



MIRUS minimally invasive & ROBOTIC UROLOGIC SURGERY

Ayal M. Kaynan, MD, FACS
Minimally Invasive & Robotic Urologic Surgery

Updated: Jan 19, 2009

Employment & Education

Director, Minimally Invasive & Robotic Surgery
Morristown Memorial Hospital, Morristown, NJ
Mar. 2006 – present

Attending & Partner
Adult & Pediatric Urology Group, P.A., Morristown, NJ
Aug. 1, 2001 – present

Laparoscopic Urologic Oncology, Honorary Fellow
Hopital Henri Mondor, Creteil, France
L'Institut Mutualiste Montsouris, Paris, France
Clinic Jean d'Arc, Lyons, France
June 1 – 30, 2004

Spinal Cord Injury, Endourology & Laparoscopic Surgery, Fellow
Stanford University Medical Center, Stanford, CA
Veterans Affairs Palo Alto Health Care System, Palo Alto, CA
July 1, 2000 – June 30, 2001

Urology, Resident
Montefiore Medical Center, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY
July 1, 1996 – June 30, 2000

Chief Resident (PGY6), July 1, 1999 – June 30, 2000
Administrative Chief, 1997-1999
Delegate of the Committee for Interns and Residents, Jacobi Medical Center, 1997
Peer Representative for the Committee of Graduate Medical Education, MMC, 1999-2000
Coordinator, Male Urologic Exam, Physical Diagnosis Course for Medical School, 2000

Subspecialty Concentrations:

Urologic Oncology: Memorial Sloan Kettering Cancer Center, NY
Pediatric Urology: The Hospital for Sick Children, Toronto
Endourology
Erectile Dysfunction
Renal Transplantation
Female Urology
Infertility
Trauma

General Surgery, Consult Resident (PGY2), MMC, Albert Einstein College of Medicine, Bronx, NY
July 1, 1995 – June 30, 1996

General Surgery, Intern (PGY1), Mayo Clinic, Rochester, MN
June 25, 1994 – June 30, 1995

MD, Duke University School of Medicine, Durham, NC
May 1994

BA, University of Pennsylvania, College of Arts and Sciences, Philadelphia, PA
Cum Laude; Dean's List (academic year 1987-88)
Major: Economics; Minor: Chemistry
May 1990

Hospital Privileges

Attending, Department of Surgery / Section of Urology
Secretary of the Section of Urology, 2007 – present
Morristown Memorial Hospital, Morristown, NJ

Attending, Department of Surgery / Division of Urology
Saint Barnabas Medical Center, Livingston, NJ

Attending, Department of Surgery / Division of Urology
Overlook Hospital, Summit, NJ

Attending, Department of Surgery / Division of Urology
Riverview Medical Center, Red Bank, NJ

Attending, Department of Surgery / Division of Urology
Ambulatory Surgery Center at Morristown, Morristown, NJ

Attending, The Stone Center of New Jersey
Newark, NJ

Visiting Attending, Department of Urology
Stony Brook University Hospital, Stony Brook, NY

Certification

Board-Certified, American Board of Urology (Feb 28, 2003)

Licensure

New Jersey State (#MA72413)
New York State (#206617-1) – inactive
California State (#A71255) – inactive

Professional Societies

Minimally Invasive Robotic Association, 2005
American College of Surgeons, Fellow, 2004
Morris County Medical Society, 2001
Society of American Gastrointestinal Endoscopic Surgeons, 2001
Society of Laparoendoscopic Surgeons, 1999
Endourological Society, 1999
American Urology Association, 1996
American Medical Association, 1990

Committee Functions at Morristown Memorial Hospital

Minimally Invasive & Robotic Surgery Committee, Chair
Operating Room Committee
Operating Room Cost & New Technology Committee
Performance Improvement Committee
Atlantic Health Physician Quality Committee
Peter B. Doherty Urologic Cancer Center Operations Committee

Regional Proctor

Laparoscopic Urologic Surgery: Ethicon EndoSurgery, Inc.
daVinci Robotic Urologic Surgery: Intuitive Surgical, Inc.

Laboratory Research

Howard Hughes Medical Institute, Dr. Barry R. Bloom, Department of Microbiology and Immunology. Forcheimer Science Laboratories, Albert Einstein College of Medicine of Yeshiva University. Used cultures and luminometry to quantify adhesion of BCG to bladder cancer epithelial cells.

Duke Eye Center, Dr. Glenn J. Jaffe, Department of Ophthalmology, Duke University. Used tissue cultures to study the effects of saporin toxin on retinal pigment epithelial cell proliferation.

Orthopaedic Laboratories, Dr. L. Scott Levin, Department of Surgery, Duke University. Developed an organ bath system for measuring the force of contraction of plantar arteries in the rat; techniques in microsurgery were used. A canine model for open tibial fractures was studied.

Hospital of the University of Pennsylvania, Dr. V. Paul Addonizio, Department of Surgery, University of Pennsylvania. Independent study: Platelet physiology and its analytical assessment – *the effects of heparin on human platelets*.

Clinical Investigations

Quality of Life Outcomes Prostate Cancer Database, Ayal M. Kaynan, MD, principal investigator, Peter B. Doherty Men's Cancer Center at the Carol G. Simon Cancer Center, Morristown Memorial Hospital.

Publications

Peer-Reviewed Articles

1. "Thermostasis during laparoscopic urologic surgery." **Ayal M. Kaynan** and Howard N. Winfield *Journal of Endourology*, Volume 16, Number 7, pp.465-470, 2002.
2. "Survey of urological laparoscopic practices in the state of California." **Ayal M. Kaynan**, Keith L. Lee and Howard N. Winfield. *Journal of Urology*, Volume 167, June, 2002.
3. "Priapism of Ambiguous Classification in a Sickle Cell Patient: A Case Report." S Hoffman, **AM Kaynan**, A Melman. *International Journal of Impotence Research*, Volume 12, Number 1, pp. 59-63, 2000.
4. "Air on Radiography of Perineal Necrotizing Fasciitis Indicates Testis Involvement." Jamil Rehman, **Ayal Kaynan**, David Samadi, Jonathan Fleischmann. *Journal of Urology*, Volume 162, Number 6, pp. 2101, 1999.
5. "Intraoperative Electrical Stimulation of Cavernosal Nerves with Monitoring of Intracorporeal Pressure in Patients Undergoing Nerve Sparing Radical Prostatectomy." Rehman J, Christ GJ, **Kaynan A**, Samadi, D, and Fleischmann J. (Abstract presented at the American Urology Association Annual Meeting, New Orleans, April 1997). *BJU International*, Volume 84, Number 3, pp. 305-310, 1999.

6. "Use of Spiral Computed Tomography In Lieu of Angiography for the Preoperative Assessment of Living Renal Donors." **Kaynan AM**, Rozenblit AM, Figueroa K, Hoffman S, Cynamon J, Karwa GL, Tellis VA, Lerner SE. (Abstract presented at the Ferdinand C. Valentine Urology Residents Essay Competition, New York, March 1997). *Journal of Urology*, Volume 161, Number 6, pp. 1769-1775, 1999
7. "Modification of Sexual Behavior of Long-Evans Male Rats by Drugs Acting on the 5-HT_{1a} Receptor." Jamil Rehman, **Ayal Kaynan**, George Christ, Mira Valcic, Saul Maayani, Arnold Melman. *Brain Research*, Volume 821, Number 2, pp. 414-425, 1999.

Invitational Articles& Book Chapters (Edited)

1. "Hemostasis." **Ayal M. Kaynan**, *In Urologic Robotic Surgery*, Ed. J.A. Stock, M.P. Esposito and V.J. Lanteri. Humana Press, Totowa, NJ, 2008, pp. 185-198.
2. "Neurogenic Bladder." **Ayal M. Kaynan** and Inder Perakash. *In Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain and Rehabilitation*, 2nd Edition. Ed. W.R. Frontera, J.K. Silver and T.D. Rizzo. Saunders (Elsevier), Philadelphia, 2008, pp. 733-743.
3. "Physiologic implications of CO₂ pneumoperitoneum and minimally invasive methods: renal aspects." **Ayal M. Kaynan** and Sherry M. Wren. *SAGES Manual of Pre and Post-Op Care of the Laparoscopic Patient*.
4. "A Transperitoneal Laparoscopic Approach to Endourology." **Ayal M. Kaynan** and Howard N. Winfield. *Current Urology Reports*, April, 2001.
5. "Laparoscopic Ureteral Surgery." **Ayal M. Kaynan**, Jamil Rehman, David M. Hoenig. *Seminars in Laparoscopic Surgery*, Volume 7, Number 3, pp. 166-175, 2000.
6. "The Role for Salvage Surgery in Radio-Recurrent / Resistant Carcinoma of the Prostate." Seth E. Lerner, Christopher L. Amling, **Ayal M. Kaynan**, Michael L. Blute, Horst Zincke. *AUA Update Series*, Volume 18, Lesson 8, 1999.
7. "Anatomic and Technical Considerations for Tumor Resection of the Horseshoe Kidney." **Ayal M. Kaynan**, MD, Seth E. Lerner, MD, John S. Train, MD, Horst Zincke, MD, PhD. *Atlas of the Urologic Clinics of North America*, Volume 6, Number 1, pp. 73-90, April 1998.
8. "Medical therapy for prevention of renal stones." **Ayal M. Kaynan** and Howard N. Winfield. www.Yourdoctor.com
9. "Dissolution therapy for renal stones." **Ayal M. Kaynan** and Howard N. Winfield. www.Yourdoctor.com
10. "Laparoscopic management of renal tumors." **Ayal M. Kaynan** and Howard N. Winfield. www.vistamedical.com
11. "Physiologic implications in laparoscopy." **Ayal M. Kaynan** and Howard N. Winfield. www.vistamedical.com

Presentations

1. "Robotic Prostatectomy", moderator for live presentation of Robotic-Assisted Laparoscopic Nerve-Sparing Radical Prostatectomy at Morristown Memorial Hospital, February 2, 2007. <http://www.or-live.com/morristown/1612/event/webcast.cfm?>

2. "Intraoperative thermostasis during laparoscopic urologic surgery." **Ayal M. Kaynan** and Howard N. Winfield. American Urological Association Annual Meeting (poster session), Anaheim, California, June 2001.
3. "Laparoscopic partial cystectomy for pheochromocytoma of the bladder." Paul M. Kozlowski, **Ayal M. Kaynan**, Frederick Mihm and Howard N. Winfield. 18th Annual World Congress on Endourology & Shockwave (poster session), Sao Paulo, Brazil, September 2000.
4. "Laparoscopic repair of ventral and parastomal hernias following major surgery." Paul M. Kozlowski, **Ayal M. Kaynan**, Eric Wallen and Howard N. Winfield. 18th Annual World Congress on Endourology & Shockwave (poster session), Sao Paulo, Brazil, September 2000.
5. "The use of bone anchors and cadaveric fascia vs. no bone anchors and native fascia in the management of stress urinary incontinence." Chief Residents' Debate, New York Section of the AUA, NYC, February 2000.

Abstracts

1. "Lose a screw?" Ayal M. Kaynan, Joseph Steinberg, and Chris Green. Third Annual World Robotic Symposium, April 2008.
2. "Comparison of the da VinciTM robotic surgical system to standard laparoscopic technique in porcine pyeloplasty: an examination of anastomotic efficiency." **Ayal M. Kaynan**, Yamil Saenz, Harcharan Gill, and Howard N. Winfield. American Urological Association Annual Meeting (poster session), Orlando, Florida, May 2002.
3. "Laparoscopic Enucleation of Renal Tumors." **Ayal M. Kaynan**, Simon McRae, and Howard N. Winfield (Video Abstract, Presented at World Congress of Endourology annual meeting, Bangkok, Thailand, November 2001 – Journal of Endourology, Volume 15, Supplement 1: A134, V7-P2, November, 2001).
4. "In Vitro Use of the Luciferase Gene to Quantify BCG by Luminescence." **Kaynan AM**, Maitland M, Bardarov S, Melman A, Bloom BR. Ferdinand C. Valentine Urology Residents Essay Competition, New York, March 1998.
5. "Renal Cell Carcinoma (RCC) with IVC Thrombus (IVCT): An Analysis of 77 Patients." **Ayal Kaynan**, Thomas M. Seay, Seth E. Lerner, Michael L. Blute, Horst Zincke. American Urological Association Annual Meeting, 1996.
6. "Inhibition of Human Retinal Pigment Epithelial (hRPE) Cells Proliferation by bFGF-Saporin Toxin." GJ Jaffe, AB Das, **A Kaynan**, M Ong, LL Houston. International Cytokine Society, 1994.

Lectures

1. "Laparoscopy: The Basic Science." Urology Grand Rounds, Stanford University Department of Urology, February 16, 2001.
2. "Laparoscopic Management of Renal Tumors." Urology Grand Rounds, Stanford University Department of Urology, May 4, 2001.
3. "Advances in Urologic Laparoscopic Surgery." General Surgery Grand Rounds, Morristown Memorial Hospital, September 5, 2001.
4. "Laparoscopic Radical Prostatectomy." Us Too Prostate Cancer Support Group, Morristown Memorial Hospital, November 6, 2001.
5. "Minimally Invasive Approaches to Urologic Diseases." Senior Contact Lecture Series, Morristown Memorial Hospital, April 11, 2002 & Overlook Hospital, March 10, 2003.

6. "Robotic Surgery." General Surgery Grand Rounds, Morristown Memorial Hospital, December 17, 2003
7. "PSA Screening." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, February, 2004.
8. "Evaluation and Management of Hematuria." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, March, 2004.
9. "Evaluation and Management of Adrenal Tumors." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, April, 2004.
10. "Evaluation and Management of Kidney Stones." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, May, 2004.
11. "Post-Surgical Urologic Nursing." Minimally Invasive Surgical Unit, Morristown Memorial Hospital, July, 2004.
12. "Urinary Retention." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, August, 2004 & Morristown Memorial Hospital, August, 2004.
13. "Prostate Cancer." Internal Medicine Resident Lecture Series, Saint Barnabas Medical Center, September, 2004.
14. "Laparoscopic & Robotic Prostate Surgery." US Too Prostate Cancer Support Group, Morristown Memorial Hospital, October 5, 2004.
15. "Prostate Health." Senior Contact Health Program, Morristown Memorial Hospital, October 7, 2004.
16. "Retroperitoneoscopic Renal Tumor Surgery." Tumor Board, Morristown Memorial Hospital, November 18, 2004.
17. "Laparoscopic & Robotic Prostatectomy." Multidisciplinary Urologic Oncology Conference, Morristown Memorial Hospital, February 23, 2005.
18. "Laparoscopic & Robotic Prostatectomy." Medical Grand Rounds, Centrastate Hospital, June 24, 2005.
19. "Laparoscopic & Robotic Prostatectomy." Medical Grand Rounds, Saint Clare's Hospital, January 7, 2005.
20. "Laparoscopic Partial Nephrectomy." New Jersey Chapter of the American College of Surgeons, Princeton, NJ, December 3, 2005.
21. "Laparoscopic Partial Nephrectomy." Course Instructor on Laparoscopic Urologic Surgery, Stony Brook University Hospital, Stony Brook, NY, December 4, 2005.
22. "Update on Robotic Surgery." General Surgery Grand Rounds, Morristown Memorial Hospital, January 25, 2006.
23. "Controversies in Prostate Cancer Screening." Medical Grand Rounds, Morristown Memorial Hospital, November 8, 2006.
24. "Evolving Therapy for Prostate Cancer: The Role of Robotics." Medical Grand Rounds, Trinitas Hospital, NJ, March 15, 2007.
25. "Management of Surgical Hypertension: Adrenal Tumors." 6th Annual Ames L. Filippone, Jr, MD Surgical Symposium on *Advances in Minimal Access Surgery*, May 14, 2008.

Symposiums

1. 6th Annual Ames L. Filippone, Jr, MD Surgical Symposium on *Advances in Minimal Access Surgery*, May 14, 2008. Symposium Director.