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ARTAS Robotic System Transforms

Hair Restoration for Physicians and Patients

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ARTAS Robotic System

By Desiree Ifft, Contributing Editor

As an FDA cleared, physician-controlled, computer-assisted technology for minimally invasive hair transplantation, the ARTAS Robotic System from Restoration Robotics (San Jose, Calif.) is a significant advancement in its field. Utilizing proprietary digital mapping and tracking technology, a minimally invasive dissection punch and an image-guided robotic arm, this system harvests follicular units from the patient's donor area, surpassing manual follicular unit extraction (FUE) in four crucial areas: precision, control, reproducibility and efficiency. In addition, it eliminates a major drawback associated with hand-held tools and automated hair restoration systems – physician fatigue.

The ARTAS Robotic System opens the field of surgical hair restoration to physicians willing to commit to mastering the art and science behind this in-demand service. By identifying and mapping the location of thousands of follicular units to be harvested in one session, and targeting them for dissection at the appropriate angle of approach, this system maximizes the likelihood of high-quality, transplantation-ready grafts and minimizes the transection rate. With the ARTAS System, the surgeon can adjust dissection settings, including puncture and coring depth, angle and speed, all without interrupting the procedure.

Providing a permanent, natural looking solution for hair loss that is safe and efficient, the ARTAS Robotic System transforms both the surgeon's and patient's experience. Unlike the strip harvesting approach to hair transplantation, the ARTAS procedure involves little or no discomfort. Patients can return to all of their normal activities in one to two days. Also, since there is no linear incision and resulting scar, they can continue to wear their hair in any length or style. Intelligent algorithms ensure the donor area maintains a natural appearance.

Mark Bishara, M.D., of Bishara Cosmetic Surgery & Hair Restoration in Mansfield, Texas, has used the ARTAS Robotic System for nearly 100 patients in a little over a year. In his experience it alleviates the repeated stress and strain on the surgeon's eyes and lumbar spine that are typically associated with manual FUE. "By eliminating operator fatigue, the potential for human error is reduced," he pointed out. "The robot simply does not tire."

Samuel Lam, M.D., of Lam Facial Plastic Surgery Center in Plano, Texas, agreed, noting that avoiding transection of the hair follicles is key to successful hair transplant. "Fatigue and error are major contributors to transection, but the precision and accuracy of the ARTAS are unrivaled in terms of the human hand," he said.

According to Gregory A. Turowski, M.D., Ph.D., F.A.C.S., medical director of New Horizons Center for Cosmetic Surgery and Medical Spa in Chicago, Ill., the ARTAS Robotic System is much more efficient than even an experienced surgeon using automated FUE. Experienced in using both automated and robotic FUE, he and his team prefer the robotic ARTAS System, which allows them to perform on average over 500 FUEs in an hour.

In Dr. Bishara's opinion, "Comparing automated FUE to ARTAS is like comparing apples and oranges. The automated FUE device is a hand tool guided by the physician who must rely only on his or her eyes to determine the appropriate angles of the individual hairs to be harvested. Conversely, ARTAS gives us

real-time digital targeting down to the micron level and consistently harvests the hairs with its robotic arm to deliver healthy grafts every time."

Between 2008 and 2010 the worldwide market for hair restoration increased by 47.9%.* With this rapid growth, the ARTAS System is well-positioned to further expand the market. "Even patients who are not only thin shafted, but sparse in the universal donor area are now candidates for ARTAS Robotic Hair Transplantation," Dr. Bishara said. "In addition, now that a robot is used in the provision of this service, appropriately selected patients will enjoy a more widespread availability of hair restoration procedures that will not commit them to a linear scar, which for many of today's patients is considered aesthetically unacceptable."

Dr. Lam believes the introduction of the ARTAS System is helping to raise awareness of the latest solutions for hair loss that are available to patients. "The company is running direct-to-consumer ads, and a buzz has been created in the media," he said.

While purchasing the ARTAS System is a substantial investment for a practice, and the procedure cost for patients is considered relatively high, the market seems accepting. Today's patients are savvy, Dr. Turowski said. "They tend to research their options thoroughly and are willing to pay for solutions that provide true benefits and value."

Dr. Bishara agreed and compared it to other luxury items; "people are willing to purchase high-priced televisions if they want a high-definition experience, and televisions are far less permanent than a hair restoration procedure."

In Dr. Lam's practice, being able to offer the ARTAS procedure has expanded the hair restoration demographic to patients who would not have considered transplantation surgery otherwise. "Our business has tripled because of this," he said. "You have to be sure you will have a certain number of cases to justify bringing in the system, but the opportunity is there for someone who either doesn't perform hair transplantation at this time or wants to upgrade to a more sophisticated way of doing it."

For Dr. Turowski, his practice has achieved a favorable return on its ARTAS investment. "It helps to have a thriving practice to support it initially, including the necessary systems, such as marketing, personnel, etc., already in place," he stated. He views the ARTAS System as a technology that is moving both his practice and the field of hair restoration forward. "Poll results presented at a recent meeting of the *International Society of Hair Restoration Surgery* showed that a minority of transplantation procedures are currently FUE, but that is changing rapidly. I believe we are currently in a transitional period, where minimally invasive hair restoration procedures such as the ARTAS Robotic Transplant will explode," he shared. "This will be much like when there was resistance to new ways of performing liposuction, but eventually the older methods disappeared."

References:

2011 Practice Census Results. International Society of Hair Restoration Surgery. Available from: www.ishrs.org/sites/default/files/users/user3/FinalPracticeCensusReport7_11_11.pdf. Accessed March 5, 2013.

Donor area before Tx

Donor area after ARTAS Robotic Tx

Photos courtesy of Restoration Robotics

Before Tx

After 900 grafts with ARTAS Robotic Tx

Photos courtesy of Restoration Robotics