

Graham “Luke” Machen, M.D.

Urology

EDUCATION

Undergraduate

8/2005-5/2009	University of North Carolina Chapel Hill, NC	Bachelor of Arts With Distinction	Major: Chemistry
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Graduate

8/2009-5/2013	Louisiana State University Health Sciences Center New Orleans, LA		Medical Doctorate
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Postgraduate

6/2013-6/2014	Baylor Scott and White Temple, TX	Internship General Surgery	
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7/2014-6/2018	Baylor Scott and White Temple, TX	Residency Urology	
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7/2018-6/2019	Medical College of Wisconsin Milwaukee, WI	Fellowship Reproductive Urology and Andrology	
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CERTIFICATIONS and LICENSURE

Specialty certification:

2018	American Board of Urology Certifying Exam – Part I
2021	Diplomate of the American Board of Urology

Medical License:

2013-2018	Texas medical training license
2018-2019	Wisconsin medical license
2019-2023	Texas medical license
2022-present	North Carolina Medical License

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

2013-Present	American Urological Association
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2016-Present	American Society of Andrology
2017-Present	Society of Urologic Prosthetic Surgeons
2018-Present	American Society for Reproductive Medicine
2018-Present	Society for the Study of Male Reproduction
2018-Present	Sexual Medicine Society of North America
2018-Present	Society for Male Reproduction and Urology
2022-Present	North Carolina Urological Society

HONORS

2009	Association of American Medical Colleges (AAMC) Student Representative
2012	LSU School of Medicine Alumni Scholarship
2016	Texas Transplantation Society Trinkle-Banowsky Case Presentation Competition Winner
2017	Sexual Medicine Society/Society for Urologic Prosthetic Surgeons Resident Training Scholarship Program and Symposium
2017	Baylor Scott & White High Score on In-Service Exam
2017	Baylor Scott & White Chief Resident
2018	Arnold P Gold Humanism in Medicine Honor Society
2018	Top Quintile, American Board of Urology Qualifying Exam Part I
2018	Peer Faculty for 2018 ASRM Resident Education Program
2018	Moderator for SMRU Traveling Scholars Oral Abstract Session ASRM 2018
2020	Society for the Study of Male Reproduction Social Media Task Force
2022	Delegate for Travis County Medical Society Delegation to Texas Medical Association
2022	Moderator for SCSAUA Men's Health Podium Session SCSAUA 2022

PROFESSIONAL DEVELOPMENT

2008	Technology Transfer Internship, National University of Singapore
2009	Chemistry 101 Lab Undergraduate Teaching Assistant
2017	Cleveland Clinic National Urology Resident Preceptorship in Adult and Pediatric Reconstructive and Prosthetic Urologic Surgery
2021	Texas Medical Association Leadership College

PUBLICATIONS

Peer-reviewed Articles

1. Kavoussi PK, Henderson HT, Hudson K, Mehrabani-Farsi R, **Machen GL**. Cremaster muscle thickening: the anatomic difference in men with testicular retraction due to hyperactive cremaster muscle reflex. *Asian J Androl*. 2022 Dec 6; online ahead of print.
2. Kavoussi PK, **Machen GL**, Chen SH, Gilkey MS, Chen J, Hamzeh, Aston KI, Kavoussi SK. Direct conversion from long acting testosterone replacement therapy to Natesto allows for spermatogenesis resumption: proof of concept. *Andrologia*. 2022 Sep; 54(8):e14453.
3. Kavoussi PK, Gilkey MS, **Machen GL**, Kavoussi SK, Dorsey C. Varicocele Repair improves static oxidation reduction potential as a measure of seminal oxidative stress levels in infertile men: a prospective clinical trial using the MiOxsys system. *Urology*. 2022 Jul; 165:193-197.
4. Kavoussi SK, Chen SH, Wininger JD, Lal A, Roudebush WE, Lanford HC, Esqueda AS, Barsky M, Lebovic DI, Kavoussi PK, Gilkey MS, Chen J, **Machen GL**, Chosed RJ. The expression of pregnancy-associated plasma protein-A (PAPP-A) in human blastocoel fluid-conditioned media: a proof of concept study. *J Assist Reprod Genet*. 2022 Feb; 39(2):389-394.
5. Kavoussi PK, Hudson K, **Machen GL**, Barsky M, Lebovic DI, Kavoussi SK. FSH levels and testicular volumes are associated with the severity of testicular histopathology in men with non-obstructive azoospermia. *J Assist Reprod Genet*. 2021 Nov; 267: 241-244.
6. Kavoussi PK, **Machen GL**, Gilkey MS, Hunn C, Chen SH, Wininger JD, Kavoussi KM, Kavoussi SK. The impact of ipsilateral testicular atrophy on semen analysis and sperm DNA fragmentation response to varicocele repair. *Asian J Androl*. 2021 Mar-Apr; 23(2): 146-149
7. Kavoussi PK, West BT, **Machen GL**. Preoperative predictors of failure of microsurgical spermatic cord denervation for men with chronic orchialgia. *Urology*. 2021 Mar; 149: 30-33
8. Kavoussi PK, **Machen GL**, Gilkey MS, Chen SH, Kavoussi KM, Esqueda A, Wininger JD, Barsky M, Kavoussi SK. Converting men from clomiphene citrate to natesto for hypogonadism improves libido, maintains semen parameters, and reduces estradiol. *Urology*. 2021 Feb; 148: 141-144.
9. Kavoussi PK, West BT, Chen SH, Hunn C, Gilkey MS, **Machen GL**, Kavoussi KM, Esqueda A, Wininger JD, Kavoussi SK. A comprehensive assessment of predictor of fertility outcomes in men with non-obstructive azoospermia undergoing microdissection testicular sperm extraction. *Reprod Biol Endocrinol*. 2020 Aug; 18(1):90
10. Masterson JM, Cohen J, Blachman-Braun R, **Machen GL**, Sandlow J, Ramasamy R. Pre-treatment estradiol does not predict testosterone response to clomiphene citrate. *Transl Androl Urol*. 2020 Apr; 9(2): 609-613

11. **Machen GL**, Doolittle J, Sandlow JI. Prednisone after vasectomy reversal may improve semen parameters: one institution's experience. *Can J Urol*. 2020 Apr; 27(2): 10181-10184
12. **Machen GL**, Johnson DJ, Nissen M, Naber E, Sandlow JI. Time to improvement of semen parameters after microscopic varicocelectomy: when it occurs and its effects on fertility. *Andrologia*. 2020 Mar; 52(2): e13500
13. Dietrich P, Everett R, Doolittle J, Dadhich P, Roadman D, Kansal J, **Machen GL**, Ellison J, Sandlow J. Fertility preservation discussion in cancer patients is underutilized and varies based on age. In press. *Journal of Fertility Preservation*. 2020 July; 1; doi: 10.32371
14. Krzastek SC, Sharma D, Abdullah N, Sultan M, **Machen GL**, Wenzel JL, Ells A, Chen X, Kavoussi M, Costabile RA, Smith RP, Kavoussi PK. Long term safety and efficacy of clomiphene citrate for the treatment of hypogonadism. *J Urol*. 2019 Nov; 202(5):1029-1035
15. Doersch KM, Thai KH, **Machen GL**, Bird ET, Reilly TP, El Tayeb MM. A comparison of clinical outcomes of operating room versus office-based ureteral stenting with the novel use of nitrous oxide sedation. *Urology*. 2019 Oct; 132:37-42
16. Navetta AF, Elmekresh A, Doersch K, Durdin TD, **Machen GL**, Cohen A, Lowry PS, El Tayeb MM. Preoperative ureteral stenting prior to ureteroscopy for management of urolithiasis does not impact the postoperative return for unplanned care. *Urol Ann*. 2019 Jul-Sep; 11(3):282-286
17. **Machen GL**, Mahmoud AM, Kleinguetl CE, Chen W, Harris SE, Bird ET. Vasectomy reversal utilizing fibrin glue. *Proc(Bayl Univ Med Cent)*. 2019 Mar; 32(2): 196-198
18. Kavoussi PK, **Machen GL**, Wenzel JL, Ellis AM, Kavoussi M, Kavoussi KM, Kavoussi SK. Medical treatments for hypogonadism do not significantly increase the risk of deep vein thrombosis over general population risk. *Urology*. 2019 Feb; 124-127-130
19. Kavoussi PK, Gilkey MS, Hunn C, **Machen GL**, Chen SH, Wininger JD, Kavoussi KM, Kavoussi SK. Ibuprofen does not have an adverse impact on semen parameters. *J Assist Reprod Genet*. 2018 Dec; 35(12): 2201-2204.
20. Doersch K, **Machen GL**, Thai KH, Sung J, El Tayeb MM. Feasibility and clinical outcomes of ureteral stenting in the office procedural suite. *Can J Urol*. 2018 Dec; 25(6): 9596-9600.
21. **Machen GL**, Bird ET, Kavoussi PK. Analysis of Rural vs Urban Vasectomy Demographics. *Trans Androl Urol*. 2018 Dec; 7(6):931-934.

22. Doersch KM, Hart KD, Elmekresh A, Milburn PA, **Machen GL**, El Tayeb MM. Comparison of utilization of pressurized automated versus manual hand irrigation during ureteroscopy in the absence of ureteral access sheath. *Proc (Bayl Univ Med Cent)*. 2018 Oct; 31(4):432-435
23. Doersch KM, Elmekresh A, **Machen GL**, El Tayeb, MM. The use of string with a stent for self-removal following ureteroscopy: a safe practice to remain. *Arab J Urol*. 2018 Jun; 16(4): 435-440.
24. **Machen GL**, Bird ET, Brown M, Ingalsbe D, Reyes M, Kuehl T. Utilization rates of cryopreserved sperm based on the indication for storage. *Investig Clin Urol*. 2018 May; 59(3): 177-181.
25. **Machen GL**, Brown ML, Ingalsbe DA, East MM, Reyes M, Kuehl TJ. Time trends for bacterial species and resistance patterns in semen of patients evaluated for infertility. *Proc (Bayl Univ Med Cent)*. 2018 Mar; 31(2): 165-167
26. Mukhopadhyay D, Wiggins-Dohlvik KC, MrDutt MM, Hamaker JS, **Machen GL**, Davis ML, Regner J, Smith RW, Ciceri DP, Shake JG. Implementation of a standardized handoff protocol for post-operative admissions to the surgical intensive care unit. *Am J Surg*. 2018 Jan; 215(1):28-36.
27. **Machen GL**, Rajab, H, Pruszynski J, Coffield KS. Phosphodiesterase type 5 inhibitors usage and prostate cancer: a match-paired analysis. *Trans Androl Urol*. 2017 Oct; 6(5):879-882
28. **Machen GL**, Lowry PS, Doherty DK, Lappin JA, El Tayeb MM. Ex-vivo Ureteroscopy in deceased donor kidneys. *Can Urol Assoc J*. 2017 Aug; 11(8): 251-253.
29. **Machen GL**, Chiles LR, Joyce J, Wagner KR. Robotic repair of vesicovaginal fistulas utilizing fibrin sealant. *Can J Urol*. 2017 Apr; 24(2): 8740-8743
30. Jhavar S, Swanson G, Deb N, Pruszynski J, **Machen GL**, Milburn PA, Bird ET. Durability of artificial urinary sphincter with prior radiation therapy. *Clin Genitourinary Cancer*. 2017 Apr; 15(2): e175-e180
31. Berlanga GA, **Machen GL**, Lowry PS, Brust KB. Management of a renal fungal bezoar caused by multi-drug resistant *Candida Glabrata*. *Proc (Bayl Univ Med Cent)*. 2016 Oct 1; 29(4): 416-417
32. Wiczer BM, Lobo S, **Machen GL**, Graves LM, Bernlohr DA. FATP1 mediates fatty-acid induced activation of AMPK in 3T3-L1 Adipocytes. *Biochem Biophys Res Commun*. 2009 Sep 18; 387(2): 234-8.

Reviews, Invited Published Papers, Proceedings, Monographs, Book Chapters, and Other Publications

1. **Machen GL**, Sandlow JI. (2020) Causes of Male Infertility. *Male Infertility: Contemporary Clinical Approaches, Andrology, ART, and Antioxidants* (pp.3-14). 2nd Edition. New York, NY: Springer.
2. Smith-Harrison L, Piotrowski J, **Machen GL**, Guise A. Acquired buried penis in adults: A review of surgical management. *Sex Med Rev.* 2020 Jan; 8(1): 150-157.
3. **Machen GL**, Sandlow JI. Extended Indications for Varicocelectomy: Summary of Current Literature. *F1000Res.* 2019 Sep; 8:1579.
4. **Machen GL**, Sandlow JI. Alternative Indications for Varicocelectomy. *AUANews* 2019 July; 24(7); 1-2.
5. **Machen GL**, Harris SE. (2018) "Empiric Medical Treatment." *Encyclopedia of Reproduction* (pp. 328-332). 2nd Edition. Cambridge: Academic Press.

PROFESSIONAL ACTIVITIES: WORKSHOPS, SEMINARS, LECTURES

Local Presentations

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| 2015 | “Successfully Treated Genitourinary Fungal Bezoar.” Scott and White Internal Medicine Research Conference |
| 2015 | “Ex-vivo ureteroscopy in deceased donor kidneys.” Texas Transplantation Society Annual Conference |
| 2019 | “Sub-fertility and its psychological impact on men.” Wisconsin Urological Society Annual Meeting |
| 2019 | “Frequency of fertility preservation discussion in cancer patient varies based on age.” Wisconsin Urological Society Annual Meeting |
| 2019 | “Testosterone and cardiovascular risk: Fact vs Fiction.” Medical College of Wisconsin Grand Rounds. |

Regional, National, and International Presentations

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| 2013 | “Analysis of Disbanding a Multidisciplinary Spina Bifida Clinic for Children in Post-Hurricane Katrina New Orleans.” South Eastern Section of the American Urological Association Annual Meeting. March 2013 |
| 2015 | “Modification of Port Placement in Robot Assisted Laparoscopic Prostatectomy in Patients who have Undergone a Large Ventral Hernia Repair.” World Congress of Endourology. October 2015 |
| 2015 | “The Effect of Radiation Therapy on Outcomes After Artificial Urinary Sphincter.” South Central Section of the American Urological Association. October 2015 |

- 2016 “Vesicovaginal Fistula Repair using Fibrin Sealant.” Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction Winter Meeting. February 2016
- 2016 “Four Ring Circus: A Case of Penile Incarceration.” American Society of Andrology Annual Conference. April 2016
- 2016 “Predictors of ED Visits Following Ureteroscopy.” South Central Section of the American Urological Association. September 2016
- 2016 “Vesicovaginal Fistula Repair using Fibrin Sealant.” World Congress of Endourology. November 2016
- 2016 “Predictors of ED Visits Following Ureteroscopy.” World Congress of Endourology. November 2016
- 2017 “Utilization of pressurized vs non-pressurized irrigation during ureteroscopy in the absence of a ureteral access sheath.” American Urological Association Annual Meeting. May 2017
- 2017 “Effect of different postoperative pain medications on return for unplanned care after ureteroscopy.” American Urological Association Annual Meeting. May 2017
- 2017 “Predictors of ED Visits Following Ureteroscopy.” American Urological Association Annual Meeting. May 2017
- 2017 “Utilization rates of cryopreserved sperm based on the indication for storage.” American Urological Association Annual Meeting. May 2017
- 2017 “Sequential balloon dilation vs direct access sheath insertion pre-flexible ureteroscopy in non-pretented patients: a retrospective comparative study.” South Central Section of the American Urological Association. November 2017
- 2017 “Ureteral stent placement in clinic using nitrous oxide analgesia: one institution’s experience.” South Central Section of the American Urological Association. November 2017
- 2018 “Vasectomy Reversal Utilizing Fibrin Sealant.” American Society of Andrology Annual Conference. April 2018
- 2018 “Analysis of Urban vs Rural Vasectomy Demographics.” American Society for Reproductive Medicine Scientific Expo. October 2018
- 2018 “Descriptive outcomes of patients undergoing Urolift for extended indications.” Sexual Medicine Society of North America Annual Fall Meeting. November 2018
- 2019 “Varicocele Size Relates to Degree of Semen Improvement.” American Urological Association Annual Meeting. May 2019
- 2019 “Prednisone after Vasectomy Reversal May Improve Semen Parameters.” American Urological Association Annual Meeting. May 2019
- 2019 “The Risk of Deep Vein Thrombosis Associated with Treatments for Hypogonadism.” American Urological Association Annual Meeting. May 2019
- 2019 “Risk factors for non-compliance in post vasectomy follow up.” North Central Section of AUA. September 2019
- 2019 “Risk factors for non-compliance in post vasectomy follow up.” American Society for Reproductive Medicine Scientific Expo. October 2019

- 2019 “Fertility preservation discussion in cancer patients is underutilized and varies based on age.” American Society for Reproductive Medicine Scientific Expo. October 2019
- 2019 “Long term safety and efficacy of clomiphene citrate for the treatment of male hypogonadism.” American Society for Reproductive Medicine Scientific Expo. October 2019
- 2019 “Penile Plication is an effective treatment option for congenital penile curvature.” Sexual Medicine Society of North America Annual Fall Meeting. November 2019
- 2019 “Pretreatment estradiol does not predict improvement in serum testosterone in men receiving clomiphene citrate.” Sexual Medicine Society of North America Annual Fall Meeting. November 2019
- 2020 “Larger varicoceles are associated with higher sperm DNA fragmentation indices.” American Urological Association Annual Meeting. May 2020
- 2020 “Converting men from clomiphene citrate to Natesto for hypogonadism improves libido, maintains semen parameters and reduces estradiol.” American Urological Association Annual Meeting. May 2020
- 2020 “Larger varicoceles are associated with higher sperm DNA fragmentation indices.” South Central Section of the American Urological Association. September 2020

PROFESSIONAL ACTIVITIES: RESEARCH

Grant Support

Title	Source	Primary Investigator	Amount	Years Inclusive
Urodynamic Evaluation of Men with ED and Stress Incontinence s/p Insertion of IPP with Mini-Jupette	Sexual Medicine Society of North America	Luke Machen, MD	\$7,500	6/2019-5/2020