

NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES)

Building on an ongoing, collaborative relationship between the [University of Texas Southwestern Medical Center at Dallas](#) and the [University of Texas at Arlington](#), we have formed a NOTES research group consisting of Laparoscopic Surgeons with expertise in Robotic and Gastrointestinal surgery, Urology, and Gynecology, Therapeutic Endoscopists, and Engineers experienced in robotic surgical instrumentation and imaging system design, development, rapid prototyping and evaluation. The Minimally Invasive Surgery and Urology fellows, as well as other key research personnel, are included in this team approach.



[Dr. Jeffrey Cadeddu](#) (Department of Urology, UT Southwestern Medical Center) originally conceived the idea of the Magnetic Anchoring and Guidance System (MAGS) and formed this collaboration in 2001.

The lead engineering expertise for the MAGS platform has been developed by [Raul Fernandez, PhD](#) and [Richard Bergs, MS](#) at the Texas Manufacturing and Assistance Center, Automation and [Robotics Research Institute](#), UT Arlington.

[Dr. Daniel Scott](#) (Department of Surgery, UT Southwestern Medical Center) initiated the NOTES Research Team in 2005, after studying with Dr. Paul Swain in London, as part of his [Society for Surgery of the Alimentary Tract \(SSAT\) Traveling Fellowship](#). [Dr. Shou Jiang Tang](#) (Department of Gastroenterology, UT Southwestern Medical Center) joined the group and has provided invaluable expertise as an Advanced Therapeutic Endoscopist.

Recent Presentations

1. Scott DJ, Tang SJ, Bergs R, Fernandez R. Magnetically-Anchored Instruments for Transgastric Endoscopic Surgery, Presented at the SAGES Emerging Technologies Session, SAGES Annual Meeting, Dallas, TX April 29, 2006. (Podium)
2. Scott DJ, Tang SJ, Fernandez R, Bergs R, Cadeddu JA. Transgastric, transcolonic, and transvaginal cholecystectomy using magnetically anchored instruments. Society of American Gastrointestinal and Endoscopic Surgeons, Las Vegas, NV, Apr. 19 – 22, 2007. (Poster)
3. Scott DJ, Tang SJ, Fernandez R, Bergs R, Goova MT, Zeltser I, Cadeddu JA. Completely transvaginal cholecystectomy using magnetically anchored instruments. Society of American Gastrointestinal and Endoscopic Surgeons, Las Vegas, NV, Apr. 20, 2007. (Podium)
4. Scott DJ, Tang SJ, Goova MT, Bergs R, Hogg DC, Kehdy FJ, Cadeddu JA, Fernandez R. Short-term survival outcomes following transvaginal NOTES cholecystectomy using magnetically anchored instruments. American Society for Gastrointestinal Endoscopy, Washington, DC, May 21, 2007. (Podium)
5. Scott DJ, Goova MT, Tang SJ, Bergs R, Fernandez R, Cadeddu JA. Transvaginal NOTES cholecystectomy using magnetically anchored instruments. American Society for Gastrointestinal Endoscopy, Washington, DC, May 21, 2007.

Selected Publications

1. Gettman, MT, Lotan Y, Napper CA, Cadeddu JA. Transvaginal laparoscopic nephrectomy: development and feasibility in the porcine model. *J Urology* 2002;59:446-450.
2. Cadeddu, JA, Eberhart R, Fernandez R, Bergs R. Transabdominal Magnetic Anchoring System for Trocar-less Laparoscopic Surgery. *J Urology* 2002;167:4 (abstract).
3. Fernandez R, Bergs, R., Eberhart, R., Baker, L., and Cadeddu, JA., Development of a Transabdominal Anchoring System for Trocar-Less Laparoscopic Surgery, *Advances in Bioengineering - ASME International Mechanical Engineering Congress & Exposition*, Washington DC, November 2003, BED Vol. 55, pp 157-158.

4. Park S, Bergs R, Eberhart R, Baker L, Fernandez R, Cadeddu JA. Trocarless laparoscopy: magnetic positioning of intra-abdominal camera and retractor. *Ann Surg* 2007;245:379-384.
5. Zeltser IS, Bergs R, Fernandez R, Baker L, Eberhart R, Cadeddu JA. Single trocar laparoscopic nephrectomy utilizing magnetic anchoring and guidance system in the porcine model. *J Urol* 2007; 178, 288-291.
6. Scott DJ, Tang S, Fernandez R, Bergs R, Goova MT, Zeltser I, Kehdy FJ, Cadeddu JA. Completely transvaginal NOTES cholecystectomy using magnetically anchored instruments. *Surg Endosc* (online first: DOI 10.1007/s00464-007-9498-z).
7. Scott DJ, Tang S, Goova MT, Bergs R, Hogg DC, Kehdy FJ, Cadeddu JA, Fernandez R. Short-Term survival outcomes following transvaginal NOTES cholecystectomy using magnetically anchored instruments. *Gastrointest Endosc*, 65: AB109, 2007 (abstract).