistent results with a very technically demanding procedure, and more and more consumers are requesting it. If patients are demanding the ARTAS procedure and the physicians’ don’t offer it, they will be left behind.”

Physicians Interviewed For This Paper:

- Robert M. Bernstein, MD, FAAD. Bernstein Medical - Center for Hair Restoration. New York, NY
- Mark Bishara, MD. Bishara Cosmetic Surgery & Restoration. Fort Worth, TX.
- Glenn Charles, DO. Charles Medical Group. Boca Raton, FL.
- James A. Harris, MD, FACS. Hair Sciences Center of Colorado. Greenwood Village, CO.
- Young Hong, MD. Visual Hair Clinic. Los Angeles, CA.

References:

1. International Society of Hair Restoration Surgery. ISHRS 2013 Practice Census Results. Available online at: http://ishrs.org/sites/default/files/users/user3/report_2013_practice_census-final.pdf. Accessed on August 6, 2013.
2. Winnington P. Robotic surgery: with new technology come new opportunities? Pract Dermatology. August 2012:38-39. Available online at: <http://bmctoday.net/practicaldermatology/2012/08/article.asp?f=robotic-surgery-with-new-technology-come-new-opportunities>. Accessed July 25, 2013.
3. Rassman WR, Bernstein RM, McClellan R, Jones R, et al. Follicular Unit Extraction: Minimally invasive surgery for hair transplantation. Dermatol Surg 2002; 28(8): 720-7.
4. Harris JA. The SAFE System: New Instrumentation and Methodology to Improve Follicular Unit Extraction (FUE). Hair Transplant Forum Intl. 2004; 14(5): 157, 163-4.
5. Bernstein RM. Integrating Robotic FUE into a hair transplant practice. Hair Transplant Forum Intl. 2012; 22(6): 228-229.



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