

Revised 6/19/2018

CURRICULUM VITAE
RYAN S. HSI, MD

PERSONAL DATA

Office Address: 1161 21st Avenue South
A-1301 Medical Center North
Nashville, TN 37232-2765
(615)343-2036 (office)
(615)322-8990 (fax)

Email Address: ryan.hsi@vanderbilt.edu

Place of Birth: Cincinnati, Ohio

Citizenship: U.S.A.

EDUCATION

09/01-06/05 Stanford University
Stanford, CA
B.S. with Distinction, Biological Sciences, 2005
B.A. with Distinction, Chinese, 2005

08/05-05/09 Loma Linda University School of Medicine
Loma Linda, CA
M.D., 2009

POSTGRADUATE TRAINING

07/09-06/10 Internship and Residency, Department of Surgery
University of Washington School of Medicine
Seattle, Washington

07/10-06/15 Residency and Chief Residency, Department of Urology
University of Washington School of Medicine
Seattle, Washington

07/15-06/16 Fellowship, Laparoscopy and Endourology
Department of Urology
University of California San Francisco
San Francisco, California

POSTGRADUATE RESEARCH TRAINING

07/12-6/13 Mentors/Labs:
Michael Bailey, PhD, Applied Physics Laboratory
Jonathan Harper, MD, Department of Urology
University of Washington
Funding: Intramural

Effort 100%

ACADEMIC APPOINTMENTS

08/16 – present Assistant Professor, Department of Urologic Surgery, Vanderbilt University
School of Medicine

HONORS

2018 AUA/JUA Academic Exchange Scholar
2017 Best Reviewer Award, Engineering & Urology Society, AUA Annual Meeting, Boston
2015 Resident as Teacher Award
2015 In-Service Award
2014 1st Place Presentation, J. Tate Mason Award, Northwest Urological Society
2013 Warren H. Chapman Resident Research Award
2013 Best Poster of Session, Imaging/Radiology, AUA Annual Meeting, San Diego
2013 Best Poster of Session, Sexual Function/Dysfunction/Andrology, AUA Annual
Meeting, San Diego
2013 Best Abstract. Connors et al. AUA Annual Meeting 2013
2013 NIH Trainee Travel Award, American Society of Andrology, San Antonio TX
2012 1st Place Presentation, J. Tate Mason Award, Northwest Urological Society
2012 Best Poster, International Kidney Stone Institute Stone Meeting, Indianapolis, IN
2012 IVUmed Traveling Resident Scholarship, Ghana, January 2013
2012 Engineering & Urology Society (EUS) Best Paper Award
2011, 2012 Western Section AUA Annual Meeting Scholarship 2011, 2012
2011 Hirschler Fellowship Award, Department of Urology, University of Washington
2011 Best Poster of Session, Stone Disease, AUA Annual Meeting. Washington D.C.
2008 Alpha Omega Alpha (AOA), Loma Linda University School of Medicine
2008 First Place, Scientific Poster Session, Annual Postgraduate Convention, Loma Linda
2008 Walter E. Macpherson Society Student-Faculty Research Award, Loma Linda
2006 Walter E. Macpherson Society Summer Research Scholarship, Loma Linda

BOARD CERTIFICATION

3/2018 American Board of Urology

LICENSURE

2009-2015 Washington #ML60093573
2015-present California #134875
2015-present California fluoroscopy license #RHC 00201662, expires 10/31/2019
2016-present Tennessee #54165, expires 9/30/2019

PROFESSIONAL ORGANIZATIONS

American Urological Association, 2009-present
American Medical Association, 2013-present
Endourological Society, 2016-present

Vanderbilt Urology Society, 2016-present
Southeastern Section of the AUA, 2017-present

COMMITTEES

Local and University

Representative, Western Section, AUA National Residents' Bowl (Runner-up), 2013
Urology Representative, University of Washington Housestaff Association, University of Washington, 2012-2013
Reduced dose computed tomography (CT) protocols for stone disease, Vanderbilt University Medical Center, 2016 – present
EPICLeap transition ambassador, Vanderbilt University Medical Center, 2016-2017
EPIC inbasket usability task force, Vanderbilt University Medical Center, 2017
Laser Committee Chair, Vanderbilt University Medical Center, 2018 – present
EPIC Physician Champion, Vanderbilt University Medical Center, 2018 – present

JOURNAL RESPONSIBILITIES

Ad hoc review

Journal of Urology, 2015 – present
Urology, 2016 - present
Urology Practice, 2016 – present
International Journal of Urology, 2017 – present

TEACHING RESPONSIBILITIES

Resident/fellow education

Vanderbilt Endocrinology Fellows Lectureship, Nashville, TN. February 2017. “Kidney stones: why an endocrinologist should care.”
Vanderbilt Urology Resident Teaching Conference, Nashville, TN. February 2018. “Surgical management of stones”.
Endourology Hands-On Skills training and curriculum for residents and fellows, Nashville TN, August 2018.

CURRICULA

1. **Hsi RS**, Harper JD. “Hydrocele”, multimedia module for the American Board of Surgery SCORE curriculum, 2013 Dec.
2. **Hsi RS**, Harper JD. “Urinary Catheterization”, multimedia module for the American Board of Surgery SCORE curriculum, 2013 Dec.

MENTORSHIP

Trainee	Position	Dates	Current or last known position
Joshua Calvert, MD	Urology Resident	2017 – current	Urology Resident,

			Vanderbilt University Medical Center
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RESEARCH PROJECT MENTORSHIP

Trainee	Position	Dates	Current or last known position
Joseph Kuebker, MD	Endourology Fellow	2017 - 2018	Fellow
Caroline Kang, MD	Urology Resident	2017 - current	Resident
Benjamin Dropkin, MD	Urology Resident	2017 - 2018	Resident
Jackson Cabo	Medical Student	2017 - current	Medical student
William French	Medical Student	2017 - current	Medical student
Joel Hancock, MD	Urology Resident	2018 - current	Resident
Joshua Calvert, MD	Urology Resident	2018 – current	Resident

RESEARCH FUNDING

Attempted

NIH/NIDDK R01

Resubmitted 4/2018

Next-generation ultrasound for kidney stone disease

The goal of this project is to investigate nonlinear beamforming ultrasound algorithms and finite element modeling, and perform a clinical study on stone formers to improve ultrasound imaging for stone disease.

Role: PI

Result: Not scored/funded

NIH/NIDDK R21

Applied 2/2018

Large-scale phenotyping Using the Electronic Medical Record: A Precision Medicine Approach to Nephrolithiasis

The goal of this project is to investigate natural language processing methods and neural networks for kidney stone composition and 24-hour urine phenotyping from the electronic medical record.

Role: co-PI

Results: Score 45/not funded

NIH/NIDDK R01

Applied 10/2017

Next-generation ultrasound for kidney stone disease

The goal of this project is to investigate nonlinear beamforming ultrasound algorithms and finite element modeling, and perform a clinical study on stone formers to improve ultrasound imaging for stone disease.

Role: PI

Result: Not scored/funded

O'Brien Pilot and Feasibility Grant

Applied 6/2017

Vanderbilt Center for Kidney Disease (VCKD)

\$40,000

Nephrolithiasis Risk among Middle Aged and Elderly Urban Chinese

The goal of this project is to investigate kidney stone risk among the urban Chinese population, and evaluate the risk of green tea intake and vegetable protein intake with incident risk.

Role: PI

Result: Not funded

Completed

WISE Pilot Grant 12/01/16-06/01/17

Vanderbilt Institute in Surgery and Engineering \$40,000

Development of wave-mechanics-based ultrasound imaging techniques for kidney stone detection and characterization

The goal of this project is to determine the feasibility of model-based ultrasound imaging techniques for kidney stone detection and sizing applied to real data from ex vivo models.

Role: Co-PI

WISE Physician-In-Residence program 01/01/2017-06/30/2017

Vanderbilt Institute in Surgery and Engineering 20% effort

In vivo assessment of ultrasound coherence based methods for detecting kidney stones.

The goal of this project is to ultrasound coherence-based imaging methods to improve the sensitivity of ultrasound detection.

Role: Co-PI

PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. **Hsi RS**, Saint-Elie DT, Zimmerman GJ, and Baldwin DD. Mechanisms of Hemostatic Failure During Laparoscopic Nephrectomy: A Review of the FDA Database. *Urology* 2007; 70(5):888-92. PMID: 17919695
2. Lambertson GR, **Hsi RS**, Jin DH, Lindler TU, Baldwin DD. Prospective Comparison of Four Laparoscopic Vessel Ligation Devices. *Journal of Endourology* 2008; 22(10):2301-12. PMID: 18831673
3. **Hsi RS**, Ojogho ON, Baldwin DD. Analysis of Techniques to Secure the Renal Hilum During Laparoscopic Donor Nephrectomy: Review of the FDA Database. *Urology* 2009; 74(1):142-7. PMID: 19406458
4. **Hsi RS**, Hotaling JM, Spencer ES, Bollyky PL, Walsh TJ. Isolated Infection of a Decommissioned Penile Prosthesis Reservoir with *Actinomyces neuii*. *Journal of Sexual Medicine* 2010; Dec 8. PMID: 21143418
5. McAllister MW, **Hsi RS**, Torrey RR, Simmons Z, Baldwin BD, Baldwin DD. In Vitro Comparison of Changes in Effective Patient Weight Between Purely Laparoscopic and Hand-assisted Laparoscopic Surgery. *Journal of Endourology* 2011; Apr;25(4):651-5. PMID: 21438691
6. Sorensen MD, Bailey MR, Shah AR, **Hsi RS**, Paun M, Harper JD. Quantitative Assessment of Shock Wave Lithotripsy Accuracy and the Effect of Respiratory Motion. *Journal of Endourology*. 2012; Aug;26(8):1070-4. PMID: 22471349
7. Sorensen MD, Harper JD, **Hsi RS**, Shah AR, Dighe MK, Carter SJ, Moshiri M, Paun M, Lu W, Bailey MR. B-mode Ultrasound Versus Color Doppler Twinkling Artifact in Detecting Kidney Stones. *Journal of Endourology*. 2013 Feb;27(2):149-53. PMID: 23067207
8. **Hsi RS**, Welty CJ, Sorensen MD, Koreishi AF, Wessells H. Combined partial cystectomy and Caesarean delivery in a pregnant female with bladder pheochromocytoma. *Can J Urol*. 2013 Feb;20(1):6646-8. PMID: 23433139
9. **Hsi RS**, Harper JD. Fluoroless Ureterscopy: Zero-dose fluoroscopy during ureteroscopic treatment of urinary tract calculi. *Journal of Endourology*. 2013 Apr;27(4):432-7. PMID: 23194092

10. **Hsi RS**, Hotaling JM, Moore TN, Joyner BD. Publication Misrepresentation among Urology Residency Applicants. *World Journal of Urology*. 2013 Jun;31(3):697-702. PMID: 22729465
11. **Hsi RS**, Hotaling J, Hartzler A, Holt SK, Walsh TJ. "Validation of a Smartphone Application for Measurement of Penile Curvature." *Journal of Sexual Medicine* 2013 Jul;10(7):1867-73. PMID: 23551808
12. Harper JD, Sorensen MD, Cunitz BW, Wang YN, Simon JC, Starr F, Paun M, Dunmire B, Liggitt HD, Evan AP, McAteer JA, **Hsi RS**, Bailey MR. Safety and Efficacy of a Clinical Prototype using Focused Ultrasound to Expel Calculi from the Kidney." *Journal of Urology* 2013 Sep;190(3):1090-5. PMID: 23583535
13. **Hsi RS**, Dearn J, Dean M, Zamora D, Kanal K, Harper JD, Merguerian P. "Effective and organ specific doses during pediatric videourodynamics". *Journal of Urology* 2013 Oct;190(4):1364-70. PMID: 23707437
14. Sorensen M, Harper JD, **Hsi RS**, Cunitz B, Simon J, Wang YN, Paun M, Starr F, Lu Wei, Evan A, Bailey M. "Focused Ultrasonic Propulsion of Kidney Stones: Review and update of preclinical technology." *Journal of Endourology* 2013 Oct;27(10):1183-6. PMID: 23883117
15. Connors BA, Evan AP, Blomgren PM, **Hsi RS**, Harper JD, Sorensen MD, Wang YN, Simon JC, Paun M, Starr F, Cunitz BW, Bailey MR, Lingeman JE. "Comparison of Tissue Injury from Focused Ultrasonic Propulsion of Kidney Stones Versus Extracorporeal Shock Wave Lithotripsy." *Journal of Urology* 2014 Jan;191(1):235-41. PMID: 23917165
16. **Hsi RS**, Zamora D, Kanal K, Harper JD. "Severe Obesity is Associated with 3-Fold Higher Radiation Dose Rate During Ureteroscopy". *Urology* 2013 Oct;82(4):780-5. PMID: 23958504
17. Sorensen MD, Chi T, Shara NM, Wang H, **Hsi RS**, Orchard T, Kahn AJ, Jackson RD, Reiner AP, Stoller ML. "Activity, Energy Intake, Obesity and the Risk of Incident Kidney Stones in Postmenopausal Women: A Report from the Women's Health Initiative." *J Am Soc Nephrol*. 2014 Feb;25(2):362-9. PMID: 24335976.
18. Maxwell A, **Hsi RS**, Casale P, Bailey M, Lendvay T. "Noninvasive Ureterocele Puncture Using Pulsed Focused Ultrasound: An In Vitro Study". *Journal of Endourology*. 2014 Mar;28(3):342-6. PMID: 24171441
19. **Hsi RS**, Macleod LC, Gore JL, Wright JL, Harper JD. "Comparison of Selective Parenchymal Clamping to Hilar Clamping during Robotic Assisted Laparoscopic Partial Nephrectomy". *Urology*. 2014 Feb;83(2):339-44. PMID: 24246321
20. **Hsi RS**, Dunmire B, Cunitz BW, He X, Sorensen MD, Harper JD, Bailey MR, Lendvay TS. "Content and Face Validation of a Curriculum for Ultrasonic Propulsion of Renal Calculi in a Human Phantom". *Journal of Endourology*. 2014 Apr;28(4):459-63. PMID: 24228719
21. Macleod L, **Hsi RS**, Gore JL, Wright JL, Harper JD. "Perinephric fat thickness is an independent predictor of operative complexity during robotic partial nephrectomy". *Journal of Endourology* 2014 May;28(5):587-91. PMID: 24377723
22. **Hsi RS**, Holt SK, Gore JL, Harper JD. "Trends in Follow-up Imaging after Adult Pyeloplasty". *Journal of Urology*. 2014 May;191(5):1357-62. PMID: 24423439
23. Sorensen MD, **Hsi RS**, Chi T, Shara N, Wactawski-Wende J, Kahn AJ, Wang H, Hou L, Stoller ML. "Dietary Intake of Fiber, Fruit and Vegetables Decrease the Risk of Incident Kidney Stones in Women: A Women's Health Initiative (WHI) Report." *Journal of Urology*. 2014 Dec;192(6):1694-9. PMID: 24859445
24. Harper JD, Dunmire B, Wang YN, Simon JC, Liggitt D, Paun M, Cunitz BW, Starr F, Bailey MR, Penniston K, Lee FC, **Hsi RS**, Sorensen MD. "Preclinical Safety and Effectiveness Studies of Ultrasonic Propulsion of Kidney Stones." *Urology*. 2014 Aug;84(2):484-9. PMID:24975708.

25. Dunmire B, Lee FC, **Hsi RS**, Cunitz BW, Paun M, Bailey MR, Sorensen MD, Harper JD. “Tools to improve the accuracy of kidney stone sizing with ultrasound.” *Journal of Endourology*. 2015 Feb;29(2):147-52. PMID: 25105243
26. Maxwell AD, Cunitz BW, Kreider W, Sapozhnikov OA, **Hsi RS**, Harper JD, Bailey MR, Sorensen MD. “Fragmentation of urinary calculi in vitro by burst wave lithotripsy.” *Journal of Urology*. 2015 Jan;193(1):338-44. PMID: 25111910
27. **Hsi RS**, Holt SK, Gore JL, Lendvay TS, Harper JD. “National Trends in Follow-up Imaging after Pyeloplasty in Children in the US”. *Journal of Urology*. 2015 Sep;194(3):777-82. PMID: 25868576.
28. Lee FC, **Hsi RS**, Sorensen MD, Dunmire B, Liu Z, Bailey MR, Harper JD. “Renal vasoconstriction occurs early during clinical SWL using a renal protection protocol.” *Journal of Endourology*. 2015 Dec;29(12):1392-5. PMID: 26239232
29. Dunmire B, Harper JD, Cunitz BW, Lee FC, **Hsi R**, Liu Z, Bailey MR, Sorensen MD. “Use of the acoustic shadow width to determine kidney stone size with ultrasound.” *Journal of Urology*. 2016 Jan;195(1):171-7. PMID: 26301788
30. **Hsi RS**, AJ Spieker, ML Stoller, DR Jacobs, AP Reiner, RL McClelland, AJ Kahn, T Chi, M Szklo, MD Sorensen. “Coronary artery calcium score and association with recurrent nephrolithiasis: the Multi-Ethnic Study of Atherosclerosis.” *Journal of Urology*. 2016 Apr;195(4P1):971-6. PMID: 26454103
31. Harper JD, Cunitz BW, Dunmire B, Lee FC, Sorensen MD, **Hsi RS**, Thiel J, Wessells H, Lingeman JE, Bailey MR. “First-in-human clinical trial of ultrasonic propulsion of kidney stones.” *Journal of Urology*. 2016 Apr;195(4P1):956-64. PMID: 26521719
32. Dy GW, **Hsi RS**, Holt SK, Lendvay TS, Gore JL, Harper JD. “National Trends in Secondary Procedures Following Pediatric Pyeloplasty.” *Journal of Urology*. 2016 Apr;195(4 Pt 2):1209-14. PMID: 26926543.
33. **Hsi RS**, Ramaswamy K, Ho SP, Stoller ML. “The origins of urinary stone disease: upstream mineral formations initiate downstream Randall’s plaque.” *BJU Int*. 2017 Jan;119(1):177-84. PMID: 27306864
34. Lee FC, Holt SK, **Hsi RS**, Haynes B, Harper JD. “Preoperative Belladonna and Opium Suppository for Ureteral Stent Pain: a Randomized, Double-Blinded Placebo Controlled Study.” *Urology*. 2017 Feb;100:27-32. PMID:27658661
35. **Hsi RS**, Sanford T, Goldfarb DS, Stoller ML. “The role of the 24-hour urine collection in the prevention of kidney stone recurrence.” *Journal of Urology*. 2017 Apr;197(4):1084-1089. PMID: 27746283
36. Chang H, Tzou DT, Usawachintachit M, Duty BD, **Hsi RS**, Harper JD, Sorensen MD, Stoller M, Sur RL, Chi T. “Rationale and Design of the Registry for Stones of the Kidney and Ureter (ReSKU™): A Prospective, Observational Registry to Study the Natural History of Urolithiasis Patients. *Journal of Endourology*. 2016 Dec;30(12):1332-1336. PMID: 27758162
37. Usawachintachit, M, Isaacson DS, Taguchi K, Tzou DT, **Hsi RS**, Sherer BA, Stoller ML, Chi T. “A Prespective Case-Control Study Comparing LithoVue, a Single-Use Flexible Disposable Ureteroscope with Flexible, Reusable Fiber-Optic Ureteroscopes.” *Journal of Endourology*. 2017 May;31(5):468-75. PMID: 28287823.
38. Sherer BA, Chen L, Yang F, Ramaswamy K, Killilea D, **Hsi RS**, Stoller ML, Ho SP. “Heterogeneity in Calcium Nephrolithiasis: A Materials Perspective.” *Journal of Materials Research*. 2017;32(13):2497-2509
39. Graves CE, Co C, **Hsi RS**, Kwiat D, Imamura-Ching J, Harrison MR, Stoller ML. “Magnetic Compression Anastomosis (Magnamosis): First-In-Human Trial.” *Journal of the American College of Surgeons*. In press – Available online 23 Aug 2017. PMID: 28843832.
40. Tzou DT, Isaacson D, Usawachintachi M, Wang ZJ, Taguchi K, Hills NK, **Hsi RS**, Sherer BA, Reliford-Titus S, Duty B, Harper J, Sorensen M, Sur RL, Stoller ML, Chi T. “Variation in

- Radiologic and Urologic Computed Tomography Interpretation of Urinary Tract Stone Burden: Results From ReSKU.” *Urology*. 2017 Oct 12 [Epub ahead of print] PMID: 29032235.
41. Shu X, Cai H, Xiang YB, Li H, Lipworth L, Miller NL, Zheng W, Shu XO, **Hsi RS**. “Nephrolithiasis among middle aged and elderly urban Chinese: A report from prospective cohort studies in Shanghai.” *Journal of Endourology*. 2017 Dec;31(12):1327-1334. PMID: 29048227.
 42. Chen L, **Hsi RS**, Yang F, Sherer Ba, Stoller ML, Ho SP. “Anatomically-specific intratubular and interstitial biominerals in the human renal medullo-papillary complex.” *PLoS One*. 2017 Nov 16(11):e0187103. PMID: 29145401.
 43. Usawachintachit M, Sherer B, Hudnall M, Tzou DT, Taguchi K, **Hsi RS**, Stoller M, Chi T. “Clinical outcomes for cystinuria patients with unilateral versus bilateral cystine stone disease.” *J Endourol*. 2017 Nov 27 [Epub ahead of print]. PMID: 29179563.
 44. May PC, **Hsi RS**, Tran HH, Stoller M, Chew BH, Chi T, Usawachintachi M, Duty BD, Gore JL, Harper JD. “The Morbidity of Ureteral Strictures in Patients with Prior Ureteroscopic Stone Surgery: Multi-Institutional Outcomes.” *J Endourol*. 2018 Apr;32(4):309-14. PMID: 29325445.
 45. Tierney JE, Schlunk SG, Jones R, George M, Karve P, Duddu R, Byram BC, **Hsi RS**. “In vitro feasibility of next generation non-linear beamforming ultrasound methods to characterize and size kidney stones.” *Urolithiasis*. 2018 Jan 22 [Epub ahead of print] PMID: 29356874.
 46. **Hsi RS**, Kabagambe EK, Shu X, Han X, Miller NL, Lipworth L. “Race- and Sex-Related Differences in Nephrolithiasis Risk among Blacks and Whites in the Southern Community Cohort Study.” *Urology*. 2018 May 10 [Epub ahead of print] PMID: 29753847.

EDITORIALS, COMMENTARIES, AND LETTERS

1. **Hsi RS**, Stoller ML. “A Spectrum: Nephrocalcinosis-Nephrolithiasis.” *Journal of Urology*. 2015 Nov;194(5):1188-9. PMID: 26279238 (Editorial)
2. **Hsi RS**, Stoller ML, Miller NL. “Pro: Ultrasonography is an Adequate Initial Screening Test for Urinary Calculi.” *Journal of Urology*. 2016 Sep;196(3):645-7. PMID: 27312317 (Editorial)
3. **Hsi R**, Stoller ML. “Complete Metabolic Evaluation is Indicated after a First Stone Event: Con.” *Journal of Urology*. 2016 Dec 16. PMID: 27992753 (Editorial)
4. **Hsi RS**. RE: Cessation of Ureteral Colic Not Indicative of Ureteral Stone Expulsion (*J Urol*, November 15, 2017), Practice Update. (Invited commentary)
5. **Hsi RS**. RE: Same-Session Bilateral Ureteroscopy for Multiple Stones (*J Urol*, July 06, 2017), Practice Update. (Invited commentary)
6. **Hsi RS**. RE: Performance of Quick Sequential (Sepsis Related) and Sequential (Sepsis Related) Organ Failure Assessment to Predict Mortality in Patients with Acute Pyelonephritis Associated with Upper Urinary Tract Calculi. *Journal of Urology*. 2018 Mar 20 PMID: 29571691 (Editorial Comment).
7. **Hsi RS**. RE: National Imaging Trends after Percutaneous Nephrolithotomy. *Journal of Urology*. 2018 Apr 9 PMID: 29649422 (Editorial Comment).
8. **Hsi RS**. Cessation of Ureteral Colic Does Not Necessarily Mean That a Ureteral Stone Has Been Expelled. PracticeUpdate website. Available at:<http://www.practiceupdate.com/content/cessation-of-ureteral-colic-not-indicative-of-ureteral-stone-expulsion/60463/65/3/1>. Accessed June 05, 2018. (Invited commentary)
9. **Robles J, Hsi RS. Re:** Time-Driven Activity-Based Costing Analysis of Urological Stone Disease. *Urology Practice*. 2018 (In press). (Editorial Commentary)

TEXTBOOK CHAPTERS

1. Lendvay TS, **Hsi RS**. “Robotic-Assisted Urologic Applications”. Surgical Robotics – Systems, Applications, and Visions. Chapter 28. Ed. Rosen J, Hannaford B, Satava R. Springer: Dec 2010.
2. **Hsi RS**, Stoller ML. “Management of Ureteral Injury”. Complications of Urologic Surgery: Prevention and Management, 5th Edition. Chapter 14. Ed. Taneja T. Elsevier: Nov 2017.

PUBLISHED ABSTRACTS

1. Saint-Elie DT, **Hsi RS**, Ebrahimi K, Harper JD, Baldwin DD. Vascular Complications During Laparoscopic Nephrectomy: Lessons Learned From a Review of the FDA Database. *Journal of Endourology* 2006; 20:Supplement 1, A43.
2. **Hsi RS**, Lindler TU, Lamberton GR, Baldwin DD. Vascular Complications During Laparoscopic Nephrectomy: Lessons Learned From A Review of the FDA Database. *Journal of Urology* 2007; 177(4), Supplement 1:406.
3. Lamberton, GR, Lindler TU, Jin DH, **Hsi RS**, Baldwin DD. Prospective Comparison Between Four Laparoscopic Vessel Ligation Instruments. *Journal of Endourology* 2007; 21:Supplement 1, A134.
4. **Hsi RS**, Lindler TU, Lamberton GR, Baldwin DD. Vascular Complications During Laparoscopic Donor Nephrectomy. *Journal of Endourology* 2007; 21:Supplement 1, A36.
5. Lamberton GR, Lindler TU, Jin DH, Broome DR, Saaty HP, **Hsi RS**, Baldwin DD. Effect of Reduced Milliampere-seconds on Stone Detection Rates During Computed Tomography. *Journal of Endourology* 2007; 21:Supplement 1, A10-11.
6. Lamberton GR, Jin DH, Broome DR, Saaty HP, Bhattacharya S, Lindler TU, **Hsi RS**, Baldwin DD. Low Radiation Dosage CT Scan for the Detection of Small Renal Calculi. *Journal of Urology* 2008; 179(4), Supplement 1:727.
7. **Hsi RS**, Torrey R, McAllister MW, Baldwin DD. Vascular Complications Reported to the FDA Occurring During Laparoscopic Donor Nephrectomy. *Journal of Urology* 2008; 179(4), Supplement 1:664.
8. Harper J, Sorensen M, **Hsi RS**, Simon J, Wang WN, Paun M, Starr F, Lu W, Cunitz B, Bailey M. Ureteroscopic Observtion of Ultrasonic Propulsion of Kidney Stones (video). *Journal of Urology* 2012; 187(4), Page e693.
9. **Hsi RS**, Harper JD. Fluoro-less Ureteroscopy: minimizing intraoperative radiation during ureteroscopic procedures. *Journal of Urology* 2012; 187(4), Page e886.
10. **Hsi RS**, Hotaling J, Hartzler A, Walsh T. Validity and Reliability of a Smartphone Application for the Assessment of Penile Deformity in Peyronie’s Disease. *Journal of Urology* 2013; 189(4), Page e508.
11. Conners B, Evan A, Blomgren P, **Hsi RS**, Harper J, Sorensen M, Wang YN, Simon J, Paun M, Starr F, Cunitz B, Bailey M. Comparison of Tissue Injury from a Novel Technique of Focused Ultrasonic Propulsion of Kidney Stones Versus Extracorporeal Shock Wave Lithotripsy. *Journal of Urology* 2013; 189(4), Page e637.
12. Sorensen M, Chi T, Shara N, Wang H, **Hsi RS**, Orchard T, Miller J, Kahn A, Jackson R, Reiner A, Stoller M. Physical Activity and Dietary Energy Intake are Independently Associated with Incident Kidney Stones in Women: A Report from the Women’s Health Initiative (WHI). *Journal of Urology* 2013; 189(4), Page e28.

13. Sorensen M, **Hsi RS**, Chi T, Kahn A, Shara N, Wang H, Stoller M. Dietary Intake of Fiber, Vegetables, and Fruit Decrease the Risk of Incident Kidney Stones in Women: A Women's Health Initiative (WHI) Report. *Journal of Urology* 2013; 189(4), Page e858.
14. Wei L, Sapozhnikov OA, **Hsi RS**, Harper JD, Bailey MR, Kaczowski PJ, Cunitz BW, Dunmire B, Kucewicz J, Crum LA, Sorensen MD. Evidence for Trapped Surface Micro-Bubbles as the Etiology of the Twinkling Artifact Observed from Ultrasound Imaging of Kidney Stones. *Journal of Urology* 2013; 189(4), Page e830-1.
15. Wang YN, Simon J, **Hsi RS**, Harper J, Sorensen M, Starr F, Paun M, Cunitz B, Liggitt HD, Evan A, McAteer J, Bailey M. Determination of Tissue Injury Threshold from Focused Therapeutic Ultrasound. *Journal of Urology* 2013; 189(4), Page e638.
16. **Hsi RS**, Dearn J, Dean M, Zamora D, Kanal K, Harper J, Merguerian P. Effective and Organ Specific Doses from Videourodynamic in Children. *Journal of Urology* 2013; 189(4), Page e201-2.
17. **Hsi RS**, Zamora D, Kanal K, Harper J. Dependence of Fluoroscopy Dose Rate on Obesity and Body Density During Ureteroscopy. *Journal of Urology* 2013; 189(4), Page e825.
18. Bailey M, Wang YN, Simon JC, Cunitz BW, Harper JD, **Hsi RS**, Starr F, Paun M, Dunmire B, Sapozhnikov OA, Crum LA, Sorensen MD. Acoustic radiation force to reposition kidney stones. *J Acoust Soc Am.* 2013 May;133(5):3279.
19. Wang YN, Simon JC, Cunitz BW, Starr FL, Paun M, Denny L, Evan AP, McAteer JA, Williams JC, Liu Z, Kaczowski PJ, **Hsi RS**, Sorensen MD, Harper JD, Bailey MR. Determination of tissue injury thresholds from ultrasound in a porcine kidney model. *J Acoust Soc Am.* 2013 May;133(5):3411.
20. Maxwell A, **Hsi RS**, Bailey R, Casale P, Lendvay TS. "Cavitation-Based Focused Ultrasound for Noninvasive Puncture of Ureterocele: In vitro results." *Journal of Endourology* 2013; 27:Supplement 1, A360.
21. **Hsi RS**, Cunitz BW, Dunmire B, Paun M, Sorensen MD, Bailey MR, Harper JD. "Development of Dedicated Stone Detection Protocols Using a Research-Based Ultrasound Imager". *Journal of Endourology* 2013; 27:Supplement 1, A315-6.
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PRESENTATIONS AS PRIMARY PRESENTER

1. **Hsi RS**, Saint-Elie DT, Ebrahimi K, Harper JD, Baldwin DD. “Vascular complications during laparoscopic nephrectomy: lessons learned from a review of the FDA database.” 24th World Congress of Endourology. Cleveland, Ohio. August 17-20 2006. (Virtual Poster)
2. **Hsi RS**, Lamberton GR, Bhattacharya S, Lindler TU, Kaura B, Baldwin DD. “Ureteroscope Autopsy: Durability Analysis of Flexible Ureteroscopes.” Annual Postgraduate Convention. Loma Linda, California. March 4, 2007. (Poster)
3. **Hsi RS**, Ojogho ON, Baldwin DD. “Vascular Complications During Laparoscopic Donor Nephrectomy: A Review of the FDA Database.” Annual Postgraduate Convention. Loma Linda, California. March 2, 2008. (Poster)
4. **Hsi RS**, Torry R, McAllister MW, Baldwin DD. “Vascular Complications Reported to the FDA Occurring During Laparoscopic Donor Nephrectomy.” American Urological Association Annual Meeting. Orlando, Florida. May 17-22, 2008. (Podium)
5. **Hsi RS**, Hotaling JM, Shah A, Wessells H, Voelzke BB. “Posterior Urethroplasty: The Harborview Experience.” Northwest Urological Society Annual Meeting. Bellevue, WA. December 4, 2009.
6. **Hsi RS**, Shah A, Dighe M, Paun M, Wright J, Bailey M, Harper J. “Using Diagnostic Ultrasound to Assess Efficacy of Shockwave Lithotripsy Treatment.” Northwest Urological Society Annual Meeting. December 4, 2010.
7. **Hsi RS**, Hotaling JM, Spencer ES, Bollyky PL, Walsh TJ. “Isolated Infection of a Decommissioned Penile Prosthesis Reservoir with *Actinomyces neuii*: A case for always removing the reservoir?” Northwest Urological Society Annual Meeting. Vancouver, BC. December 4, 2010.

8. **Hsi RS**, Shah A, Harper JD, Sorensen MD, Paun Marla, Bailey MR. "Quantitative Assessment of Shockwave Lithotripsy." American Urological Association Annual Meeting. Washington D.C. May 17, 2011. (Poster)
9. **Hsi RS**, Shah A, Harper JD, Cunitz BW, Kucewicz JC, Wang YN, Simon JC, Lu W, Kaczowski PJ, Bailey MR. "Prototype for Ultrasonic Expulsion of Kidney Stones." American Urological Association Annual Meeting. Washington D.C. May 17, 2011. (Poster)
10. **Hsi RS**, Gore JL, Harper JD. "Selective Renal Ischemia During Laparoscopic Robotic Partial Nephrectomy: Early Experience with a Parenchymal Clamp." Western Section, American Urological Association Annual Meeting. Vancouver, BC. August 21, 2011. (Poster)
11. **Hsi RS**, Harper JD. "Fluoro-less Ureteroscopy: Minimizing intraoperative radiation during ureteroscopic procedures." Northwest Urological Society Annual Meeting. Portland, OR. December 3, 2011.
12. **Hsi RS**, Harper JD. "Fluoro-less Ureteroscopy: minimizing intraoperative radiation during ureteroscopic procedures." American Urological Association Annual Meeting. Atlanta, GA. May 23, 2012. (Moderated Poster)
13. **Hsi RS**. "Difficult Foley Catheter Placement." UW Urology Junior Resident Bootcamp. June 29, 2012.
14. **Hsi RS**. "Radiation and the Urologist: Key concepts and considerations." UW Department of Urology Grand Rounds. August 1, 2012.
15. **Hsi RS**. "Priapism: Insights into evaluation and management." UW Department of Emergency Medicine Grand Rounds. August 29, 2012.
16. **Hsi RS**, Wang YN, Simon J, Harper JD, Sorensen MD, Starr F, Paun M, Cunitz B, Liggitt HD, Evan AP, McAteer J, Bailey MR. "Ultrasound-Induced Renal Injury Threshold." Western Section, American Urological Association Annual Meeting. Waikoloa, HI. October 7, 2012. (Moderated Poster)
17. **Hsi RS**, Dunmire B, Sorensen MD, Kucewicz J, Bailey MR, Cunitz B, Harper JD. "Overestimation of Kidney Stone Size Increases with Depth and Gain." Western Section, American Urological Association Annual Meeting. Waikoloa, HI. October 7, 2012. (Moderated Poster)
18. **Hsi RS**, Harper JD, Sorensen MD, Cunitz B, Simon J, Wang YN, Paun M, Starr F, Lu W, Evan A, Liggitt HD, McAteer J, Bailey MR. "Preclinical Efficacy and Safety of Ultrasonic Propulsion of Kidney Stones." Western Section, American Urological Association Annual Meeting. Waikoloa, HI. October 10, 2012. (Podium)
19. **Hsi RS**, Gore JL, Wright JL, Harper JD. "Selective Renal Parenchymal Clamping Versus Hilar Clamping in Robotic-Assisted Laparoscopic Partial Nephrectomy: The UW Experience." Northwest Urological Society. Bellevue, WA. December 8, 2012. (Podium)
20. **Hsi RS**, Gore JL, Wright JL, Harper JD. "Does Obesity (BMI>30) Affect Outcomes with Robotic-Assisted Laparoscopic Partial Nephrectomy?" Northwest Urological Society. Bellevue, WA. December 8, 2012. (Podium)
21. **Hsi RS**, Dunmire B, Sorensen MD, Kucewicz JC, Bailey MR, Cunitz BW, Harper JD. "Overestimation of Kidney Stone Size Increases with Depth and Gain using Conventional Bmode Ultrasound." Northwest Urological Society. Bellevue, WA. December 8, 2012. (Podium)
22. **Hsi RS**, Penniston KL, Crenshaw TD, Nakada SY, Paun M, Dunmire B, Cunitz BW, Sorensen MD, Bailey MR, Harper JD. "Focused Ultrasound Repositions De Novo Calculi in an Established

- Stone-Forming Porcine Model”. Engineering and Urology Society, American Urological Association Annual Meeting. San Diego, CA. May 4, 2013. (Poster)
23. Maxwell A, **Hsi RS**, Bailey M, Casale P, Lendvay T. “Pulsed Focused Ultrasound as a Method for Noninvasive Treatment of Ureteroceles.” Engineering and Urology Society, American Urological Association Annual Meeting. San Diego, CA. May 4, 2013. (Poster)
 24. **Hsi RS**, Cunitz BW, Dunmire B, Paun M, Harper JD, Bailey MR, Sorensen MD. “Development of Dedicated Stone Detection Protocols Using a Research-Based Ultrasound Imager”. Engineering and Urology Society, American Urological Association Annual Meeting. San Diego, CA. May 4, 2013. (Poster)
 25. **Hsi RS**, Dearn J, Dean M, Zamora D, Kanal K, Harper JD, Merguerian P. “Effective and Organ Specific Doses from Videourodynamics in Children”. American Urological Association Annual Meeting. San Diego, CA. May 5, 2013. (Moderated Poster)
 26. **Hsi RS**, Hotaling JM, Hartzler AL, Holt SK, Walsh TJ. “Validity and Reliability of a Smartphone Application for the Assessment of Penile Deformity in Peyronie’s Disease”. American Urological Association Annual Meeting. San Diego, CA. May 6, 2013. (Moderated Poster)
 27. Wang YN, Simon J, **Hsi RS**, Harper JD, Sorensen MD, Starr F, Paun M, Cunitz B, Liggitt HD, Evan AP, McAteer JA, Bailey MR. “Determination of tissue injury threshold from focused therapeutic ultrasound”. American Urological Association Annual Meeting. San Diego, CA. May 7, 2013. (Podium)
 28. Wei L, Sapozhnikov OA, **Hsi RS**, Harper JD, Bailey MR, Kaczowski PJ, Cunitz BW, Dunmire B, Kucewicz J, Crum LA, Sorensen MD. “Evidence for Trapped Surface Micro-Bubbles as the Etiology of the Twinkling Artifact Observed from Ultrasound Imaging of Kidney Stones.” American Urological Association Annual Meeting. San Diego, CA. May 8, 2013. (Moderated Poster)
 29. **Hsi RS**, Zamora D, Kanal K, Harper JD. “Dependence of Fluoroscopy Dose Rate on Obesity and Body Density during Ureteroscopy”. American Urological Association Annual Meeting. San Diego, CA. May 8, 2013. (Moderated Poster)
 30. **Hsi RS**. “Manipulation of Urinary Tract Calculi with Ultrasound: Update and future directions.” UW Department of Urology Grand Rounds. May 22, 2013.
 31. **Hsi RS**, Macleod LC, Gore JL, Wright JL, Harper JD. “Comparison of Selective Parenchymal Clamping to Hilar Clamping During Robotic-Assisted Laparoscopic Partial Nephrectomy”. World Congress of Endourology. New Orleans, LA. Oct 24, 2013. (Moderated Poster)
 32. **Hsi RS**, Holt SK, Gore JL, Harper JD. “National Trends in Follow-up Anatomic and Functional Imaging after Pyeloplasty: Is success overestimated?” World Congress of Endourology. New Orleans, LA. Oct 23, 2013. (Moderated Poster)
 33. **Hsi RS**, Dunmire B, Cunitz BW, He X, Sorensen MD, Harper JD, Bailey MR, Lendvay TS. “Content and Face Validation of a Curriculum for Ultrasonic Propulsion of Renal Calculi in a Human Phantom”. World Congress of Endourology. New Orleans, LA. Oct 23, 2013. (Moderated Poster)
 34. **Hsi RS**, Cunitz BW, Dunmire B, Paun M, Sorensen MD, Bailey MR, Harper JD. “Development of Dedicated Stone Detection Protocols Using a Research-Based Ultrasound Imager”. World Congress of Endourology. New Orleans, LA. Oct 24, 2013. (Moderated Video)

35. Macleod LC, **Hsi RS**, Gore JL, Wright JL, Harper JD. "Perinephric Fat Thickness Increases Operative Complexity Independent of Nephrometry Score During Robotic Partial Nephrectomy". World Congress of Endourology. New Orleans, LA. Oct 24, 2013. (Moderated Poster)
36. **Hsi RS**, Macleod LC, Gore JL, Wright JL, Harper JD. "Comparison of Selective Parenchymal Clamping to Hilar Clamping During Robotic-Assisted Laparoscopic Partial Nephrectomy". Western Section AUA. Monterey, CA. Nov 6, 2013. (Podium)
37. **Hsi RS**. "Cardiovascular Implications of Kidney Stone Disease." UW Department of Urology Grand Rounds. February 26, 2014.
38. **Hsi RS**, Holt SK, Gore JL, Harper JD. "National Trends in Follow-Up Imaging after Pyeloplasty in Children" University of Washington Research Day. Seattle, WA. June 14, 2014. (Podium)
39. Sorensen M, Kreider W, Maxwell A, Cunitz B, Wang YN, **Hsi R**, Lee F, Khokhlova V, Connors B, Evans A, Bailey M, Harper J. "Evaluation of In Vivo Hemorrhagic Kidney Injury Caused by Burst Wave Lithotripsy." World Congress of Endourology. Taipei, Taiwan. Sept 4, 2014. (Moderated Poster)
40. Lee F, Cunitz B, Dunmire B, Sorensen M, Liu Ziyue, **Hsi R**, Bailey M, Harper J. "Novel Automated Stone Detection System to Measure Renal Calculi with Ultrasound." World Congress of Endourology. Taipei, Taiwan. Sept 4, 2014. (Moderated Poster)
41. Lee F, **Hsi R**, Sorensen M, Paun M, Dunmire B, Liu Ziyue, Bailey M, Harper J. "Shockwave Lithotripsy with Renoprotective Pause is Associated with Renovascular Vasoconstriction in Humans." World Congress of Endourology. Taipei, Taiwan. Sept 4, 2014. (Moderated Poster)
42. Lee, F, Dunmire B, Harper J, Liu Ziyue, **Hsi R**, Bailey M, Sorensen M. "The Acoustic Shadow Width is a More Accurate Predictor of True Stone Size During Ultrasound." World Congress of Endourology. Taipei, Taiwan. Sept 6, 2014. (Moderated Poster)
43. **Hsi R**, Holt S, Gore J, Harper J. "National Trends in Follow-Up Imaging After Pyeloplasty in Children in the US." World Congress of Endourology. Taipei, Taiwan. Sept 6, 2014. (Moderated Poster)
44. **Hsi RS** and Chery LJ. "AUA Guideline Review: microhematuria and urotrauma". UW Resident Campbell's Review. July 25, 2014.
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52. K Ramaswamy, **Hsi**, D Chrzan, T Chi, D Killilea, A Kahn, P Kapahi, ML Stoller. "Inhibition of Nucleation of Growth of Cystine Crystals in Urine." World Congress of Endourology. London, United Kingdom. Oct 1, 2015. (Moderated Poster)
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56. **Hsi RS**. "Kidney Stones and Cardiovascular Disease: Implications for Early Intervention." NYU Department of Urology Grand Rounds. November 9, 2015.
57. **Hsi RS**. "Kidney Stones and Cardiovascular Disease: Implications for Early Intervention." Vanderbilt University Department of Urology Grand Rounds. January 11, 2016.
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63. Miller N, Pickens R, Viprakasit D, **Hsi R**. "Challenging Cases in Endourology and MIS." Vanderbilt Urology Society Rhamy-Shelley Program, Nashville, TN. November 11, 2016. (Panel Discussion).
64. **Hsi R**. "Why Engineers Should Care about Kidney Stones." Vanderbilt Institute for Surgery and Engineering (VISE) Seminar, Nashville, TN. April 13, 2017. (Invited Speaker).
65. **Hsi R**. "Update on the surgical and medical management of cystinuria." International Cystinuria Foundation. Nashville, TN. April 25, 2017. (Invited Speaker).

66. **Hsi R.** “Debate: Utility of a 24-Hour Urine in Managing Stone Disease, Con.” ROCK Society, American Urological Association Annual Meeting. Boston, MA. May 15, 2017 (Invited Speaker).
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69. **Hsi R.** “Kidney Stone Care: What are the Quality Indicators?” Vanderbilt Urology Society Rhamy-Shelley Program, Nashville, TN, October 13, 2017. (Invited Speaker).
70. **Hsi R.** “Natural Language Processing-Based Phenotyping of Kidney Stone Formers from Electronic Health Records.” ROCK Society Annual Meeting. Rochester, NY. April 13, 2018.
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INTERVIEWS AND MULTIMEDIA

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