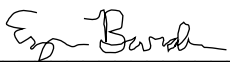


CURRICULUM VITAE
The Johns Hopkins University School of Medicine


Ezra Baraban, M.D.

September 5, 2025

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

1/22-present Assistant Professor of Pathology, Johns Hopkins University School of Medicine
1/22-present Attending Pathologist, The Johns Hopkins Hospital

Personal Data

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Education and Training

9/07-6/11 BS, Biology with Distinction, Yale College, New Haven CT, Magna Cum Laude
7/12-6/16 MD, Yale School of Medicine, New Haven CT
7/16-6/20 Residency in Anatomic & Clinical Pathology, Hospital of the University of Pennsylvania, Philadelphia, PA

Professional Experience

7/20-6/21 Faculty Assistant, Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD
7/21-12/21 Genitourinary Pathology Fellow, Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD
1/22-present Assistant Professor, Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD

PUBLICATIONS

Original Research [OR]

1. Lim HK, Lim HK, Ryoo S, Benjo A, Shuleri K, Miriel V, **Baraban E**, Camara A, Soucy K, Nyhan D, Shoukas A, Berkowitz DE. Mitochondrial arginase II Constrains endothelial NOS-3 activity. *Am J Physiol Heart Circ Physiol.* 2007;293(6):H3317-3324.
2. Ryoo S, Gupta G, Benjo A, Lim HK, Camara A, Sikka G, Lim HK, Sohi J, Santhanam L, Soucy K, Taday E, **Baraban E**, Ilies M, Gerstenblith G, Nyhan D, Shoukas A, Christianson DW, Alp NJ, Champion HC, Huso D, Berkowitz DE. Endothelial arginase II: a novel target for the treatment of atherosclerosis. *Circ Res.* 2008;102(8):923-932.
3. Sikka G, Yang R, Reid S, Benjo A, Koitabashi N, Camara A, **Baraban E**, O'Donnell CP, Berkowitz DE, Barouch LA. Leptin is essential in maintaining normal Vascular compliance independent of body weight. *Int J Obes (Lond).* 2010;34(1):203-206.
4. **Baraban EG**, Morin JB, Phillips GM, Phillips AJ, Strobel SA, Handelsman J. Xyolide, a bioactive nonenolide from an Amazonian endophytic fungus, *Xylaria feejeeensis*. *Tetrahedron Lett.* 2013;54(31):4058-4060.
5. Stulberg ER, Lozano GL, Morin JB, Park H, **Baraban EG**, Mlot C, Heffelfinger C, Phillips GM, Rush JS, Phillips AJ, Broderick NA, Thomas MG, Stabb EV, Handelsman J. Genomic and Secondary Metabolite Analyses of *Streptomyces* sp. 2AW Provide Insight into the Evolution of the Cycloheximide Pathway. *Front Microbiol.* 2016;7:573.
6. **Baraban E**, Hu S, Hui P, Podoltsev N, Cooper D, Xu M. Tissue Based Chimerism Analysis Enhances Detection of Donor Derived Neoplasia in Allogeneic Stem Cell Transplant Patients. *Bone Marrow Transplant.* 2017;52(4):634-637.

7. Lubin D, **Baraban E**, Lisby A, Jalali-Farahani S, Zhang P, Livolsi V. Papillary Thyroid Carcinoma Emerging from Hashimoto Thyroiditis Demonstrates Increased PD-L1 Expression, Which Persists with Metastasis. *Endocr Pathol.* 2018;29(4):317-323.
8. **Baraban E**, Zhang PJ, Jaffer S, Lubin D, Feldman M, Bleiweiss IJ, Nayak A. MYB rearrangement and immunohistochemical expression in adenomyoepithelioma of the breast: a comparison with adenoid cystic carcinoma. *Histopathology.* 2018;73(6):897-903.
9. Weinberg OK, Hasserjian RP, **Baraban E**, Ok CY, Geyer JT, Philip, JKSS, Hurzer JH, Rogers JH, Stone R, Garcia J, Bagg A, Wang S, Orazi A, Arber DA. Acute Undifferentiated Leukemia: Clinical, Immunophenotypic, and Genomic Findings and Comparison to AML with Minimal Differentiation. *Mod Pathol.* 2019;32(9):1373-1385.
10. Lubin D, Toorens E, Zhang PJ, Jaffer S, **Baraban E**, Bleiweiss IJ, Nayak A. Adenomyoepitheliomas of the Breast Frequently Harbor Recurrent Hotspot Mutations in PIK3-AKT Pathway-related Genes and a Subset Show Genetic Similarity to Salivary Gland Epithelial-Myoepithelial Carcinoma. *Am J Surg Pathol.* 2019;43(7):1005-1013.
11. **Baraban E**, Sadigh S, Rosenbaum J, Van Arnam J, Bogusz AM, Mehr C, Bagg A. Cyclin D1 expression and novel mutational findings in Rosai-Dorfman disease. *Br J Haematol.* 2019;186(6):837-844.
12. Zou Y, Watters A, Cheng N, Perry CE, Xu K, Alicea GM, Parris JLD, **Baraban E**, Ray P, Nayak A, Xu X, Herlyn M, Murphy ME, Weeraratna AT, Schug ZT, Chen Q. Polyunsaturated Fatty Acids from Astrocytes Activate PPAR γ Signaling in Cancer Cells to Promote Brain Metastasis. *Cancer Discov.* 2019;9(12):1720-1735.
13. Herman DS, Toro E, **Baraban EG**, Bagg A, Wang P. Falsely Increased Plasma Lactate Dehydrogenase without Hemolysis Following Transport through Pneumatic Tube System. *J Appl Lab Med.* 2019;4(3):433-438.
14. **Baraban E**, Tong CCL, Adappa ND, Cooper K. A Subset of Sinonasal Undifferentiated Carcinoma (SNUC) is Associated with Transcriptionally Active High-Risk Human Papillomavirus by In-Situ Hybridization (ISH): A Clinical and Pathologic Analysis. *Hum Pathol.* 2020;101:64-69.
15. Lou R, Lazor JW, **Baraban E**, Cooper K, Ware JB, Pantel A. ⁶⁸Ga-DOTATATE Uptake in an Endolymphatic Sac Tumor: Radiologic-Pathologic Correlation. *Clin Nucl Med.* 2020;45(7):563-565.
16. Wachtel H, Hutchens T, **Baraban E**, Schwartz L, Montone K, Baloch Z, LiVolsi V, Krumeich L, Fraker DL, Nathanson KL, Cohen DL, Fishbein L. Predicting Metastatic Potential in Pheochromocytoma and Paraganglioma: A Comparison of PASS and GAPP Scoring Systems. *J Clin Endocrinol Metab.* 2020;105(12):34661-2670.
17. Liang A, **Baraban E**, Myers KS, Mullen LA, Panigrahi B, Oluyemi E, Cimino-Mathews A, Ambinder EB. Developing Asymmetries without Sonographic Correlate at Digital Breast Tomosynthesis. *Radiology.* 2022 Mar;302(3):525-532.
18. **Baraban E**, Ding CC, White M, Vohra P, Simko J, Boyle K, Guo C, Zhang M, Dobs A, Ketheeswaran S, Liang F, Epstein JI. Prostate Cancer in Male-to-Female Transgender Individuals: Histopathologic Findings and Association With Gender-affirming Hormonal Therapy. *Am J Surg Pathol.* 2022 Dec 1;46(12):1650-1658.
19. Argani P, Matoso A, **Baraban EG**, Epstein JI, Antonescu CR. *MED15::TFE3* Renal Cell Carcinomas: Report of Two New Cases and Review of the Literature Confirming Nearly Universal Multilocular Cystic Morphology. *Int J Surg Pathol.* 2023 Jan 2;10668969221143455.
20. Deutsch JS, Lipson EJ, Danilova L, Topalian SL, Jedrych J, **Baraban E**, Ged Y, Singla N, Choueiri TK, Gupta S, Motzer RJ, McDermott D, Signoretti S, Atkins M, Taube JM. Combinatorial biomarker for predicting outcomes to anti-PD-1 therapy in patients with metastatic clear cell renal cell carcinoma. *Cell Rep Med.* 2023 Feb 21;4(2):100947.
21. Argani P, Dickson BC, Gross JM, Matoso A, **Baraban E**, Antonescu CR. Ossifying Fibromyxoid Tumor of the Genitourinary Tract: Report of 4 Molecularly Confirmed Cases of a Diagnostic Pitfall. *Am J Surg Pathol.* 2023 Apr 6.
22. **Baraban E**, Erak E, Fatima A, Akbari A, Zhao J, Fletcher SA, Bhanji Y, de la Calle CM, Mamawala M, Landis P, Macura KJ, Pavlovich CP, Epstein JI. Identifying Men Who Can Remain on Active Surveillance Despite Biopsy Reclassification to Grade Group 2 Prostate Cancer. *J Urol.* 2023 Apr 12.
23. **Baraban E**, Ged Y, Singla N, Allaf ME, Gorin MA, Markowski MC, Rowe SP, Argani P. Vascular Expression of Prostate-specific Membrane Antigen (PSMA) in MiTF Family Translocation Renal Cell Carcinoma and Related Neoplasms. *Appl Immunohistochem Mol Morphol.* 2023 Jul 20.
24. Argani P, Medeiros LJ, Matoso A, **Baraban E**, Lotan T, Pawel BR, McKenney JK, Mehra R, Falzarano SM, Pallavajjala A, Lin MT, Patel S, Rawwas J, Bendel AE, Gagan J, Palsgrove DN. "Oncocytoid Renal Cell Carcinomas After Neuroblastoma" Represent TSC-mutated Eosinophilic Solid and Cystic Renal Cell Carcinomas: Association With Prior Childhood Malignancy and Multifocality With Therapeutic Implications. *Am J Surg Pathol.* 2023 Aug 1.

25. **Baraban EG**, Elias R, Lin MT, Ged Y, Zhu J, Pallavajjala A, Singla N, Lotan TL, Argani P, Eshleman JR, Epstein JI. High-Grade, Nonsarcomatoid Chromophobe Renal Cell Carcinoma: A Series of 22 Cases With Novel Molecular Features on a Subset. *Mod Pathol*. 2024 Mar 14;37(5):100472.
26. Rezaee M, Pallauf M, Fletcher S, Pavlovich C, **Baraban E**, Ged Y, Singla N. Prognostic Significance of pT3a Staging Subclassifications in Renal Cell Carcinoma: Not all pT3a are Equal. *Urologic Oncology*. 2024 Apr;42(4): 119.
27. Argani P, Gross JM, **Baraban E**, Rooper LM, Chen S, Lin MT, Gocke C, Agaimy A, Lotan T, Suurmeijer AJH, Antonescu CR. *TFE3*-Rearranged PEComa/PEComa-like Neoplasms Report of 25 New Cases Expanding the Clinicopathologic Spectrum and Highlighting its Association With Prior Exposure to Chemotherapy. *Am J Surg Pathol*. Apr 10 2024.
28. **Baraban E**, Thompson ED, Matoso A, Hruban RH, Argani P. Benign Islet Cells Within Peripancreatic Lymph Nodes: A Potential Diagnostic Pitfall. *Am J Surg Pathol*. 2024 May 9.
29. Rodriguez E, Fedorova T, Daskam M, **Baraban E**, Foote DC, Salvatori R, Singla N, Fishman EK, Chen Cardenas SM, Ball DW, Hamrahian AH, Mathur A, Morris-Wiseman LF. Adrenal cysts less than 10 cm can be safely observed. *World J Surg*. 2024 Jul 7.
30. Warmke LM, Strike SA, Fayad LM, Ahlawat S, Liu YJ, Mata DA, Rooper L, **Baraban E**, Zou YS, Gross JM. Undifferentiated round cell sarcoma with CRTC1::SS18 fusion: Expanding clinicopathologic features of a rare translocation sarcoma with prominent desmoplastic stroma. *Mod Pathol*. 2024 Jul 5:100555.
31. Rowe SP, Murtazaliev S, Oldan JD, Kaufmann B, Khan A, Allaf ME, Singla N, Pavlovich CP, De Marzo AM, **Baraban E***, Gorin MA*, Solnes LB*. Imaging of Chromophobe Renal Cell Carcinoma with ^{99m}Tc-Sestamibi SPECT/CT: Considerations Regarding Risk Stratification and Histologic Reclassification. *Mol Imaging Biol*. 2024 Jul 29. *Co-Corresponding Author
32. Liu W, Alam R, Choi SY, Wan Y, Zhang R, **Baraban E**, Matoso A, Matlaga BR, Winoker JS, Gracias DH. Untethered Microgrippers for Biopsy in the Upper Urinary Tract. *Adv Healthc Mater*. 2024 Aug 5:e2401407.
33. Dermawan JK, Malik F, Gross JM, **Baraban E**, Pratilas C, Mneimneh W, Trucco M, Sun W, Barr FG, D'Almeida Costa F, Fritchie KJ. Novel PAX3::MAML3 fusion identified in alveolar rhabdomyosarcoma, using DNA methylation profiling to expand the genetic spectrum of "fusion-positive" cases. *Mod Pathol*. 2024 Aug 13:100594.
34. Indulkar S, Ribeiro E, Osunkoya AO, Prieto-Granada CN, Giannico GA, **Baraban E**, Argani P, Matoso A. Clear Cell Adenocarcinoma of the Urinary Tract Primary to the Renal Pelvis: A Multi-institutional Clinicopathologic and Molecular Study of Five Patients. *The American Journal of Surgical Pathology*. October 10, 2024.
35. Ahmed TM, Fishman EK, Morris-Wiseman LF, **Baraban E**, Chu LC. Cinematic rendering of primary adrenal lymphoma. *Curr Probl Diagn Radiol*. 2024 Sep-Oct;53(5):641-647.
36. Cascone T, Awad MM, Spicer JD, He J, Lu S, Sepesi B, Tanaka F, Taube JM, Cornelissen R, Havel L, Karaseva N, Kuzdzal J, Petruzella LB, Wu L, Pujol JL, Ito H, Ciuleanu TE, de Oliveira Muniz Koch L, Janssens A, Alexandru A, Bohnet S, Moiseyenko FV, Gao Y, Watanabe Y, Coronado Erdmann C, Sathyanarayana P, Meadows-Shropshire S, Blum SI, Provencio Pulla M; CheckMate 77T Investigators. Perioperative Nivolumab in Resectable Lung Cancer. *N Engl J Med*. 2024 May 16;390(19):1756-1769.
37. **Baraban E**, Fishman EK, Lafaro K, Lin MT, Ged Y, Hruban RH, Argani P. A Confirmed Extrarenal Birt-Hogg-Dubé-Associated Oncocytic Neoplasm. *Am J Surg Pathol*. 2024 Sep 2.
38. **Baraban EG**, Gru A, Guo R, Elias R, Pallavajjala A, Dudley JC, Gross JM. Neurofibroma-like Desmoplastic Melanoma: A Series of Five Cases Exploring the Role of Molecular Testing as a Diagnostic Adjunct and Highlighting the Differential Diagnosis With Diffuse-type Neurofibroma. *Am J Surg Pathol*. 2025 Jan 1;49(1):1-10.
39. Wu Q, **Baraban E***, Gross JM. Perinephric myxoid pseudotumor of fat: A series of 13 cases and literature review. *Hum Pathol*. 2024 Dec;154:105681. *Co-Corresponding Author
40. Law S, Sanchez SI, Fomchenko K, Meyer A, **Baraban E**, Gross JM. Tenosynovitis with psammomatous calcifications: Series of 18 cases and review of the literature emphasizing a common source of expert consultation and updated differential diagnosis. *Virchows Arch*. 2024 Dec 5.
41. Ghabrial J, Stinnett V, Ribeiro E, Klausner M, Morsberger L, Long P, Middlezong W, Xian R, Gocke C, Lin MT, Rooper L, **Baraban E**, Argani P, Pallavajjala A, Murry JB, Gross JM, Zou YS. Diagnostic and Prognostic/Therapeutic Significance of Comprehensive Analysis of Bone and Soft Tissue Tumors Using Optical Genome Mapping and Next-Generation Sequencing. *Mod Pathol*. 2024 Dec 13;38(4):100684.
42. **Baraban EG**, Vlachou E, Patel S, Kates M, Johnson B, Smith A, Shenderov E, Sharma S, Denmeade SR, Brame A, Han M, De Marzo AM, Matoso A, Hoffman-Censits J. Nectin-4 Expression in Prostatic Adenocarcinoma: An Immunohistochemical Study. *Prostate*. 2025 Jan 2.

43. Ged Y, Touma A, Meza Contreras L, Elias R, Van Galen J, Cupo O, **Baraban E**, Singla N, Lee CH, Pal S, Zibelman M, Kotecha RR. Multi-institutional Analysis of Immune-Oncology Combination Therapy for Metastatic MiT Family Translocation Renal Cell Carcinoma. *J Immunother*. 2025 Feb 4.
44. Elias R, Nirschl T, Rezaee M, Yerrapragada A, Wang S, Cheaib J, Alam R, Patel S, Jing Y, Allaf M, McKean D, Klein AP, Fertig EJ, **Baraban E**, Ged Y, Yegnasubramanian S, Singla N. Clear cell renal cell carcinoma molecular subtypes differ by African and European genetic similarity groups. *Cancer Res Commun*. 2025 Mar 25.
45. Zheng L, Tabet G, Guo CC, Rizvi YO, Raso MG, Liu J, Ding Q, **Baraban E***, Zhao J. Clinicopathological Study of 34 Cases of Clear Cell Adenocarcinoma of the Urinary Tract and Diagnostic Value of SOX 17 in its Differential Diagnosis. *Hum Pathol*. 2025 Apr 4:105767. *Co-Corresponding Author
46. Argani P, Wangsiricharoen S, Tretiakova M, Liu YJ, Falzarano SM, Collins K, Brimo F, Gross JM, **Baraban E**, Matoso A, Wakeman K, Corless C, Neff T, Smith BF, Abdel Satir A, Agaimy A, Antonescu CR, Charville GW, Sangoi AR. *MEIS1::NCOA1* Primitive Spindle Cell Sarcoma of the Kidney: Report of 7 Cases of a Distinctive Clinicopathologic Entity. *Am J Surg Pathol*. 2025 Mar 31.
47. Argani P, **Baraban E**, Yaskiv O, Li H, Bhardwaj S, Dombrowski K, Lotan TL, Zou YS, Patel SH, Katz B, Cai Q, Mehra R, Barker N, Dudley J, Palsgrove DN. Clinically Sporadic Folliculin-mutated Renal Epithelial Neoplasms Represent a Mixture of True Somatic Folliculin-mutated and Occult Birt-Hogg-Dubé Syndrome-associated Cases: Morphologic and Molecular Overlap With TSC/MTOR-mutated Eosinophilic Renal Neoplasms and MiT Family Translocation Renal Cell Carcinoma. *Am J Surg Pathol*. 2025 May 5.
48. Bhardwaj S, Salimian M, Matoso A, Gross J, Argani P, **Baraban E**. Establishing the Diagnosis of Germ Cell Tumors in Patients Presenting With Metastatic Disease: A Series of 55 Cases Emphasizing Challenges Commonly Encountered in Core Biopsies. *Am J Surg Pathol*. 2025 Jun 11.
49. Wallace BK, Su ZT, Flynn JP, Garman TS, Weitzner A, Rezaee ME, **Baraban EG**, Matoso A, Smith AK, Patel SH, Kates MR. National Trends in Diagnoses of Subtype histologies in bladder cancer: a population-based study based on the SEER database. *Urol Oncol*. 2025 Jul 4:S1078-1439(25)00239.
50. Lin R, Li H, **Baraban E**, Lotan T, DeMarzo A, Argani P, Baras A, Matoso A. Atypical Intraductal Proliferation (AIP) of the Prostate: Findings in Repeat Biopsy or Radical Prostatectomy in Patients who Met Pathologic Criteria for Active Surveillance. *Hum Pathol*. 2025 Jun 14:105854.
51. Beauchamp L, Elias R, Toll AD, Li H, Pallajavalla A, Zhu J, Zou YS, Eshleman JR, Argani P, Epstein JI, **Baraban EG**. Extra-Gonadal Urinary Tract Neoplasms with Yolk Sac Differentiation: Clinical, Histologic, and Molecular Evidence of Derivation from Underlying Urothelial Carcinoma. *Mod Pathol*. 2025 Jun 21.
52. Gross JM, Zou YS, Michal M, Agaimy A, Garcia RA, Hysell C, Fritchie KJ, Dermawan JK, Rubin BP, Klausner M, Morsberger L, Dudley J, Skaist A, Zhang Y, Schuebel K, Meyers J, Yegnasubramanian S, Cope L, Din NU, Alani A, Suster DI, Rooper L, Argani P, **Baraban EG**, Baumhoer D, Ameline B, Charville GW, Rosenberg AE. Ossifying Spindled and Epithelioid Tumor: A Novel Soft Tissue Tumor. *Mod Pathol*. 2025 Jul 16:100840.
53. Youssef R, Saeed OA, **Baraban E**, Salimian M, Iczkowski KA, Chung LJ, Baniak N, Compérat EM, Wang Y, van Leenders GJ, Sangoi AR, Wu DJ, Osunkoya AO, Kandukuri S, Cuber A, Michalova K, Strakova-Peterikova A, Martignoni G, Calìò A, Marcolini L, Miyamoto H, Pecoraro A, Tsuzuki T, Acosta AM. Determinants of oncologic outcomes in high-grade organ-confined prostate cancer after prostatectomy. *Histopathology*. 2025 Aug 29.
54. Yuan M, Moschovas MC, Joshi K, Sanada Y, Perera RA, Lee B, Pokhrel R, Polivka J Jr, Miller A, Amankwah EK, Gonzalez-Gomez I, Nimmagadda N, **Baraban E**, Jaiswal A, Zhong C, Rivera I, Sonpavde GP, Bettegowda C, Patel V, Pavlovich CP, Perera RJ. A sensitive and specific non-invasive urine biomarker panel for prostate cancer detection. *EBioMedicine*. 2025 Aug 23:105895.

Review Articles [RA]

1. **Baraban EG**, Cooper K. Pathogenesis of Testicular Germ Cell Neoplasia: A Conceptual Approach. *Adv Anat Pathol*. 2019;26(4):241-245.
2. LiVolsi VA, **Baraban E**, Baloch ZW. Familial Thyroid Carcinoma: The Road Less Traveled in Thyroid Pathology – an Update. *Diagnostic Histopathology*. 2017;23:366-377.
3. **Baraban E**, Cooper K. Arrested Development: A Conceptual Approach to Testicular Germ Cell Tumors. *Adv Anat Pathol*. 2019;26(4):241-245.
4. **Baraban E**, Cooper K. Histiocytic and dendritic cell neoplasms of the mediastinum. *Mediastinum*. 2020 Jun;4:12.
5. **Baraban E**, Cooper K. Dedifferentiated and undifferentiated neoplasms: A conceptual approach. *Semin Diagn Pathol*. 2021 Nov;38(6):119-126.
6. **Baraban E**, Epstein J. Prostate Cancer: Update on Grading and Reporting. *Surg Pathol Clin*. 2022 Dec;15(4):579-589.

7. Rowe SP, Islam Z, Viglianti B, Solnes LB, **Baraban E**, Gorin MA, Oldan JG. Molecular imaging for non-invasive risk stratification of renal masses, *Diagnostic and Interventional Imaging*, 2024.
8. Ged Y, Feinaj A, **Baraban E**, Singla N. Management of Translocation Carcinomas of the Kidney. *Transl Cancer Res.* 2024 Aug.
9. Singla N, Bagrodia A, **Baraban E**, Fankhauser CD, Ged YMA. Testicular Germ Cell Tumors: A Review. *JAMA.* 2025 Feb 3.
10. Li G, Wu N, Ghabrial J, Stinnett V, Klausner M, Morsberger L, Long P, **Baraban EG**, Gross J, Zou YS. Chromoanagenesis in Osteosarcoma. *Biomolecules.* 2025 Jun 7;15(6):833.

Case Reports [CR]

1. Katsakhyan L, **Baraban EG**, Dumoff KL, Burger RA, Parikh R, Cooper K. The “Far Left” of the Morphologic Spectrum of Ovarian High-Grade Serous Carcinoma: Case Report of a Purely Noninvasive High-Grade Serous Carcinoma Mimicking an Ovarian Serous Borderline Tumor. *Int J Gynecol Pathol.* 2021;40(2):175-179.
2. Scarlotta M, Avery R, **Baraban E**, Maleki Z, Ged Y. New Onset Lymphadenopathy after Immune Checkpoint Inhibitor Therapy Presents A Clinicopathological and Radiological Challenge. *Frontiers in Oncology.* 2022: Vol 12:1-6.
3. Agrawal P, **Baraban E**, de la Calle C, Patel S, Kamat A, Smith A. Primary Mesonephric Adenocarcinoma of the Bladder: A Case Report. *Urology Case Reports.* 2022. Vol 43: 1-3.
4. Smart A, Wynne M, **Baraban E**, Ged Y, Smith A. Metastasis to the Bladder: A Rare Site of Recurrence of Renal Cell Carcinoma. *Case Rep Urol.* 2022 Jun 17;2022:4339270.
5. Bhanji Y, **Baraban E**, Antonucci B, Ged Y, Singla N. Robotic-assisted cytoreductive partial nephrectomy for metastatic sarcomatoid renal cell carcinoma following dramatic response to combination immunotherapy in a young female. *Kidney Cancer J.* 2023 Jun;21(2):15-18.
6. Goddard B, **Baraban E**, Wolfman D, Birkness-Gartman J, Smith A. Appendiceal adenocarcinoma presenting as a bladder tumor. *Urol Case Rep.* 2022 Oct 8;45:102256.
7. Histopathological Differences Between ACTH-dependent and ACTH-independent Adrenal Hyperplasia Causing Cushing Syndrome. Pishdad R, **Baraban E**, Morris-Wiseman L, Cardenas SC, Salvatori R, Hamrahian AH. *AACE Clinical Case Reports* 2022.
8. Bhanji Y, **Baraban E**, Antonucci B, Ged Y, Singla N. Robotic-assisted cytoreductive partial nephrectomy for metastatic sarcomatoid renal cell carcinoma following dramatic response to combination immunotherapy in a young female. *Kidney Cancer J.* 2023 Jun;21(2):15-18.
9. Moctezuma S, Perez JL, **Baraban E**, Caturegli P, Morris-Wiseman L, Salvatori R. Cushing Syndrome Due to a Corticotropin Releasing Hormone and Adrenocorticotrophic Hormone Secreting Silent Pheochromocytoma. *AACE Clinical Case Reports*, 2024.
10. Sepehri S, **Baraban E**, Allaf ME, Patel S. Traumatic retroperitoneal neuroma at the site of prior radical nephrectomy: A case report. *Urol Case Rep.* 2025 Apr 21;61:103048.

Book Chapters, Monographs [BC]

1. **Baraban E**. Biochemistry. In Le T (ed). *First Aid for the Basic Sciences*, 3rd Ed., McGraw-Hill, New York, 2016.
2. Kanbour S, Pishdad R, **Baraban E**, Hamrahian A. Adrenal Disorders. In Camacho P (ed). *Clinical Endocrinology and Metabolism* 2nd Ed., CRC Press, 2022.
3. Vlachou E, Johnson BA, **Baraban E**, Noadal R, Hoffman-Censits J. Current advances in the Management of Nonurothelial Subtypes of Bladder Cancer. In *American Society of Clinical Oncology Educational Book*. Volume 44, Number 3. June 2024.
4. Elias R, **Baraban E**, Singla N, Ged Y. Chapter 80: Cancer of the Kidney. In *Abeloff’s Clinical Oncology* 7th Edition, 2025.

Other Publications

Guidelines/Protocols, Consensus Statement, Expert Opinion, Consortium Articles [GL]

Editorials [ED]

1. **Baraban E**, Netto G, Ventura C, Zhou M. Molecular Biomarker Testing in Localized Prostate Cancer: Critical Roles of Pathologists. *Arch Pathol Lab Med.* 2021;145(3):264-265.

Media Releases or Interviews [MR]

Active Surveillance After Biopsy Reclassification to Grade Group 2 Prostate Cancer. *JU Insight.* AUA News, May 2023.

Other Media [OM]

1. **Baraban E.** Cardiology. In Stone R (ed). USMLE Step 2 CK Rapid Clinical Vignettes. Memorang.com, 2017.
2. **Baraban E**, Morrisette JJD, Cooper K. FGFR3 Alterations in Urothelial Carcinoma. CAP Today, September, 2019.
3. **Baraban E**, Hamrahian A, Jasim S. American Association of Clinical Endocrinology Podcast, Episode 53: Histopathologic Differences Between Adrenocorticotrophic Hormone–Dependent and Adrenocorticotrophic Hormone–Independent Adrenal Hyperplasia Causing Cushing Syndrome

FUNDING

3/15/2022- current Pathologic response to Periadjuvant IO for NSCLC CA209-77T

Bristol-Myers Squibb Co.

\$1,209,165

Role: Co-investigator (10% effort)

Notes: The major goals of this project are to correlate histologic features from resection specimens with clinical outcome for patients with non-small cell lung carcinoma (NSCLC) treated with periadjuvant (neoadjuvant then adjuvant) immunotherapy and/or chemotherapy.

3/2023 - current Characterization of Renal Well-Differentiated Neuroendocrine Tumors

Johns Hopkins Department of Pathology

\$5,650

Mentor for Eric Young MD PhD, Recipient of Gary S Hill, M.D. Renal Pathology Research Award

3/2023 - current Oncogenic *PIK3CA* Mutations in Non-invasive Proliferative Breast Lesions

Johns Hopkins Department of Pathology

\$3,630

Mentor for Jeremy Johnson MD PhD, Recipient of Joseph C. Eggleston Award in Surgical Pathology

3/2024 – current Genomic Investigation of Low-Grade Oncocytic Tumor: a Recently Defined Renal Tumor

Johns Hopkins Department of Pathology

\$2000

Mentor for Julia Gales MD, Recipient of Gary S Hill, M.D. Renal Pathology Research Award

3/2025 – current Leveraging Long-Read Nanopore Sequencing for Efficient Molecular Diagnostics in Bone and Soft Tissue Pathology and Beyond

Johns Hopkins Department of Pathology

\$7000

Co-Mentor for Waqar Arif MD PhD, Recipient of Fred and Janet Sanfilippo Research Award

2024 – current Capturing an Elusive Cell Population in a Rare Disease: Applying Spatial Transcriptomics to Rosai-Dorfman Disease

Johns Hopkins University, Discovery Award

\$100,376

Co-Investigator (5% Salary Support)

11/2024 – current SAMBAI (Social, Ancestry, Molecular and Biological Analysis of Inequalities) Cancer Grand Challenges Award

\$25,000,000

Sub-Investigator with Co-PI Dr. Clayton Yates (10% Salary Support)

CLINICAL ACTIVITIES

Clinical Focus

Surgical pathology signout with subspecialty interests in genitourinary pathology and bone & soft tissue pathology.

Certification

Medical, other state/government licensure

12/20-present State of Maryland, Physician License #D0088691
11/23-present District of Columbia, #MD500002460

Boards, other specialty certification

12/20-present Diplomate, American Board of Pathology, Anatomic and Clinical Pathology

Clinical (Service) Responsibilities

2022-present Surgical Pathology Attending, Sign out of general surgical pathology cases, Signout of Genitourinary Pathology Consultation Cases, Frozen section diagnosis, Presentation of cases at the daily Quality Assurance Conference

Clinical Productivity Annual Signout of >2000 Clinical Cases (>6000 RVU)

Clinical Draw from outside local/regional area Consultation sought from national and international contributing pathologists

Clinical Program Building / Leadership

2023-Present Faculty Advisor, Johns Hopkins School of Medicine, Pathology Medical Student Interest Group

Clinical Demonstration Activities to external audience, on or off campus

2022-Present Attending Pathologist, Multidisciplinary Adrenal Tumor Board, Johns Hopkins Hospital
2022- Present Attending Pathologist, Multidisciplinary Genitourinary Tumor Board, Johns Hopkins Hospital
2024-Present Attending Pathologist, Multidisciplinary Bone and Soft Tissue Tumor Board, Johns Hopkins Hospital

EDUCATIONAL ACTIVITIES

Educational Focus

Resident teaching and mentoring with a particular emphasis on fundamental concepts in surgical pathology, Effective communication, and Efficient use of immunohistochemistry and molecular pathology.

Teaching

Classroom instruction

JHMI/Regional
Summer 2012 Graduate Teaching Assistant, undergraduates, Department of Chemistry, Yale University, lead formal discussion and lab sections for undergraduates taking two semesters of organic chemistry in ten weeks

2012-2014 Student Leader & Volunteer Teacher, high school students, Anatomy Teaching Program, Yale School of Medicine, taught anatomy twice per month to New Haven high school students taking honors biology, using human cadavers in Yale's anatomy lab. Utilized human anatomy to excite the students about basic principles of biology and physiology; designed a new curriculum and coordinated logistics for over 70 volunteer teachers and 50 high school students.

2013-2014 Teaching Assistant, medical students, Department of Pathology, Yale School of Medicine, instructed medical students in fundamentals of histology and pathophysiology; delivered several formal presentations on numerous topics, including central nervous system development and renal physiology

2013-2014 Tutor, undergraduates, Freshman Scholars Summer Program, Yale College, served as a tutor and mentor to several rising college freshmen from disadvantaged backgrounds; designed individualized lesson plans customized to the students' level of understanding and personal interest

2013-2016 Tutor, undergraduates, Center for Teaching & Learning, Yale College, held open evening office hours twice per week for Yale undergraduates seeking help in organic chemistry, biology, and biochemistry courses; emphasized the practical applications and clinical relevance of fundamental scientific concepts

2015-2017 Tutor, medical students, Yale School of Medicine and Perelman School of Medicine, University of Pennsylvania, instruct individual students in all aspects of medical board preparation (>350

	hours), including study skills, time management, and the scientific principles underlying medical practice; specifically motivate and educate students to pursue conceptual understanding over memorization
2017-2020	Teaching Assistant, medical students, Department of Pathology, Perelman School of Medicine, University of Pennsylvania, provide formal instruction of medical students in core pathology topics including pulmonary and cardiac pathology
8/19/2021	Challenging Cases in Genitourinary Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
10/8/2021	Cardiac Pathology and Myocarditis, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/21/2021	Coronary Artery Disease and Myocardial Infarction, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
12/2/2021	Chronic Inflammation, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
1/5/2022	Introduction to Neoplasia: Cancer Specimens, Small-group leader, Johns Hopkins School of Medicine Pathology Lab Session
1/6/2022	Challenging Cases in Surgical Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
1/24/2022	Male Reproductive Tract Histology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
1/26/2022	Pathology of the Prostate and Testis, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
2/2/2022	Breast Pathology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
3/3/2022	Deceptive Metastatic Phenotypes, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
5/5/2022	Rare but Clinically Significant Morphologic Variants in Genitourinary Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
6/23/2022	Spindle Cell Lesions in the Genitourinary Tract, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
8/15/2022	Thoracic Pathology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
8/18/2022	Introduction to Lung Pathology I, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
8/24/2022	Introduction to Lung Pathology II, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
8/25/2022	Benign Mimickers in Surgical Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
9/12/2022	Glomerular Disease Patterns, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
9/14/2022	Renal Pathology & Systemic Disease, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/6/2022	Approach to Germ Cell Tumor Diagnosis, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
10/20/2022	Coronary Artery Disease and Myocardial Infarction, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/20/2022	Challenging Cases in Genitourinary Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
12/22/2022	Rare Carcinoma Subtypes in Genitourinary Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
1/3/2023	Introduction to Neoplasia: Cancer Specimens, Small-group leader, Johns Hopkins School of Medicine Pathology Lab Session
2/1/2023	Tutorial in Breast Pathology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
2/9/2023	Recently Described Eosinophilic Renal Tumors, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference

6/29/2023	Benign Epithelial Neoplasms of the Genitourinary Tract, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
8/23/2023	Acute Respiratory Distress Syndrome, Pneumonia, Lung Cancer, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/20/2023	Pathology of Renal Tumors, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/19/2023	Diagnostic Approach to Spindle Cell Lesions of the Kidney, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
10/19/2023	Coronary Artery Disease and Myocardial Infarction, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/20/2023	Muscle, Connective Tissue and Bone, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/23/2023	Epithelium and Cell Morphology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
10/24/2023	GI Tract Epithelium, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
11/16/2023	Mimickers of Squamous Neoplasia, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
11/27/2023	Cell Injury and Death, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
11/30/2023	Chronic Inflammation, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
1/3/2024	Introduction to Neoplasia: Cancer Specimens, Small-group leader, Johns Hopkins School of Medicine Pathology Lab Session
5/30/2024	Approach to Inflammatory Lesions of the Urothelial Tract, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
6/20/2024	Benign Spindle Cell Lesions in Surgical Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
7/11/2024	Diagnostic Approach to Mesothelioma, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
1/27/2025	Male Genitourinary Tract Histology, Small-group leader, Johns Hopkins School of Medicine Virtual Microscopy Session
3/6/2025	Deceptively Bland Appearing Malignancies in Genitourinary Pathology, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
3/12/2025	Introduction to Neoplasia: Cancer Specimens, Small-group leader, Johns Hopkins School of Medicine Pathology Lab Session
6/19/2025	Benign Mimickers of Sarcoma, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference
8/21/2025	Histologic Variants of Urothelial Carcinoma, Johns Hopkins Hospital, Surgical Pathology Unknowns Conference

National Invited Presentations

4/30/2022	Challenging Frozen Sections in Genitourinary Pathology, Maryland Society of Pathologists CME Seminar
7/27/2022	Key Concepts in Genitourinary Pathology, American Association of Pathologists Assistants Annual Meeting, Baltimore MD
9/15/2023	Diagnostic Pitfalls in Genitourinary Pathology, Hospital of the University of Pennsylvania Pathology Department
3/14/2025	Challenging Cases in Genitourinary Tract Pathology, Hospital of the University of Pennsylvania Slide Seminar
8/7/2025	Persistent Diagnostic Challenges at the Intersection of Prostate Cancer and Neuroendocrine Neoplasia, Grand Rounds, Carolinas Pathology Group, North Carolina
9/20/2025	Challenges in Surgical Pathology of the Genitourinary Tract: Tools for Avoiding Common (and Rare) Diagnostic Pitfalls, Chinese American Pathologists Association
9/25/2025	Testicular Neuroendocrine Tumors: From Tumor Biology to Clinical Diagnosis - Difficult Areas In Testicular and Paratesticular Pathology, Genitourinary Pathology Society Virtual Seminar

10/3/2025	Updates in Surgical Pathology: Focus on Prostate and Urothelial Tract, Department of Pathology Seminar, Mercy Hospital, St. Louis, Missouri
10/23/2025	Practical Diagnostic Issues in Pathology of the Prostate and Urothelial Tract, Department of Pathology, St. Luke's University Hospital, Bethlehem, Pennsylvania
11/5/2025	Diagnostic Updates and Approach to Challenging Differential Diagnoses in Genitourinary Pathology, Dahl-Chase Diagnostic Services, Bangor Maine
11/14/2025	Diagnostic Issues in Genitourinary Pathology, Tufts University Medical Center Department of Pathology Grand Rounds
4/23/2026	The Spectrum of Germ Cell Neoplasia and its Somatic Mimickers, Grand Rounds, The Ohio State University Department of Pathology, Columbus Ohio

International Invited Presentations

12/23/2024	Challenging Cases in Surgical Pathology, Invited Presentation at Annual Pathology CME Course, Department of Pathology, Tel Aviv University
10/19/2025	Contemporary Approaches to Diagnostic Dilemmas in Genitourinary Pathology, CME Course, Soroka Medical Center, Ben Gurion University

Clinical instruction

JHMI/Regional

8/31/16	Lecturer, pathology faculty and residents, "The Manchurian Platelet: Design & Development of a Next Generation Thrombolytic," Resident Noon Talk, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
9/27/16	Lecturer, pathology faculty and residents, "Classic Causes of Inpatient Thrombocytopenia and How to Distinguish Them," Blood Bank Rounds, Hospital of the University of Pennsylvania
12/1/16	Lecturer, pathology faculty and residents, "A 43-Year-Old Gentleman with Recurrent Pancreatitis," Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
12/29/16	Lecturer, pathology faculty and residents, "Needle in the Haystack & Elephant in the Corner: Massive Perivillous Fibrin Deposition & Chronic Histiocytic Intervillositis," Autopsy Case Conference, Department of Pathology, Children's Hospital of Philadelphia
1/18/17	Lecturer, pathology faculty and residents, "The Blind Leading the Blind: A Conceptual Approach to Tenosynovial Giant Cell Tumor," Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
2/23/17	Lecturer, pathology faculty and residents, "A Sheep in Wolf's Clothing: A Recurrent Adrenal Mass in a Patient with Cowden Syndrome," Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
5/19/17	Lecturer, pathology faculty and residents, "Nodular Lymphocyte Predominant Hodgkin Lymphoma & Its Differential Diagnosis," Hematopathology Education Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
6/16/17	Lecturer, pathology faculty and residents, "T-cell Lymphomas of the GI Tract: An Atypical Case & Differential Diagnosis," Hematopathology Education Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
8/23/17	Lecturer, pathology faculty and residents, "Arrested Development: Molecular Pathology of Testicular Germ Cell Tumors," Resident Noon Talk, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
9/21/17	Lecturer, pathology faculty and residents, "Portrait of a Stowaway: Embryology & Pathology of Notochordal Lesions," Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
12/5/17	Lecturer, pathology faculty and residents, "From PAM to PAP: The Airspace Filling Pattern," Autopsy Case Conference, Department of Pathology, Children's Hospital of Philadelphia
8/18/18	Lecturer, residents, "Domino Effect: Unintended Consequences of Recycling a Liver," Resident Noon Talk, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
9/6/18	Lecturer, pathology faculty and residents, "Interdigitating Dendritic Cell Sarcoma & Differential Diagnosis," Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania

2/21/19	Lecturer, pathology faculty and residents, “Molecular Glioblastoma: Current Classification of Infiltrating Gliomas,” Interesting Case Conference, Department of Pathology & Laboratory Medicine, Hospital of the University of Pennsylvania
3/7/2022	Medical Oncology Fellows Conference, Carcinoma of Unknown Primary, Johns Hopkins Hospital
6/7/2022	Lecturer, “Diagnostic Approach to Frozen Sections”, Johns Hopkins Hospital, Anatomic Pathology Didactic Series
10/9/2024	Lecturer, pathology residents, “Urothelial Cancer: Diagnosis, Staging, and Pitfalls”, Johns Hopkins Hospital, Anatomic Pathology Didactic Series
10/16/2024	Lecturer, pathology residents, “Urothelial Cancer: Diagnosis, Staging, and Pitfalls”, Johns Hopkins Hospital, Anatomic Pathology Didactic Series

Mentoring

Pre-doctoral Advisees /Mentees

Jevon Layne, BS, 2024-Present

Artificial Intelligence (CODA) and Spatial Transcriptomics in a Diverse Prostate Cancer Cohort

Co-Advisor with Dr. Clayton Yates and Dr. Ashley Kiemen

Sadra Sepehri, BS, 2025-Present

Immunohistochemical and Morphometric Predictive and Prognostic Biomarkers in Papillary Urothelial Carcinoma

Co-Advisor with Dr. Max Kates

Medical Student, Johns Hopkins School of Medicine

Post-doctoral Advisees /Mentees

Jason Van Roo MD, 2021-2022

Atypical Intraductal Proliferation of the Prostate: Correlation with Clinicopathologic Parameters and Oncologic Outcomes

Pathology Resident, Johns Hopkins Hospital

Eric Young MD PhD, 2023-

Characterization of Renal Well-Differentiated Neuroendocrine Tumors

Recipient of Gary S Hill, M.D. Renal Pathology Research Award, Johns Hopkins Department of Pathology, 2023

Pathology Resident, Johns Hopkins Hospital

Jeremy Johnson MD PhD, 2023-

In-Situ Detection of PIK3CA mutations in Breast Epithelial Proliferations

Recipient of Joseph C. Eggleston Award in Surgical Pathology, Johns Hopkins Department of Pathology, 2023

Pathology Resident, Johns Hopkins Hospital

Stephan Bronimann MD, 2024-2025

Urine-And Plasma-Based Tumor Genomic Profiling In Patients With Upper Tract Urothelial Carcinoma

Co-Advisor with Dr. Nirmish Singla

Urology Research Fellow, Johns Hopkins Hospital

Mohammad Salimian MD, 2024-2025

Determinants of Oncologic Outcomes in High Grade Organ-Confined Prostate Cancer After Radical Prostatectomy

Urologic and Surgical Pathology Fellow, Johns Hopkins Hospital

Qingqing Wu MD, 2023-2024

Expanding the Morphologic Spectrum of Perinephric Myxoid Pseudotumor of Fat: A Series of 9 Cases

Urologic Pathology Fellow, Johns Hopkins Hospital

Julia Gales MD, 2024 –

Genomic Investigation of Low-Grade Oncocytic Tumor: a Recently Defined Renal Tumor

Recipient of Gary S Hill, M.D. Renal Pathology Research Award, Johns Hopkins Department of Pathology, 2024

Pathology Resident, Johns Hopkins Hospital

Leonie Beauchamp MD, 2024-2025

Extra-Gonadal Urinary Tract Neoplasms with Yolk Sac Differentiation: Clinical, Histologic, and Molecular Evidence of Derivation from Underlying Urothelial Carcinoma

Urologic Pathology Fellow, Johns Hopkins Hospital

Waqar Arif MD PhD 2025-2026

Leveraging Long-Read Nanopore Sequencing for Efficient Molecular Diagnostics in Bone and Soft Tissue Pathology and Beyond

Recipient of Fred and Janet Sanfilippo Research Award, Johns Hopkins Department of Pathology, 2025

Pathology Resident, Johns Hopkins Hospital

Ruihe Lin MD PhD, 2025-2026

Alternative Lengthening of Telomeres in Aggressive PEComas: Correlation with Molecular Features Including ATRX Gene Mutation Status

Urologic Pathology Fellow, Johns Hopkins Hospital

Swati Bhardwaj, MBBS MD, 2025-2026

Establishing the Diagnosis of Germ Cell Tumors in Patients Presenting with Metastatic Disease: A Series of 55 Cases Emphasizing Challenges Commonly Encountered in Core Biopsies

Refining HER2 Assessment in Urothelial Carcinoma: Implications of Scoring Criteria, Histologic Subtypes, and Genomic Characteristics Across Disease Sites

Urologic Pathology Fellow, Johns Hopkins Hospital

Guannan Zhang, MD PhD, 2025-2026

Diagnostic Issues in Core Biopsies of Adrenal Masses

Urologic Pathology Fellow, Johns Hopkins Hospital

Carla Bedoya, MD, 2025-2026

Advanced Cytogenetic Analysis of Renal Tumors Using Optical Genome Mapping

Urologic Pathology Fellow, Johns Hopkins Hospital

Jiejun Wu, MD PhD, 2025-2026

Advanced Cytogenetic Analysis of Renal Tumors Using Optical Genome Mapping

Urologic Pathology Fellow, Johns Hopkins Hospital

Ahmad Kohsar MD, 2025-

Morphologic and Molecular Correlations in Conventional Chordoma

Pathology Resident, Johns Hopkins Hospital

Catherine Bradley MD PhD, 2025-

Morphologic and Molecular Correlations in Conventional Chordoma

Pathology Resident, Johns Hopkins Hospital

[Educational Program Building/Leadership](#)

2024-Present

Faculty Advisor, Johns Hopkins Department of Pathology, Surgical Pathology Unknowns Conference

RESEARCH ACTIVITIES

Clinical Trial Support:

Multicenter, Double-blind, Randomized Phase 3 Study to Compare the Efficacy and Safety of Belzutifan (MK-6482) Plus Pembrolizumab (MK-3475) Versus Placebo Plus Pembrolizumab, in the Adjuvant Treatment of Clear Cell Renal Cell Carcinoma (ccRCC) Post Nephrectomy, Study Pathologist

Phase 1, open-label, dose escalation and dose expansion study, to investigate the safety, tolerability, and pharmacokinetic profile of AB521 monotherapy and combination therapies in participants with clear cell renal cell carcinoma and other solid tumors, Study Pathologist

Phase 1, open-label trial of belzupacap sarotalocan (AU-011) to determine the feasibility and safety of intratumoral injection with or without intramural injection in subjects with bladder cancer, Study Pathologist

Phase 1b/2 study of abemaciclib plus cabozantinib in immune checkpoint blockade-pretreated metastatic clear cell renal cell carcinoma, Study Pathologist

An Adaptive Phase 2/3 Open-Label Multicenter Study to Assess the Diagnostic Performance of Piflufolastat F 18 PET/CT and Its Impact on Intended Clinical Management in Patients with Suspected, or at High Risk for, Metastatic Clear Cell Renal Cell Carcinoma, Study Pathologist

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

2024-Present Ensuring Quality Biomarker Evaluation in a Rapidly Evolving Personalized Medicine and Targeted Therapy Landscape in Urothelial Carcinoma

ORGANIZATIONAL ACTIVITIES

[Institutional Administrative Appointments](#)

Surgical and Genitourinary Pathology Faculty Search Committee, Johns Hopkins Department of Pathology 2023-2024

Residency Candidate Interviewer, Johns Hopkins Department of Pathology, 2022-Present

Residency Program Admissions Committee, Johns Hopkins Department of Pathology, 2022-Present

[Editorial Activities](#)

[Editorial Board appointments](#)

American Journal of Surgical Pathology, 2024-Present

[Journal peer review activities, ad hoc reviewer](#)

2019-present American Journal of Clinical Pathology

2020-present American Journal of Case Reports

2019-present British Journal of Haematology

2020-present Mediastinum

2021 Quantitative Imaging in Medicine and Surgery

2021 International Journal of Surgical Pathology

2022-Present Human Pathology

2022 The Prostate

2022 Frontiers in Endocrinology

2022 Frontiers in Oncology

2022 Journal of Investigative Surgery

2022 Cancers

2022 Cancer Investigation

2023 Translational Andrology and Urology

2023 Prostate Cancer and Prostatic Diseases

2023 Biomedicines

2023 International Journal of Environmental Research and Public Health

2023 Research and Reports in Urology

2023 Modern Pathology

2023 Annals of Medicine

2023 The Journal of Urology

2023 Journal of Pathology: Clinical Research

2025 Applied Immunohistochemistry & Molecular Morphology

2025 Seminars in Diagnostic Pathology

2025 Clinical Case Reports

2025 Cancer Treatment and Research Communications

Advisory Committees, Review Groups/Study Sections

2023-Present Genitourinary Pathology Society, Awards Committee Member
2025 Grant Reviewer, Patrick C. Walsh Prostate Cancer Research Fund Award

Professional Societies

2016-present Member, College of American Pathologists
2018-2020 Junior Member, Guidelines Committee, College of American Pathologists
2016-present United States and Canadian Academy of Pathology
2017-present American Society of Clinical Pathology
2018-present International Society of Urologic Pathology
2018-present International Society of Bone and Soft Tissue Pathology
2019-present Genitourinary Pathology Society

RECOGNITION

Awards, Honors

2011 Phi Beta Kappa, Yale College
2016 Winternitz Award for Excellence in Pathology, Yale School of Medicine
4/2019 Global Health Fellowship, American Society of Clinical Pathology, Gaborone, Botswana
5/2021 The Pathology Housestaff Pathology Fellow Teaching Award, Johns Hopkins Pathology Residents
6/2023 Anatomic Pathology Faculty Teaching Award, Johns Hopkins Department of Pathology
8/2024 Catherine and Constantinos J. Limas Award, Junior Faculty Research Award, Johns Hopkins Department of Pathology
2025 Castle Connolly Top Doctor
2025 Member, Arthur Purdy Stout Society of Surgical Pathologists

OTHER PROFESSIONAL ACCOMPLISHMENTS

Poster Abstract Presentations

5/14 Lozano GL, Stulberg ER, Morin JB, Park H, **Baraban EG**, Mlot C, Phillips AJ, Thomas MG, Handelsman J. Bioinformatic Identification of the Cycloheximide Gene Cluster and Prediction of its Biosynthetic Pathway, American Society of Microbiology Annual Meeting, Boston, MA
3/17 **Baraban E**, Hu S, Hui P, Podoltsev N, Cooper D, Xu M. Tissue Based Chimerism Analysis Enhances Detection of Donor Derived Neoplasia in Allogeneic Stem Cell Transplant Patients, United States & Canadian Academy of Pathology Annual Meeting, San Antonio, TX
3/18 **Baraban E**, Zhang P, Jaffer S, Lisby A, Feldman M, Bleiweiss I, Nayak A. MYB Rearrangement and Immunohistochemical (IHC) Expression in Adenomyoepithelioma (AME) of the Breast: A Comparison with Adenoid Cystic Carcinoma (ACC), United States & Canadian Academy of Pathology Annual Meeting, Vancouver, BC
3/18 **Baraban E**, Lubin D, Lisby A, Zhang P, LiVolsi V. Papillary Thyroid Carcinoma (PTC) Emerging from Hashimoto Thyroiditis Demonstrates Increased PDL1 Expression, Which Persists With Metastasis, United States & Canadian Academy of Pathology Annual Meeting, Vancouver, BC
10/18 **Baraban E**, Labeeb A, Bagg A. Aggressive Lymphoma of the GI tract in a patient with a history of marginal zone lymphoma: broad differential diagnosis harnessing histologic clues yields unexpected diagnosis of an unusual lymphoma, corroborated by subsequently obtained history, European Association of Hematopathology Annual Meeting, Lymphoma Workshop, Edinburgh, Scotland
10/18 **Baraban E**, Sadigh S, Sargent R, Bagg A. Classic Hodgkin lymphoma and plasma cell myeloma: a mixed marriage in the marrow, European Association of Hematopathology Annual Meeting, Bone Marrow Workshop, Edinburgh, Scotland
3/20 **Baraban E**, Tong CL, Adappa N, Cooper K. Detection of High-Risk HPV (hrHPV) by P16 Immunohistochemistry (IHC) and In-Situ Hybridization (ISH) in Sinonasal Undifferentiated Carcinoma (SNUC), United States & Canadian Academy of Pathology Annual Meeting, Los Angeles, CA
3/22 **Baraban E**, Ding Chien-Kuang, White M, Vohra P, Simko J, Epstein J. Prostate Cancer in Patients on Gender Affirming Hormonal Therapy: Highlighting Diagnostic Issues in an Underserved Patient Population. United States & Canadian Academy of Pathology Annual Meeting, Los Angeles, CA.
5/22 Alam R, Liu W, **Baraban E**, Matlaga B, Matoso A, Gracias D, Winoker J. In Vitro Testing of

- Untethered Thermal-Actuated Microgrippers as a Novel Diagnostic Tool for Urothelial Tissue. American Urological Association Annual Meeting, New Orleans, LA.
- 3/23 Saoud C, Rooper L, Lin MT, Argani P, Matoso A, **Baraban E**, Meyer C, Xing D, Ronnett B, Vang R, Lotan T, Epstein J, Gross J. GPNMB expression helps distinguish PEComas from morphologic mimics. United States & Canadian Academy of Pathology Annual Meeting, New Orleans, LA.
- 3/23 Denney J, **Baraban E**, Acosta A, Gordetsky J. Atypical Intraductal Proliferation of the Prostate. United States & Canadian Academy of Pathology Annual Meeting, New Orleans, LA.
- 3/23 **Baraban E**, Argani P, Epstein J. High grade, Non-Sarcomatoid Chromophobe Renal Cell Carcinoma: A series of 21 Cases, including a Subset with Novel Molecular Features. United States & Canadian Academy of Pathology Annual Meeting, New Orleans, LA.
- 3/23 **Baraban E**, Erak E, Lotan TL. Morphologic and Molecular Features of Mismatch Repair Deficient (MMR-d) Prostate Cancer: Insights from a Series of Radical Prostatectomies. United States & Canadian Academy of Pathology Annual Meeting, New Orleans, LA.
- 3/24 Zheng L, Guo C, Tabet G, Rizvi Y, Raso MG, Liu J, Ding Q, **Baraban E**, Zhao J. Differential Expression of SOX17 in Clear Cell Adenocarcinoma of the Genitourinary and Gynecologic Tracts. United States & Canadian Academy of Pathology Annual Meeting, Baltimore, MD.
- 3/24 Wu Q, **Baraban E**, Gross J. Expanding the Morphologic Spectrum of Perinephric Myxoid Pseudotumor of Fat: A Series of 9 Cases. United States & Canadian Academy of Pathology Annual Meeting, Baltimore, MD.
- 3/24 Ding C, Dairo O, De Paula Oliveira L, Erak E, **Baraban E**, Matoso A, Hirsch MS, Tretiakova M, Eshleman JR, Bismar TA, Lotan TL. Unexpected Pattern of Unequivocal MSH2 Loss with Focally Retained MSH6 Immunohistochemistry in Mismatch Repair Deficient Prostate Carcinoma – A Multi-Institutional Experience. United States & Canadian Academy of Pathology Annual Meeting, Baltimore, MD.
- 3/25 Youssef R, Saeed O, **Baraban E**, Salimian M, Iczkowski K, Chung L, Baniak N, et al. Determinants of Oncologic Outcomes in High Grade Organ-Confining Prostate Cancer After Radical Prostatectomy. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Law S, **Baraban E**, Gross J. Spinal and Paraspinal Pathology: Review of 969 Consecutive Cases Unveils Common Patterns in Consultation, Primary and Metastatic Tumors, and Pseudoneoplasms. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Bhardwaj S, Gross J, Argani P, **Baraban E**. Establishing the Diagnosis of Germ Cell Tumors in Patients Presenting with Metastatic Disease: A Series of 50 Cases Emphasizing Challenges Commonly Encountered in Core Biopsies. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Mikula M, Charville G, **Baraban E**, Rooper L, Gross J. NOR1 (NR4A3) Immunohistochemistry is Highly Specific and Moderately Sensitive for Extraskelatal Myxoid Chondrosarcoma. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Young E, Dua R, Elias R, **Baraban E**. Renal Well-Differentiated Neuroendocrine Tumors Share Molecular Features with NETs from Other Sites. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Erak E, Gumuskaya B, **Baraban E**, De Marzo A, Lotan T. Molecular Concordance between Lymph Node Metastases and Dominant Tumor Nodule in Primary Prostate Cancer. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Amaral A, Erak E, Shenderov E, Gomes-Alexandre C, De Marzo A, Lotan T, **Baraban E**. Association of MHC Class I and Immune Checkpoint Expression with Immune Cell Density in Mismatch Repair Deficient Primary Prostate Cancer. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.
- 3/25 Lin R, Meeker A, Gross J, Xing D, Argani P, **Baraban E**. Alternative Lengthening of Telomeres in Aggressive PEComas: Correlation with *ATRX* Gene Mutation Status. United States & Canadian Academy of Pathology Annual Meeting, Boston, MA.

Other Abstracts

1. **Baraban E**, Siddon A, Tormey C. Discordance Between Functional Screening and Genetic Confirmatory Diagnostic Tests: A Retrospective Analysis of Activated Protein C Resistance and Factor 5 Leiden Testing Over a 5-Year Period. *Am J Clin Pathol*. 2017;1:147, S163-164.

2. **Baraban E**, Hu S, Hui P, Podoltsev N, Cooper D, Xu M. Tissue Based Chimerism Analysis Enhances Detection of Donor Derived Neoplasia in Allogeneic Stem Cell Transplant Patients. *Mod Pathol*. 2017.
3. **Baraban E**, Zhang P, Jaffer S, Lisby A, Feldman M, Bleiweiss I, Nayak A. MYB Rearrangement and Immunohistochemical (IHC) Expression in Adenomyoepithelioma (AME) of the Breast: A Comparison with Adenoid Cystic Carcinoma (ACC). *Mod Pathol*. 2018;31:48.
4. **Baraban E**, Lubin D, Lisby A, Zhang P, LiVolsi V. Papillary Thyroid Carcinoma (PTC) Emerging from Hashimoto Thyroiditis Demonstrates Increased PDL1 Expression, Which Persists With Metastasis. *Mod Pathol*. 2018;31:228.
5. Lubin D, Toorens E, Jaffer S, **Baraban E**, Zhang P, Bleiweiss I, Nayak A. Adenomyoepitheliomas of the Breast Frequently Harbor Recurrent Activating Hotspot Mutations in PI3K-AKT Pathway Related Genes. *Mod Pathol*. 2019.
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