CURRICULUM VITAE

Mathew C. Raynor, MD

Education

- University of North Carolina School of Medicine, Chapel Hill, NC M.D. with Distinction, 8/2000-5/2004
- University of North Carolina, Chapel Hill, NC B.S. with Honors, 8/1994-5/1998

Post-Graduate Training

- Fellowship, Endourology, Laparoscopy, Robotic Surgery, University of North Carolina School of Medicine, Chapel Hill, NC 8/2009-7/2010
- Tulane University Health Sciences Center Residency, Urology, 7/2005-6/2009
- Tulane University Health Sciences Center Internship, General Surgery, 7/2004-6/2005

Honors & Awards

- Southeastern Section Representative, American Urological Association Residents Committee, 2007-2009
- Gerald P. Murphy Scholar, American Urological Association, 2007, 2008
- Outstanding Urology Case Presentation, 2nd place. Annual North Carolina Urology Residents Seminar, 2006.
- M.D. with Distinction, 2004
- Alpha Omega Alpha National Medical Honor Fraternity, 2004
- Sarah Kenan Medical Scholarship, 2000-2004
- B.S. with Honors, 1998
- Dean's List, 1996-1998

Appointments

- Assistant Professor, Division of Urology, University of North Carolina School of Medicine/UNC Hospitals, 7/2010-present.
- Fellow/Clinical Instructor, Division of Urology, University of North Carolina School of Medicine/UNC Hospitals, 8/2009-7/2010.
- Affiliate Staff, Durham Regional Hospital, Durham, NC, 10/2009-present.
- Affiliate Staff, Davis Ambulatory Surgical Center, Durham, NC, 2/2010-present.

License

- North Carolina Medical Board, Issued 2009
- Louisiana State Board of Medical Examiners, 2004-2009 (Inactive)

Professional Appointments

- Assistant Professor, University of North Carolina School of Medicine, Division of Urology, 05/2011-present.
- Visiting Assistant Professor, University of North Carolina School of Medicine, Division of Urology, 07/2010-04/2011

- Residency, Department of Urology Tulane University Health Sciences Center, 2005-2009
- Visiting Resident, Division of Urology
 The University of North Carolina School of Medicine, 2005-2007
- Internship, Department of General Surgery
 Tulane University Health Sciences Center, 2004-2005
- Research Assistant

Duke University Sports Performance Laboratory
Division of Orthopaedic Surgery, Duke University Medical Center, 1999-2000

Teaching Assistant

Department of Chemistry

The University of North Carolina at Chapel Hill, 1998

Research Assistant

Laboratory of Cellular and Molecular Neurobiology
Departments of Pharmacology and Neurobiology
The University of North Carolina School of Medicine, 1997-1999

 Computer Drafter RLS Arpenteurs, Surveyors and Engineers Pinehurst, NC 1993-2000

Volunteer Activities

- Student Health Action Coalition, 2000-2002
- Jimmy V Cancer Foundation, 1999
- American Red Cross Local Chapter of Southern Pines, 1999

<u>Memberships</u>

- Endourological Society, 2009-present
- Sexual Medicine Society of North America, 2007-2009
- American Urological Association, 2004-present
- Alpha Omega Alpha, 2004-present
- American Medical Association, 2000-2004

Clinical Trials

- A Phase 3, Double-Blind, Randomized, Placebo- Controlled Study of the Safety and Effectiveness of AA4500 Administered Twice per Treatment Cycle for Up to Four Treatment Cycles (2 x 4) in Men With Peyronie's Disease. Carson CC (PI), Raynor MC (Sub-I), Vyas S (Coordinator). Sponsor: Auxilium Pharmaceuticals, Inc. Currently enrolling patients.
- A Randomized, Double-Blind, Placebo-Controlled Study of Dorsal Penile Nerve Block (DPNB) Prior to Penile Prosthesis implantation for Post-Operative Pain Control. Carson CC (PI), Raynor MC (Sub-I), Vyas S (Coordinator). Sponsor: none. Currently enrolling patients.
- Patient-Partner Health related Quality of Life (HRQOL) Evaluation After the Xenograft Implant Surgery for Correction of Peyronie's Disease (PD). Carson CC (PI), Raynor MC (Sub-I), Hellstrom WJ (Sub-I), Vyas S (Coordinator). Sponsor: Coloplast, Inc.

Publications

- Ferguson J, Goyal R, Raynor MC, Nielsen ME, Pruthi RS, Brown P, Wallen EM. Real-world cost analysis of robot-assisted versus laparoscopic versus open partial nephrectomy. J Urol. Submitted.
- Smith AB, Raynor MC, Pruthi RS. Perioperative and postoperative outcomes of robotic cystectomy. BJU. Submitted.
- Raynor MC, Carson CC. Urinary infections in men. Med Clin North Am. 2011 Jan;95(1):43-54.
- Boylu U, Oommen M, Raynor MC, Lee BR, Blank B, Thomas R. Ureteroenteric anastomotic stricture: novel use of a cutting balloon dilator. J Endourol. 2010 Jul;24(7):1175-8.
- Raynor MC, Hellstrom WJ. Words of wisdom. Re: Erectile dysfunction in type 2 diabetic men: relationship to exercise fitness and cardiovascular risk factors in the Look AHEAD trial. Eur Urol. 2010 Jan;57(1):172-3.
- Pruthi RS, Nix J, McRackan D, Hickerson A, Nielsen ME, Raynor M, Wallen EM. Robotic-assisted laparoscopic intracorporeal urinary diversion. Eur Urol. 2010 Jun;57(6):1013-21.
- Boylu U, Oommen M, Raynor M, Lee BR, Thomas R. Robot-assisted laparoscopic radical prostatectomy in patients with previous abdominal surgery: a novel laparoscopic adhesiolysis technique. J Endourol. 2009 Dec 29 (epub).
- Raynor MC, Davis R, Hellstrom WJ. Robot-assisted vessel harvesting for penile revascularization. J Sex Med. 2010 Jan;7 (1 Pt 1):293-7. Epub 2009 Sep 25.
- Raynor MC, Hellstrom WJ. Peyronie's Disease: A clinical update. Medscape Urology (www.medscape.com). 2008.
- Gurkan L, Raynor MC, Hellstrom WJG. Sex and the infertile male. Semin Reprod Med. 2009 Mar;27(2):186-190.
- Raynor MC, Carson CC, Pearson MD, Nix JW. Androgen deficiency in the aging male: A guide to diagnosis and testosterone replacement therapy. Can J Urol. 2007 Dec;14(1) Suppl:63-8.
- Raynor MC, Carson CC. Androgen deficiency in the aging male: A guide to diagnosis and testosterone replacement therapy. Issues in Urology. 2006 Jul/Aug;18(4):159-66.
- Raynor MC, Pietrobon R, Guller U, Higgins LD. Cryotherapy after ACL reconstruction: a meta-analysis. J Knee Surg. 2005 Apr;18(2):123-9.
- Chin LS, Raynor MC, Wei X, Chen HQ, Li L. Hrs interacts with sorting nexin 1 and regulates degradation of epidermal growth factor receptor. J Biol Chem. 2001 Mar 9;276(10):7069-78.
- Chin LS, Nugent RD, Raynor MC, Vavalle JP, Li L. SNIP, a novel SNAP-25-interacting protein implicated in regulated exocytosis. J Biol Chem. 2000 Jan 14;275(2):1191-200.

Chapters

- Raynor MC, Pinsky MR, Chawla A, Hellstrom WJG. "Androgen Deficiency". In <u>Cancer and Sexual Medicine</u>. Mulhall J. 2011.
- **Raynor MC**, Hellstrom WJ. "Treatment of Erectile Dysfunction". In <u>Handbook of Andrology</u>, ^{2nd} Edition. Robaire B, Chan P. 2008.
- **Raynor MC**, Lee BR. "Urolithiasis", "Urolithiasis Staghorn", and "Ureteral Trauma". In 5-minute Urology Consult. Gomella L. 2008.

• Gurkan L, **Raynor MC**, Hellstrom WJG. "Surgery for Erectile Dysfunction". In <u>Clinical Andrology: EAU/ESAU course guidelines</u>. Weidner W, et al. In print.

Presentations/Abstracts

- Langston J, Selph JP, Manvar A, Ferguson J, Sawh S, Smith AB, Raynor MC, Nielsen ME, Carson CC, Pruthi RS. Clinical and pathologic differences between patients undergoing TURBT for newly-diagnosed versus recurrent bladder lesions detected by cystoscopy. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Selph JP, Langston J, Martin A, Smith AB, Sawh S, Raynor MC, Nielsen ME, Wallen EM, Castle EP, Pruthi RS. Robotic radical cystectomy: medium-term oncologic follow-up. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Langston J, Selph JP, Ferguson J, Manvar A, Smith AB, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Robotic-assisted laparoscopic prostatectomy: evaluation of the functional and oncologic learning curve. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Langston J, Selph JP, Ferguson J, Manvar A, Smith AB, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. The evaluation of the learning curve associated with robotic radical cystectomy: initial 100 cases. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Selph JP, Langston J, Martin A, Smith AB, Sawh S, Raynor MC, Nielsen ME, Wallen EM, Castle EP, Pruthi RS. Oncologic outcomes for node-positive patients undergoing robotic radical cystectomy. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Langston J, Selph JP, Ferguson J, Manvar A, Sawh S, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Cost analysis of robot-assisted versus laparoscopic versus open partial nephrectomy. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- Raynor MC, McKim S, Nielsen ME, Wallen EM, Pruthi RS. Elimination of bowel preparation in patients undergoing cystectomy and urinary diversion. American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- Raynor MC, Dray E, Smith A, McKim S, Nielsen ME, Wallen EM, Pruthi RS. The
 impact of radical cystectomy on renal function: an analysis of variance based on
 age, gender, race, and diversion technique. American College of Surgeons
 Annual Clinical Congress. Washington, DC. 2010.
- Raynor MC, Smith A, Amling C, Busby JE, Castle EP, Davis R, Nielsen ME, Thomas R, Wallen EM, Pruthi RS. Complications associated with robot-assisted radical cystectomy for bladder cancer: a multi-institutional analysis. American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- Sawh S, Raynor MC, McKim S, Nielsen ME, Wallen EM, Pruthi RS. Does robotassisted radical cystectomy for bladder cancer affect long-term health-related quality of life? American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- Sawh S, McKim S, Smith A, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Robot-assisted laparoscopic radical prostactomy: evaluation of the functional and oncologic learning curve. American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.

- Sawh S, McKim S, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Evaluation
 of the learning curve associated with robotic radical cystectomy: initial 100 cases.
 American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- McKim S, Smith A, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Does the time of year affect outcomes after robot-assisted radical prostatectomy?
 American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- McKim S, Smith A, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Does the time of day or day of the week affect outcomes after robot-assisted radical prostatectomy? American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- McKim S, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Robot-assisted laparoscopic intracorporeal urinary diversion. American College of Surgeons Annual Clinical Congress. Washington, DC. 2010.
- Raynor MC, McKim S, Nielsen ME, Wallen EM, Pruthi RS. Feasibility and outcomes of robot-assisted laparoscopic radical cystectomy for bladder cancer in the elderly. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- Raynor MC, Smith A, Amling C, Busby JE, Castle EP, Davis R, Nielsen ME, Thomas R, Wallen EM, Pruthi RS. Multi-institutional analysis of robot-assisted radical cystectomy for bladder cancer: perioperative outcomes in 227 patients. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- Raynor MC, Smith A, Amling C, Busby JE, Castle EP, Davis R, Nielsen ME, Thomas R, Wallen EM, Pruthi RS. Does obesity impact patient outcomes in patients undergoing robot-assisted radical cystectomy for bladder cancer: a multi-institutional analysis. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- McKim S, Belsante J, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS.
 Preliminary experience with prostate-sparing cystectomy for urothelial carcinoma of the bladder. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- McKim S, Smith A, Raynor MC, Nielsen ME, Wallen EM, Pruthi RS. Robotassisted laparoscopic intracorporeal urinary diversion. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- Dray E, Raynor MC, Smith A, McKim S, Nielsen ME, Wallen EM, Pruthi RS. The impact of radical cystectomy on renal function: an analysis of variance based on age, gender, race, and diversion technique. American Urological Association Annual Meeting. San Francisco, CA. 2010.
- Raynor MC, McKim S, Smith A, Nielsen ME, Wallen EM, Pruthi RS. Robotassisted laparoscopic intracorporeal urinary diversion. Southeastern Section, American Urological Association Annual Meeting. Miami, FL. 2010.
- Raynor MC, McKim S, Nielsen ME, Wallen EM, Pruthi RS. Feasibility and outcomes of robot-assisted laparoscopic radical cystectomy for bladder cancer in the elderly. Southeastern Section, American Urological Association Annual Meeting. Miami, FL. 2010.
- Raynor MC, Lavien G, Simopoulos E, McKim S, Nielsen M, Wallen EM, Pruthi RS. "Elimination of bowel preparation in patients undergoing cystectomy and urinary diversion". Society of Urologic Oncology. Bethesda, MD. 2009.
- Raynor MC, Smith A, Amling CL, Busby JE, Castle EP, Davis R, Nielsen M, Thomas R, Wallen EM, Pruthi RS. "Multi-institutional analysis of robot-assisted

- radical cystectomy for bladder cancer: perioperative outcomes in 227 patients". Society of Urologic Oncology. Bethesda, MD. 2009.
- Bowen A, Lee BR, Oommen M, Raynor MC, Boylu U. "Robotic partial nephrectomy for complex and hilar lesions". World Congress of Endourology. Munich, Germany. 2009. (Video)
- Bowen A, Raynor MC, Boylu U, Lee BR. "Risky business? Determination of Satinsky clamp safety zone to robotic arm during robotic partial nephrectomy". World Congress of Endourology. Munich, Germany. 2009. (Video)
- Raynor MC, Bejma J, Gurkan L, Davis R, Hellstrom WJG. "Penile revascularization: A minimally-invasive approach to vessel harvesting". Southeastern Section, American Urological Association Annual Meeting. San Diego, CA. 2008.
- Castle EP, Desai P, Andrews PE, Woods M, Raynor MC, Thomas R. "Tips and recommendations for deep cortical tumors during partial nephrectomy".
 Southeastern Section, American Urological Association Annual Meeting. San Diego, CA. 2008.
- Castle EP, Desai P, Andrews PE, Woods M, Matern R, Raynor MC, Thomas R, Davis R. "Robot assisted radical cystectomy: Technical considerations to improve early outcomes and operative times with RARC, lessons learned after 30 patients". Southeastern Section, American Urological Association Annual Meeting. San Diego, CA. 2008.
- Raynor MC, Woods M, Davis R, Thomas R. "Laparoscopic adrenalectomy for large tumors". Southeastern Section, American Urological Association Annual Meeting. San Diego, CA. 2008.
- Raynor MC, Bejma J, Gurkan L, Davis R, Hellstrom WJG. "Penile revascularization: A minimally-invasive approach to vessel harvesting". Sexual Medicine Society of North America Annual Meeting. Chicago, II. 2007.
- Gurkan L, Dorsey P, Raynor MC, Hellstrom WJG. "Erectile dysfunction therapies after radical prostatectomy: A cost-effectiveness analysis". Sexual Medicine Society of North America Annual Meeting. Chicago, II. 2007.
- Cockerham YR, Gurkan L, Raynor MC, Hellstrom WJG. "Nursing practice: A primary care approach to intralesional injection therapy for Peyronie's disease". Sexual Medicine Society of North America Annual Meeting. Chicago, II. 2007.
- "Robotic pyeloplasty: A step by step approach". Louisiana State Urological Society Annual Meeting. Lafayette, LA. 2007.
- "Establishing Peyronie's Disease in your clinical practice". Louisiana State Urological Society Annual Meeting. Lafayette, LA. 2007.
- "Atypical scrotal mass". North Carolina Urology Residents Seminar. Winston-Salem, NC. 2006.
- "Cryotherapy after ACL reconstruction". Centers for Excellence in Surgical Outcomes. Duke University Medical Center. 2000.
- "Novel proteins involved in synaptic transmission". Honors Thesis. Department of Chemistry, University of North Carolina. 1998.

Lectures

- "Male Infertility". Urology Grand Rounds. March 30, 2011.
- Moderator, Bladder Cancer Podium Session. Southeastern Section, American Urological Association Annual Meeting. New Orleans, LA. 2011.
- "Management of small renal masses." General Surgery Grand Rounds. March 9, 2011.

- "Urologic Oncology". MS3 Surgery Clerkship Lecture. October 2010. "Robot-assisted radical cystectomy for bladder cancer: a multi-institutional analysis. The 8th Annual Landes Symposium: Advances in Urology (UNC Continuing Medical Education). June 2010.