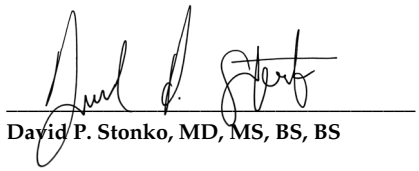
CURRICULUM VITAE

The Johns Hopkins School of Medicine



David P. Stonko, MD, MS, BS, BS

Friday, November 20, 2026
Date of this version

Demographic and Personal Information

Current Appointments

University

8/2025 - present	Clinical Fellow, Division of Vascular Surgery and Endovascular Therapy, Department of Surgery, The Johns Hopkins University School of Medicine	Baltimore, MD
2026 - present	Member, Johns Hopkins Data Science and AI Institute	Baltimore, MD

Hospital

8/2025 - present	Fellow, Division of Vascular Surgery and Endovascular Therapy, The Johns Hopkins Hospital	Baltimore, MD

Other

2021 - present	Founder, Patapsco Biomedical, LLC	Baltimore, MD
2022 - present	Clinical Associate (Analyst 2022), Catalio Capital Management	New York, NY
2026 - present	Scientific Advisory Board Member, stealth endovascular device company	
2026 - present	Medical Knowledge Expert (contingent worker), Meta	Remote

Personal Data

Business Address	Division of Vascular Surgery and Endovascular Therapy Department of Surgery The Johns Hopkins Hospital 600 N. Wolfe St., Halsted 668 Baltimore, MD 21287
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Education and Training

Undergraduate

9/2009 - 5/2013	Bachelor of Science in Mathematics and Bachelor of Science in Biological Sciences, University of Maryland, Baltimore County	Baltimore, MD

Doctoral/Graduate

5/2013 - 8/2014	Master of Science in Applied Mathematics, University of Maryland, Baltimore County Graduate School	Baltimore, MD
6/2014 - 6/2018	Doctor of Medicine, Vanderbilt University School of Medicine	Nashville, TN

Postdoctoral (Internship, residency, fellowship, etc.)

7/2018 - 6/2019	Intern, General Surgery, The Johns Hopkins Hospital	Baltimore, MD
7/2019 - 6/2024	Resident Physician, General Surgery, The Johns Hopkins Hospital	Baltimore, MD
7/2021 - 6/2023	Postdoctoral Fellow, The Battlefield Shock and Organ Support Research Program, Henry M. Jackson Foundation, at The University of Maryland Shock Trauma Hemorrhage Control & Resuscitation Laboratory (Baltimore, MD) and The Mayo Clinic Vascular and Endovascular Innovation Laboratory (Rochester, MN). Director: Jonathan J. Morrison, MB ChB, PhD.	Baltimore, MD
7/2024 - 6/2025	Chief Resident Physician in Surgery, The Johns Hopkins Hospital	Baltimore, MD
8/2025 - present	Fellow, Vascular Surgery and Endovascular Therapy, The Johns Hopkins Hospital	Baltimore, MD

Advanced Surgical Training Courses

5/29 - 5/30/2026	COOK Medical Level Up Course: advanced complex endovascular aortic training.	Ft. Lauderdale, FL
8/18/2026	W.L. Gore Fellows Course: advanced endovascular technique and device training.	Los Angeles, CA
8/19 - 8/22/2026	The Moore Course: advanced open and endovascular vascular surgical technique.	Los Angeles, CA

Professional Experience

2021 - present	Founder, Patapsco Biomedical, LLC. I founded the company and manage its intellectual property and business development for a novel intravenous fluid delivery device.	Baltimore, MD
2022 - 2022	Analyst, Catalio Capital Management. I evaluated the scientific, financial and commercial prospects of life-science investment opportunities.	New York, NY
2022 - present	Clinical Associate, Catalio Capital Management. I lead investment diligence on clinically focused companies, now mostly AI-related, along with surgical and vascular ones.	New York, NY
2026 - present	Medical Knowledge Expert (contingent worker, through Tundra Technical Solutions), Meta Knowledge Experts, in the Physicians Who Code contractor pool, which I joined after passing the Meta coding exam. Development of frontier medical knowledge AI reasoning, currently focused on long time horizon reinforcement learning tasks in medicine and surgery. I build rubrics, test frontier models and research model failures at the frontier of clinical AI.	Remote

Publications

* denotes equal authorship status

Original Research [OR]

PubMed-indexed, peer reviewed only

1. Wimmer RJ, Liu Y, Schachter TN, **Stonko DP**, Peercy BE, Schneider MF. Mathematical modeling reveals modulation of both nuclear influx and efflux of Foxo1 by the IGF-I/PI3K/Akt pathway in skeletal muscle fibers. Am J Physiol Cell Physiol. 2014;306(6):C570-84.
2. Frey JL, **Stonko DP**, Faugere MC, Riddle RC. Hypoxia-inducible factor-1a restricts the anabolic actions of parathyroid hormone. Bone Res. 2014;2:14005.
3. **Stonko DP**, Manning L, Starz-Gaiano M, Peercy BE. A Mathematical Model of Collective Cell Migration in a Three-Dimensional, Heterogeneous Environment. PLoS One. 2015;10(4):e0122799.
4. Kay HF, Chotai S, Wick JB, **Stonko DP**, McGirt MJ, Devin CJ. Preoperative and surgical factors associated with postoperative intensive care unit admission following operative treatment for degenerative lumbar spine disease. Eur Spine J. 2016;25(3):843-9.
5. Sielatycki JA, Chotai S, **Stonko DP**, Wick JB, Kay HF, McGirt MJ, Devin CJ. Is obesity associated with worse patient-reported outcomes following lumbar surgery for degenerative conditions? Eur Spine J. 2016;25(5):1627-1633.
6. Sielatycki JA, Chotai S, Kay HF, **Stonko DP**, McGirt MJ, Devin CJ. Does Obesity Correlate With Worse Patient-Reported Outcomes Following Elective Anterior Cervical Discectomy and Fusion? Neurosurgery. 2016;79(1):69-74.
7. Chotai S, Sielatycki JA, Parker SL, Sivaganesan A, Kay HF, **Stonko DP**, Wick JB, McGirt MJ, Devin CJ. Effect of obesity on cost per quality adjusted life years gained following anterior cervical discectomy and fusion in elective degenerative pathology. Spine J. 2016;16(11):1342-1350.
8. Vasquez-Castellanos RA, Chotai S, Wick JB, **Stonko DP**, Cheng JS, Mohamad B, Asher AL, McGirt MJ, Devin CJ. The Profile of a Smoker and Its Impact on Outcomes After Cervical Spine Surgery. Neurosurgery. 2016;63(Suppl 1):96-101.
9. Zuckerman SL, Chotai S, Devin CJ, Parker SL, **Stonko DP**, Wick JB, Hale AT, McGirt MJ, Cheng JS. Surgical Resection of Intradural Extramedullary Spinal Tumors: Patient Reported Outcomes and Minimum Clinically Important Difference. Spine (Phila Pa 1976). 2016;41(24):1925-1932.
10. Kim EJ, Chotai S, **Stonko DP**, Wick JB, Schneider BJ, McGirt MJ, Devin CJ. Patient-reported outcomes after lumbar epidural steroid injection for degenerative spine disease in depressed versus non-depressed patients. Spine J. 2017;17(4):511-517.
11. Wise ES, **Stonko DP**, Glaser ZA, Garcia KL, Huang JJ, Kim JS, Kallos JA, Starnes JR, Fleming JW, Hocking KM, Brophy CM, Eagle SS. Prediction of Prolonged Ventilation after Coronary Artery Bypass Grafting: Data from an Artificial Neural Network. Heart Surg Forum. 2017;20(1):E007-E014.
12. Chotai S, Zuckerman SL, Parker SL, Wick JB, **Stonko DP**, Hale AT, McGirt MJ, Cheng JS, Devin CJ. Healthcare Resource Utilization and Patient-Reported Outcomes Following Elective Surgery for Intradural Extramedullary Spinal Tumors. Neurosurgery. 2017;81(4):613-619.
13. Chotai S, Sivaganesan A, Parker SL, Wick JB, **Stonko DP**, McGirt MJ, Devin CJ. Effect of Complications within 90 Days on Cost Per Quality-adjusted Life Year Gained Following Elective Surgery for Degenerative Lumbar Spine Disease. Neurosurgery. 2017;64(CN Suppl 1):157-164.
14. Kim EJ, Wick JB, **Stonko DP**, Chotai S, Freeman TH Jr, Douleh DG, Mistry AM, Parker SL, Devin CJ. Timing of Operative Intervention in Traumatic Spine Injuries Without Neurological Deficit. Neurosurgery. 2018;83(5):1015-1022.
15. Kim EJ, Chotai S, Wick JB, **Stonko DP**, Sivaganesan A, Devin CJ. Patient Reported Outcomes and Costs associated with Revision Surgery for Degenerative Cervical Spine Diseases. Spine (Phila Pa 1976). 2018;43(7):E423-E429.
16. Smith MC, **Stonko DP**, Guillamondegui OD, Dennis BM. Temporal Factors Drive Motorcycle Collision-Related Trauma. Am Surg. 2018;84(7):e219-e221.
17. **Stonko DP**, Dennis BM, Betzold RD, Peetz AB, Gunter OL, Guillamondegui OD. Artificial Intelligence Can Predict Daily Trauma Volume and Average Acuity. J Trauma Acute Care Surg. 2018;85(2):393-397.
18. **Stonko DP***, O'Neill DC*, Dennis BM, Smith MC, Gray J, Guillamondegui OD. Trauma Quality Improvement: Reducing Triage Errors by Automating the Level Assignment Process. J Surg Educ. 2018;75(6):1551-1557.

19. Hale AT, **Stonko DP**, Wang L, Strother MK, Chambless LB. Machine learning analyses can differentiate meningioma grade by features on magnetic resonance imaging. Neurosurg Focus. 2018;45(5):E4.

20. Hale AT, **Stonko DP**, Brown A, Lim J, Voce DJ, Gannon SR, Le TM, Shannon CN. Machine-learning analysis outperforms conventional statistical models and CT classification systems in predicting 6-month outcomes in pediatric patients sustaining traumatic brain injury. Neurosurg Focus. 2018;45(5):E2.

21. **Stonko DP**, Dennis BM, Callcut RA, Betzold RD, Smith MC, Medvecz AJ, Guillamondegui OD. Identifying Temporal Patterns in Trauma Admissions: informing resource allocation. PLoS One. 2018;13(12):e0207766.

22. Kim EJ, Chotai S, **Stonko DP**, Wick JB, Sielatycki JA, Devin CJ. A retrospective review comparing two-year patient-reported outcomes, costs, and healthcare resource utilization for TLIF vs. PLF for single-level degenerative spondylolisthesis. Eur Spine J. 2018;27(3):661-669.

23. Hale AT, **Stonko DP**, Lim J, Guillamondegui OD, Shannon CN, Patel MB. Using an artificial neural network to predict traumatic brain injury. J Neurosurg Pediatr. 2019;23(2):219-226.

24. Lillemoe HA, **Stonko DP**, Sullivan ME, Geevarghese SK, Terhune KP. Preoperative goal setting and perioperative communication in an academic training institution: Where do we stand? Am J Surg. 2019;217(2):318-322.

25. Dennis BM, **Stonko DP**, Callcut RA, Sidwell RA, Stassen NA, Cohen MJ, Cotton BA, Guillamondegui OD. Artificial neural networks can predict trauma volume and acuity regardless of center size and geography: A multicenter study. J Trauma Acute Care Surg. 2019;87(1):181-187.

26. Lillemoe HA, **Stonko DP**, George BC, Schuller MC, Fryer JP, Sullivan ME, Terhune KP, Geevarghese SK. A Preoperative Educational Time-Out is Associated with Improved Resident Goal Setting and Strengthens Educational Experiences. J Surg Educ. 2020;77(1):18-26.

27. **Stonko DP**, Guillamondegui OD, Fischer PE, Dennis BM. Artificial Intelligence in Trauma Systems. Surgery. 2021;169(6):1295-1299.

28. **Stonko DP**, Etchill EW, Giuliano KA, DiBrito SR, Eisenson D, Heinrichs T, Morrison JJ, Haut ER, Kent AJ. Failure to Rescue in Geriatric Trauma: The Impact of Any Complication Increases with Age and Injury Severity in Elderly Trauma Patients. Am Surg. 2021;87(11):1760-1765.

29. **Stonko DP**, Dun C, Walsh C, Schul M, Blebea J, Boyle EM, Makary MA, Hicks CW. Evaluation of a Physician Peer-Benchmarking Intervention for Practice Variability and Costs for Endovenous Thermal Ablation. JAMA Netw Open. 2021;4(12):e2137515.

30. **Stonko DP**, Betzold RD, Abdou H, Edwards J, Azar FK, Elansary NN, Treffalls RN, Savidge SG, DuBose JJ, Feliciano DV, Morrison JJ. In-Hospital Outcomes in Autogenous Vein vs Synthetic Graft Interposition for Traumatic Arterial Injury: A Propensity Matched Cohort from PROOVIT. J Trauma Acute Care Surg. 2022;92(2):407-412.

31. Patel N, Harfouche M, **Stonko DP**, Elansary N, Scalea TM, Morrison JJ. Factors Associated with Increased Mortality in Severe Abdominopelvic Injury. Shock. 2022;57(2):175-180.

32. **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Morrison JJ. A technical and data analytic approach to pressure-volume loops over numerous cardiac cycles. JVS Vasc Sci. 2022;3:73-84.

33. Kawaji Q, Dun C, Walsh C, Sorber RA, **Stonko DP**, Abularrage CJ, Black JH III, Perler BA, Makary MA, Hicks CW. Index atherectomy peripheral vascular interventions performed for claudication are associated with more reinterventions than nonatherectomy interventions. J Vasc Surg. 2022;76(2):489-498.e4.

34. Zhang GQ, Bose S, **Stonko DP**, Abularrage CJ, Zarkowsky DS, Hicks CW. Transcarotid artery revascularization is associated with similar outcomes to carotid endarterectomy regardless of patient risk status. J Vasc Surg. 2022;76(2):474-481.e3.

35. Abdou H, Edwards J, Patel N, **Stonko DP**, Elansary NN, Lang E, Richmond MJ, Ptak T, White JM, Scalea TM, Morrison JJ. Characterizing Brain Perfusion in a Swine Model of Raised Intracranial Pressure. J Surg Res. 2022;278:64-69.

36. **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Hicks CW, Morrison JJ. The Underlying Cardiovascular Mechanisms of Resuscitation and Injury of REBOA and Partial REBOA. Front Physiol. 2022;13:871073.

37. Kibrik P, **Stonko DP**, Alsheekh A, Holscher CM, Zarkowsky DS, Abularrage CJ, Hicks CW. Association of carotid revascularization approach with perioperative outcomes based on symptom status and degree of stenosis among octogenarians. J Vasc Surg. 2022;76(3):769-777.e2.

38. Abdou H, Edwards J, **Stonko DP**, Elansary N, Ottochian M, DuBose JJ, Scalea TM, Morrison JJ, Kundi R. The Role of Endovascular Repair of Popliteal Arterial Injuries in the Acute Setting. Ann Vasc Surg. 2022;87:522-528.

39. Madurska MJ, Abdou H, Elansary NN, Edwards J, Patel N, **Stonko DP**, Richmond MJ, Scalea TM, Rasmussen TE, Morrison JJ. Whole Blood Selective Aortic Arch Perfusion for Exsanguination Cardiac Arrest: Assessing Myocardial Tolerance to the Duration of Cardiac Arrest. Shock. 2022;57(6):243-250.

40. Treffalls RN, **Stonko DP**, Edwards J, Abdou H, Savidge SG, Walker PF, Scalea TM, Morrison JJ. Characterization of the Mesenteric Circulatory Physiology During Hemorrhagic Shock in a Swine Model. Surg Pract Sci. 2022;10:100119.

41. **Stonko DP**, Patel N, Edwards J, Abdou H, Lang E, Elansary NN, Treffalls R, White J, Morrison JJ. A swine model of reproducible timed induction of peripheral arterial shunt failure: Developing warning signs of imminent shunt failure. JVS Vasc Sci. 2022;3:285-291.

42. Sborov KD, Dennis BM, de Oliveira Filho GR, Bellister SA, Statzer N, **Stonko DP**, Guyer RA, Wanderer JP, Beyene RT, McEvoy MD, Allen BFS. Acute pain consult and management is associated with improved mortality in rib fracture patients. Reg Anesth Pain Med. 2022;47(10):643-648.

43. **Stonko DP**, Goldsborough E 3rd, Kibrik P, Zhang GQ, Holscher CM, Hicks CW. Use of Transcarotid Artery Revascularization, Transfemoral Carotid Artery Stenting, and Carotid Endarterectomy in the US From 2015 to 2019. JAMA Netw Open. 2022;5(9):e2231944.

44. Patel N, Edwards J, Abdou H, **Stonko DP**, Treffalls RN, Elansary NN, Ptak T, Morrison JJ. Characterization of cerebral blood flow during open cardiac massage in swine: Effect of volume status. Front Physiol. 2022;13:988833.

45. Elansary NN, **Stonko DP**, Treffalls RN, Abdou H, Madurska MJ, Morrison JJ. Class of hemorrhagic shock is associated with progressive diastolic coronary flow reversal and diminished left ventricular function. Front Physiol. 2022;13:1033784.

46. Treffalls RN, Lubas M, Morrison JJ, **Stonko DP**. Autologous blood resuscitation for large animals in a research setting using the Hemafuse device: Preliminary data of device use for controlled and real-world hemorrhage. Front Vet Sci. 2022;9:1069420.

47. Edwards J, Treffalls RN, Abdou H, **Stonko DP**, Walker PF, Morrison JJ. Lower Extremity Staged Revascularization (LESR) as a new innovative concept for lower extremity salvage in acute popliteal artery injuries: a hypothesis. Patient Saf Surg. 2022;16(1):39.

48. Hicks CW, **Stonko DP**, Deery SE, Kavousi Y, Black JH III, Lum YW, Perler BA, Abularrage CJ. Drug-Eluting Stents are Associated with Superior Mid-Term Outcomes for the Treatment of Infrainguinal Bypass Graft Stenoses. Ann Vasc Surg. 2022;87:13-20.

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49. **Stonko DP**, Azar FK, Betzold RD, Morrison JJ, Fransman RB, Holcomb J, Bee T, Fabian TC, Skarupa DJ, Stein DM, Kozar RA, O'Connor JV, Scalea TM, DuBose JJ, Feliciano DV. Contemporary Management and Outcomes of Injuries to the Inferior Vena Cava: A Prospective Multicenter Trial From PROspective Observational Vascular Injury Treatment. Am Surg. 2023;89(4):714-719.

50. **Stonko DP**, Betzold RD, Azar FK, Edwards J, Abdou H, Elansary NN, Gerling KA, White J, Feliciano DV, DuBose JJ, Morrison JJ. Postoperative antiplatelet and/or anticoagulation use does not impact complication or reintervention rates after vein repair of arterial injury: A PROOVIT study. Vascular. 2023;31(4):777-783.

51. Chipman AM, Ottochian M, Ricaurte D, Guntur G, DuBose JJ, **Stonko DP**, Feliciano DV, Scalea TM, Morrison JJ. Contemporary management and time to revascularization in upper extremity arterial injury. Vascular. 2023;31(2):284-291.

52. Bose S, Dun C, Sorber RA, **Stonko DP**, Solomon AJ, Black JH III, Lum YW, Conte MS, Makary MA, Hicks CW. Practice patterns surrounding the use of tibial interventions for claudication in the Medicare population. J Vasc Surg. 2023;77(2):454-462.e1.

53. Bose S, **Stonko DP**, Pappas GM, Drudi LM, Stoner MC, Hicks CW. Females are less likely to receive best medical therapy for stroke prevention before and after carotid revascularization than males. J Vasc Surg. 2023;77(3):786-794.e2.

54. Edwards J, Abdou H, **Stonko DP**, Treffalls RN, Elansary N, Lang E, Morrison JJ. Partial vs Full Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) in a Swine Model of Raised Intracranial Pressure and Hemorrhagic Shock. J Am Coll Surg. 2023;236(1):241-252.

55. Edwards J, **Stonko DP**, Abdou H, Treffalls RN, Walker PF, Rasmussen TE, Propper BW, Morrison JJ. Lower Extremity Extracorporeal Distal Revascularization in a Swine Model of Prolonged Extremity Ischemia. Ann Vasc Surg. 2023;89:293-301.

56. **Stonko DP**, Weller JH, Gonzalez Salazar AJ, Abdou H, Edwards J, Hinson J, Levin S, Byrne JP, Sakran JV, Hicks CW, Haut ER, Morrison JJ, Kent AJ. A Pilot Machine Learning Study Using Trauma Admission Data to Identify Risk for High Length of Stay. Surg Innov. 2023;30(3):356-365.

57. **Stonko DP**, Richmond MJ, Edwards J, Abdou H, Treffalls RN, Elansary N, Patel N, Badjatia N, Jewhurst K, Dupnik M, DiMatteo K, Myers R, Morrison JJ. High flow cooled air can decrease brain temperature without injuring the snout or brain in Swine. Surg Pract Sci. 2023;12:100154.

58. Xun H, **Stonko DP**, Goldsborough E, Keegan AC, Srinivas T, Bose S, McDermott KM, Weaver ML, Hicks CW. A 10-Year Analysis of Representation of Women in Patent Applications and NIH Funding in Vascular Surgery. Ann Vasc Surg. 2023;95:244-250.

59. **Stonko DP**, Bose S, McDermott KM, Keegan AC, Morrison JJ, Hicks CW. Association of Year of Surgery and Carotid Stenting Outcomes in High-risk Patients, 2015-2021. JAMA Surg. 2023;158(7):768-769.

60. Keegan AC, Bose S, McDermott KM, Starks White MP, **Stonko DP**, Jeddah D, Lev-Ari E, Rutkowski J, Sherman R, Abularrage CJ, Selvin E, Hicks CW. Implementation of a patient-centered remote wound monitoring system for management of diabetic foot ulcers. Front Endocrinol (Lausanne). 2023;14:1157518.

61. Beyene RT, **Stonko DP**, Gondek SP, Morrison JJ, Dennis BM. Identifying temporal variations in burn admissions. PLoS One. 2023;18(6):e0286154.

62. Gerling KA, **Stonko DP**, Xun H, Shallal CC, Kang SH, Brandacher G, Lauria AL, Kersey AJ, Burmeister DM, Propper BW, Sacks JM, Hicks CW, White JM. A Novel Sutureless Anastomotic Device in a Swine Model: A Proof of Concept Study. J Surg Res. 2023;291:116-123.

63. **Stonko DP**, Edwards J, Abdou H, Treffalls RN, Walker PF, DeMartino RR, Mendes BC, Hicks CW, Morrison JJ. Thoracic Endovascular Aortic Repair Acutely Augments Left Ventricular Biomechanics in An Animal Model: A Mechanism for Postoperative Heart Failure and Hypertension. Ann Vasc Surg. 2023;97:18-26.

64. **Stonko DP**, Edwards J, Abdou H, Treffalls R, Walker PF, Morrison JJ. Raising Systemic Blood Pressure to Delay Irreversible Intestinal Ischemia in a Swine Model of Proximal Superior Mesenteric Artery Occlusion. J Surg Res. 2024;295:70-80.

65. **Stonko DP**, Treffalls RN, Edwards J, Abdou H, Lang E, Stonko DC, Cullen P, Hicks CW, Morrison JJ. How to TEVAR swine for scientific research: Technical, anatomic, and device considerations to translate human TEVAR techniques into the large animal laboratory. Vascular. 2024;32(4):728-736.

66. Abdou H, Treffalls RN, **Stonko DP**, Kundi R, Morrison JJ. Endovascular stenting techniques for blunt carotid injury. Vascular. 2024;32(5):1055-1062.

67. **Stonko DP**, Mohammed S, Skojec D, Rutkowski J, Call D, Verdi KG, Tsai LL, Black JH III, Perler BA, Abularrage CJ, Lum YW, Salameh MJ, Hicks CW. Automatic 1-year follow-up appointment creation and reminders can improve long-term follow-up after carotid revascularization. Am J Surg. 2024;227:57-62.

68. **Stonko DP**, Rousseau MC, Price C, Benike A, Treffalls RN, Brunton NE, Rosen D, Morrison JJ. Technical and analytical approach to biventricular pressure-volume loops in swine including a completely endovascular, percutaneous closed-chest large animal model. JVS Vasc Sci. 2024;5:100190.

69. Siddiqi N, Lammers D, Hu P, **Stonko DP**, DuBose JJ, Hurst S, Hashmi Z, Morrison J, Betzold RD. Comparison of Contralateral vs Ipsilateral Vein Graft for Traumatic Vascular Injury Repair: A Cohort From PROOVIT. Am Surg. 2024;90(9):2310-2313.

70. Aru RG, **Stonko DP**, Tan LT, Sorber RA, Hicks CW, Black JH III. Utility of motor-evoked potentials in contemporary open thoracoabdominal aortic repair. J Vasc Surg. 2024;80(4):979-987.

71. Dun C, **Stonko DP**, Bose S, Keegan AC, McDermott KM, Rumalla KC, Black JH III, Kalbaugh CA, Makary MA, Hicks CW. Trends and Factors Associated With Peripheral Vascular Interventions for the Treatment of Claudication From 2011 to 2022: A National Medicare Cohort Study. J Am Heart Assoc. 2024;13(14):e033463.

72. Treffalls RN, Poe K, Abdou H, **Stonko DP**, Edwards J, DeMartino RR, Ptak T, Morrison JJ. Exploring Intra-arterial Contrast Administration for Intraoperative Imaging Using a Swine Model. Angiology. 2025;76(9):833-840.

73. Dun C, Weaver ML, Bose S, **Stonko DP**, White M, McDermott KM, Black JH III, Kalbaugh CA, Makary MA, Hicks CW. Association Between Regional Market Competition and Early Femoropopliteal Interventions for Claudication. Ann Vasc Surg. 2025;110(Pt B):424-433.

74. Bose S*, **Stonko DP***, Kiang SC, Roh D, Mao J, Cabrera A, Dun C, Goodney PP, Black JH III, O'Banion LA, Columbo JA, Tomihama RT, Hicks CW. Validation of ICD-10 Codes to Distinguish Between Claudication and Chronic Limb-Threatening Ischemia in Patients Undergoing Peripheral Vascular Intervention Using Medicare-Matched Registry Data. Circ Cardiovasc Qual Outcomes. 2025;18(7):e011467.

75. Holscher CM, Dun C, Wu YHA, White M, **Stonko DP**, Schermerhorn M, Black JH III, Abularrage CJ, Columbo JA, Hicks CW. Impact of the 2023 Centers for Medicare & Medicaid Services policy change on carotid artery stenting use among Medicare beneficiaries. Surgery. 2025;187:109622.

76. Treffalls RN, Jodlowski G, Wilken S, **Stonko DP**, Walker PF, Morrison JJ. Lower extremity extracorporeal distal revascularization (LEEDR) as a novel approach to limb salvage following prolonged ischemia. Sci Rep. 2025;15(1):32802.

77. Banaskiewicz K, Treffalls R, Wilken S, **Stonko DP**, Morrison JJ. Performance of open versus endovascular approaches in swine modeling of acute mesenteric ischemia. Vascular. 2026;34(2):351-356.

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78. Dvir M, Jodlowski G, **Stonko DP**, Treffalls R, Nelson J, Walker PF, Morrison JJ. A proposed clinical guide to delivering Lower Extremity Extracorporeal Distal Revascularization (LEEDR) as a bridge to definitive care in acute limb ischemia. Perfusion. 2026;41(3):254-259.

79. Colling M, **Stonko DP**, Reifsnyder T. Etiology of Limb Loss after Successful Transmetatarsal Amputation. Ann Vasc Surg. 2026;130:206-213.

80. Colling M, **Stonko DP**, Reifsnyder T. Dialysis access maturation is superior after failed renal transplantation. Ann Vasc Surg. 2026. In press.

81. **Stonko DP**, Aru RG, Tan LT, Gerling KA, Kawaji Q, Lum YW, Hicks CW, Black JH III. Open Thoracoabdominal Aortic Reconstruction With Distal Aortic Perfusion: A Bottom-Up Approach is Safe in Selected Patients. Ann Vasc Surg. 2027;134:321-328.

Review Articles [RA]

1. **Stonko DP**, He J, Zheng L, Blair AB. A contemporary evidence basis for neoadjuvant chemotherapy in upfront resectable pancreatic adenocarcinoma. J Pancreatol. 2020;3(1):12-20.

2. **Stonko DP**, Haut ER. Review of the French Working Group on Perioperative Hemostasis, French Study Group on Thrombosis and Hemostasis, and French Society for Anaesthesia and Intensive Care Guidelines on Management of Antiplatelet Therapy for Nonelective Invasive Procedures or Bleeding Complications. JAMA Surg. 2020;155(9):886-887.

3. Mallela DP, Bose S, Shallal CC, Goldsborough E, Xun H, Chen J, **Stonko DP**, Brandacher G, Sacks JM, Kang SH, Hicks CW. A Systematic Review of Sutureless Vascular Anastomosis Technologies. Semin Vasc Surg. 2021;34(4):247-259.

4. Zarkowsky DS, **Stonko DP**. Artificial Intelligence's Role in Vascular Surgery Decision-Making. Semin Vasc Surg. 2021;34(4):260-267.

5. Treffalls RN, **Stonko DP**, DeMartino RR, Morrison JJ. Acute management of mesenteric emergencies: Tailoring the solution to the problem. Semin Vasc Surg. 2023;36(2):234-249.

6. **Stonko DP**, Morrison JJ, Hicks CW. A Review of Mature Machine Learning and Artificial Intelligence Enabled Applications in Aortic Surgery. JVS Vasc Insights. 2023;1:100016.

7. **Stonko DP**, Hicks CW. Mature artificial intelligence- and machine learning-enabled medical tools impacting vascular surgical care: A scoping review of late-stage, US Food and Drug Administration-approved or cleared technologies relevant to vascular surgeons. Semin Vasc Surg. 2023;36(3):460-470.

Case Reports [CR]

1. **Stonko DP**, Crook TW. A 10-Month-Old Male With a Cough, Fever, and Abnormal Hepatitis Serologies. Clin Pediatr (Phila). 2017;56(6):593-595.

2. **Stonko DP**, Betzold RD, Bellister SA, O'Neill DC, O'Neill DE, Evans PT, Dennis BM. Management of an Undetonated Intracranial Explosive: a multi-disciplinary approach including the bomb squad. ACS Case Reviews in Surgery. 2018;2(2):42-45.

3. **Stonko DP**, Liang J, Weeks AG, Redline RW, Boyd TK, Watkins JC, Kovach AE. Ectopic Fetal Hepatic Tissue in the Placenta. Int J Gynecol Pathol. 2019;38(5):426-429.

4. Hadad M, **Stonko DP**, DiBrito SR, Riddle RC, Stevens K. Extensive Abdominal Heterotopic Ossification in a Patient with Distant Penetrating Trauma. ACS Case Reviews in Surgery. 2020;3(1):47-50.

5. Holscher CM, **Stonko DP**, Weaver ML, Reifsnyder T. Successful bilateral popliteal-plantar bypasses for polyarteritis nodosa induced ischemia. J Vasc Surg Cases Innov Tech. 2021;7(1):152-156.

6. Stonko DC, Treffalls RN, Morrison JJ, Richards J, **Stonko DP**. Intraoperative TEE During TEVAR Following Blunt Thoracic Trauma: a case review. Ann Vasc Surg Brief Rep Innov. 2023;3:100188.

Book Chapters, Monographs [BC]

1. **Stonko DP**, Hicks CW. Management of Ruptured Abdominal Aortic Aneurysms. In: Cameron JL, Cameron AM, eds. Current Surgical Therapy. 14th ed. Philadelphia, PA: Elsevier Saunders; 2022.

2. **Stonko DP**, Hicks CW. Current Management of Intermittent Claudication. Adv Surg. 2023;57(1):103-113.

3. **Stonko DP**, Hicks CW. When to Surgically Intervene for Claudication? Adv Surg. 2025;59(1):245-258.

4. **Stonko DP**, Reifsnyder T. Management of Acute Mesenteric Ischemia. In: Cameron JL, Cameron AM, eds. Current Surgical Therapy. 15th ed. Philadelphia, PA: Elsevier Saunders; 2026.

5. **Stonko DP**, Black JH III. Vascular Reconstruction in Oncologic Surgery. In: Sidawy, Perler, Harris, eds. Rutherford's Vascular Surgery and Endovascular Therapy. 11th ed. Philadelphia, PA: Elsevier; 2026.

6. **Stonko DP**, Holscher CM. Acute Limb Ischemia: Surgical and Endovascular Treatment. In: Sidawy, Perler, Harris, eds. Rutherford's Vascular Surgery and Endovascular Therapy. 11th ed. Philadelphia, PA: Elsevier; 2026.

7. **Stonko DP**, Black JH III. Management of aortic arch and arch vessel injuries. In: Mitchell, Farber, Moore, Cox, eds. Decision Making in Vascular Trauma. Wolters Kluwer. In press (expected April 2027).

Books, Textbooks [BK]

NONE

Editorials [ED]

1. **Stonko DP**, Jarman MP, Byrne JP. It is time for some deep learning: a statistical commentary on machine learning for clinical prediction models using imbalanced datasets. Trauma Surg Acute Care Open. 2024;9(1):e001567.

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

NONE

Electronically signed:
David Stonko, MD MS
11/20/2026, 10:58:43

Letters, Correspondence [LT]

NONE

Other Publications

Clinical Stories or Memoirs [CS]

1. **Stonko DP**, Goles JG. Reflection: an MD and PA students' take on vaccination. Tennessee Medicine E-Journal: Vol. 2: Iss. 1, Article 4. 2016 May 31.

Creative Writing [CW]

NONE

Methods and Techniques, "How I Do It" Articles [MT]

1. **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Treffalls R, Morrison JJ. PV Loops and REBOA During Hemorrhage and Resuscitation, 08 October 2021, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1646/v1]
2. Treffalls RN, **Stonko DP**, Edwards J, Abdou H, Savidge SG, Morrison JJ. Effects of Hemorrhagic Shock and Resuscitation on Mesenteric Circulation, 16 November 2021, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1686/v1].
3. **Stonko DP**, Abdou H, Edwards J, Elansary NN, Lang E, Hicks CW, Morrison JJ. The Cardiovascular Implications of Thoracic Endovascular Aortic Repair: how aortic stenting impacts LV function and coronary artery flow. 22 November 2021, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1665/v1]
4. Edwards J, Elansary N, **Stonko DP**, Abdou H, Lang E, Treffalls RN, Savidge SG, Morrison JJ. REBOA and its effect on hemodynamics and cerebral blood flow as measured by CTP in a large animal model of raised intracranial pressure and hemorrhagic shock. 25 February 2022, PROTOCOL (Version 1).
5. Richmond MJ, **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Morrison JJ. Assessing the safety and efficacy of a novel intra-nasal high flow cannula for brain cooling, 13 May 2022, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1881/v1]
6. Treffalls RN, **Stonko DP**, Edwards J, Abdou H, Lang E, Walker PF, Morrison JJ. Effects on Lower Extremity Perfusion When the Lower Extremity Extracorporeal Distal Revascularization (LEEDR) System is Used for Arterial Shunting, 17 June 2022, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1932/v1]
7. Treffalls RN, **Stonko DP**, Lang E, Lubas M, Morrison JJ. Demonstrating the safety and efficacy of the Hemafuse device for autotransfusion in a swine model of intraperitoneal pelvic hemorrhage, 26 August 2022, PROTOCOL (Version 1) available at Protocol Exchange [https://doi.org/10.21203/rs.3.pex-1949/v1]

Opinions, Perspectives, Political Commentary, Advocacy, Essays [OP]

1. **Stonko DP**. Artificial general intelligence and the future of surgery. KevinMD.com. April 12, 2026. https://kevinmd.com/2026/04/artificial-general-intelligence-and-the-future-of-surgery.html
2. **Stonko DP**. Clinical AI tools are losing to general-purpose models. KevinMD.com. July 26, 2026. https://kevinmd.com/2026/07/clinical-ai-tools-are-losing-to-general-purpose-models.html
3. **Stonko DP**. AI Safety and Effectiveness in Surgery: Resources and Links. The Local Minimum. September 27, 2026. https://localminimum.us/library/2026/09/ai-safety-effectiveness-surgery-resources/
4. **Stonko DP**. Machines of Loving Grace, two years later. The Local Minimum. September 28, 2026. https://localminimum.us/library/2026/09/machines-of-loving-grace-two-years-later/

Original Research, Other (not peer reviewed and/or not indexed) [RO]

1. Ge X*, **Stonko DP***. Modeling a Cellular Response To A Gradient: Mathematics and Molecular Biology Inform a Mechanistic Understanding. 2012. UMBC Review 13:2012.
2. **Stonko DP**, Starz-Gaiano M, Peercy BE. Force-Based Biophysical model of Border Cell Migration: Unraveling the mechanism of collective cell migration. UMBC Department of Mathematics and Statistics. Presented May, 2013.
3. **Stonko D**, Khuvis S, Gobbert MK. Numerical methods to solve 2-D and 3-D elliptic partial differential equations using Matlab on the cluster maya. Technical Report HPCF-2014-9, UMBC High Performance Computing Facility, University of Maryland, Baltimore County, 2014.
4. **Stonko D**, Starz-Gaiano M, Peercy BE, Implementing a Numerical Package to Model Collective Cell Migration. Technical Report HPCF-2014-2. UMBC High Performance Computing Facility, University of Maryland, Baltimore County, 2014.
5. **Stonko DP**. A discrete, three-dimensional, force-based mathematical model of collective cell migration. M.S. Thesis, Department of Mathematics and Statistics, University of Maryland, Baltimore County, Defended June 6, 2014. Advisors: Bradford E. Peercy, PhD, and Michelle Starz-Gaiano, PhD.
6. Brown C, **Stonko DP**, Stephen D, Fudim M, Yang S, Cook-Weins G, McPherson J, Lindenfeld J. Once Versus Twice Daily Potassium Monitoring In Patients Hospitalized With Acute Heart Failure. Clinical Research & Case Reports International Journal. 2020 April; 1(4).
7. Cullen P, **Stonko DP**, Treffalls RN, Walker PF, Morrison JJ. Portal Endovascular Rendezvous Catheterization (PERC): An innovative transabdominal technique of accessing the portal vein for large animal translational vascular research. Annals of Vascular Surgery: Brief Reports and Innovations. 2023 June; 3(2):100195.
8. **Stonko DP**, Holscher CM, Sorber R, Reifsnyder T. Management of Limb Threatening Ischemia Following Lower Extremity Hemodialysis Access. Annals of Vascular Surgery: Brief Reports and Innovations. 2023 June 4; 10.1016.
9. **Stonko DP**. Anatomy-Informed Neural Networks: Encoding Anatomic Priors in Loss and Architecture, with an SE(3) Formulation of Guidewire-Induced Aortoiliac Deformation. arXiv preprint arXiv:2608.21332 [cs.AI]. Posted August 21, 2026. doi:10.48550/arXiv.2608.21332

Proceedings Reports [PR]

1. Vasquez-Castellanos RA, Chotai S, Wick J, **Stonko DP**, Cheng JS, Devin CJ, Asher AL, McGirt MJ. The Profile of a Smoker and Its Impact on Outcomes After Cervical Spine Surgery. Neurosurgery. 2015;62(Suppl 1):199-200.
2. Kay HF, Chotai S, Wick JB, **Stonko DP**, McGirt MJ, Devin CJ. Does depression or anxiety affect patient-reported outcomes and satisfaction following operative treatment for cervical myelopathy or radiculopathy? Spine J Meeting Abstracts (NASS Annual Meeting). 2015;2015:139-140. [Presentation #22P]
3. Vasquez-Castellanos RA, Chotai S, Wick JB, **Stonko DP**, Cheng JS, et al. The profile of a smoker and its impact on outcomes after cervical spine surgery. Spine J Meeting Abstracts (NASS Annual Meeting). 2015;2015:141-143. [Presentation #23P]
4. Sielatycki JA, Chotai S, **Stonko DP**, Wick JB, Kay HF, O'Neill KR, Devin CJ. Is obesity correlated with increased complications following cervical surgery for degenerative conditions? Spine J Meeting Abstracts (NASS Annual Meeting). 2015;2015:173-174. [Presentation #37]
5. Chotai S, Parker SL, Sivaganesan A, **Stonko DP**, McGirt MJ, Devin CJ. Where do true cost savings exist following elective surgery for degenerative spine disease? Spine J Meeting Abstracts (NASS Annual Meeting). 2015;2015:106-107. [Presentation #9]
6. Sielatycki JA, Chotai S, Wick J, **Stonko D**, Kay HF, O'Neill K, Devin CJ. Does Obesity Correlate with Poor Patient-Reported Outcomes following Cervical Surgery for Degenerative Conditions? Spine J. 2015;15(10):S228-S229.
7. Sielatycki JA, Chotai S, Kay HF, **Stonko D**, Wick J, McGirt MJ, Devin CJ. Does Obesity Predict Poor Patient-Reported Outcomes following Lumbar Surgery for Degenerative Conditions? Spine J. 2015;15(10):S259-S260.
8. Kay HF, Chotai S, Wick JB, **Stonko DP**, Asher AL, McGirt MJ, Devin CJ. Does Number of Reported Drug Allergies Affect Patient-Reported Outcomes and Satisfaction following Operative Treatment for Degenerative Lumbar Spine Disease? Spine J. 2015;15(10):S94.
9. Chotai S, Sivaganesan A, Parker SL, Sielatycki JA, **Stonko DP**, McGirt MJ, Devin CJ. Patient-Specific Factors Predicting Dissatisfaction after Elective Surgery for Degenerative Spine Diseases. Spine J. 2015;15(10):S263.
10. Chotai S, Sivaganesan A, Parker SL, Wick J, **Stonko DP**, McGirt MJ, Devin CJ. Effect of Complications Within 90 Days on Cost-Utility Following Elective Surgery for Degenerative Lumbar Spine Disease. Neurosurgery. 2016;63(CN Suppl 1):145.
11. Chotai S, Sivaganesan A, Parker SL, Sielatycki JA, Wick J, **Stonko D**, McGirt MJ, Devin CJ. Effect of Complications within 90 Days on Cost-Utility following Lumbar Decompression with and without Fusion for Degenerative Spine Disease. Spine J. 2016;16(10S):S122-S123.
12. Kim E, Chotai S, **Stonko D**, Wick J, Sielatycki JA, Devin CJ. Two Year Patient Reported Outcomes Costs and Health Care Resource Utilization for TLIF versus PLF for Single-Level Degenerative Spondylolisthesis. Spine J. 2016;16(10S):S127.
13. Kim E, Wick J, **Stonko D**, Chotai S, Freeman TH, Douleh DG, Mistry AM, Parker SL, Devin CJ. Timing of Operative Intervention in Traumatic Spine Injuries without Neurologic Deficit. Spine J. 2016;16(10S):S166.
14. Chotai S, Zuckerman SL, Parker SL, **Stonko D**, Hale AT, Wick J, McGirt MJ, Cheng JS, Devin CJ. Health Care Resource Utilization and Patient-Reported Outcomes following Elective Surgery for Intradural Extramedullary Spinal Tumors. Spine J. 2016;16(10S):S217.
15. Zuckerman SL, Chotai S, Devin CJ, Parker SL, **Stonko D**, Wick J, Hale AT, McGirt MJ, Cheng JS. Surgical Resection of Intradural Extramedullary Spinal Tumors: Patient-Reported Outcomes and Minimum Clinically Important Difference. Spine J. 2016;16(10S):S217-S218.
16. Kim EJ, Chotai S, Wick JB, **Stonko DP**, Sivaganesan A, Devin CJ. Patient-reported outcomes and costs in revision cervical surgery. Spine J Meeting Abstracts (NASS Annual Meeting). 2016;2016:179-183. [Presentation #43]
17. Sivaganesan A, Chotai S, Kim EJ, **Stonko D**, Wick JB, McGirt MJ, Devin CJ. Predictive models for patient-centered efficacy and discharge destination after elective cervical spine surgery. Spine J Meeting Abstracts (NASS Annual Meeting). 2016;2016:226-228. [Presentation #66]
18. Chotai S, Zuckerman SL, Devin CJ, Parker SL, **Stonko DP**, Wick JB, Hale AT, McGirt MJ, Cheng JS. Surgical Resection of Intradural Extramedullary Spinal Tumors: Patient Reported Outcomes and Minimum Clinically Important Difference. J Neurosurg. 2016;124(4):A1207.
19. Parker SL, Sielatycki JA, Chotai S, Sivaganesan A, **Stonko DP**, Devin CJ, McGirt MJ. Effect of Obesity on Cost and Effectiveness after Decompression with and without Fusion for Degenerative Lumbar Disease. J Neurosurg. 2016;124(4):A1207-A1208.
20. Brown CL, Fudim M, Patel D, **Stonko D**, McPherson J, Lindenfeld J. Electrolyte Derangements in Heart Failure. J Card Fail. 2017;23(8):S57.
21. Kim EJ, Chotai S, Wick JB, **Stonko DP**, Sivaganesan A, Devin CJ. Predicting the Odds of Returning to Work for Patients Undergoing Elective Cervical Spine Surgery. Spine J. 2017;17(10):S247-S248.
22. Lillemoe HA, **Stonko DP**, Schuller MC, George BC, Sullivan ME, Terhune KP, Fryer JP, Geevarghese SK. Preoperative Educational Time Out Is Feasible, Improves Resident Goal-Setting, and Strengthens Educational Experience. J Am Coll Surg. 2018;227(4):S225-S226.
23. Edwards J, **Stonko DP**, Abdou H, Betzold RD, Morrison JJ, Scalea TM, Feliciano DV, DuBose JJ. Contralateral vs Ipsilateral Vein Graft for Traumatic Arterial Injury Repair: A Multicenter Prospective Cohort Study. J Am Coll Surg. 2021;233(5):e214.
24. Deery SE, Dun C, **Stonko DP**, Abularrage CJ, Black JH III, Makary MA, Hicks CW. Use of Intravascular Ultrasound During First-Time Femoropopliteal Peripheral Vascular Interventions Among Medicare Beneficiaries. Ann Vasc Surg. 2021;71:471-472.
25. Bose S, Dun C, Sorber RA, **Stonko DP**, Abularrage CJ, Black JH III, Lum YW, Makary MA, Hicks CW. Tibial Interventions for claudication are performed often, but not often by vascular surgeons. J Vasc Surg. 2022;75(6):e93-e94.
26. Treffalls RN, Poe K, Abdou H, **Stonko DP**, Edwards J, Ptak T, White JM, Scalea TM, Morrison JJ. Utilization Of Intra-Arterial Contrast For Computed Tomography Aortography In A Swine Model. Arterioscler Thromb Vasc Biol. 2022;42(Suppl 1). [Abstract 289]
27. Treffalls RN, **Stonko DP**, Patel N, Edwards J, Abdou H, Elansary N, Walker PF, Morrison JJ. Computed Tomography Perfusion Of Cerebral Blood Flow During Open Cardiac Massage For Hypovolemic And Normovolemic Cardiac Arrest In Swine. Circulation. 2022;146(Suppl 1). [Abstract 08]
28. Beyene RT, **Stonko DP**, Mubang R, Gondek SP, Morrison J, Dennis BM. Identifying Temporal Patterns in Burn Admissions. J Burn Care Res. 2022;43(Suppl 1):S77-S78.
29. **Stonko DP**, Sorber R, Deery SE, Kavousi Y, Black JH III, Lum YW, Perler BA, Abularrage CJ, Hicks CW. Drug-eluting Stents Are Associated with Good Mid-term Outcomes for the Treatment of Failing Infrainguinal Bypass Grafts. Ann Vasc Surg. 2022;79:381.
30. **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Morrison JJ, Hicks CW. Quantifying the Cardiovascular Physiology of REBOA and Partial REBOA: How REBOA Facilitates Resuscitation but Also Strains the Left Ventricle. J Vasc Surg. 2022;75(6):e317-e318.

31. Goldsborough E, Hu F, You B, Bose S, McDermott KM, Keegan AC, **Stonko DP**, Kalbaugh CA, Hicks CW. Association of Race and Neighborhood Socioeconomic Disadvantage with Incident Peripheral Artery Disease and Chronic Limb-threatening Ischemia. J Vasc Surg. 2023;77(6):e285-e286.

32. Keegan AC, Jeddah D, Lev-Ari E, Bose S, **Stonko DP**, McDermott KM, Rutkowski J, Sherman R, Abularrage CJ, Hicks CW. Feasibility of Remote Wound Care: A Pilot Study Implementing a Patient-centered Remote Wound Monitoring System Using a Smartphone Application. J Vasc Surg. 2023;77(6):e195-e196.

33. Bose S, Dun C, Keegan AC, McDermott KM, **Stonko DP**, Black JH III, Columbo JA, Conte MS, Deery SA, Goodney PP, Simons JP, Siracuse JJ, Woo K, Makary MA, Hicks CW. Infrapopliteal Peripheral Vascular Interventions for Claudication Are Associated With Poor Long-term Outcomes Regardless of Anatomical and Disease Severity. J Vasc Surg. 2023;77(6):e83-e84.

34. Dun C, **Stonko DP**, Bose S, Keegan AC, McDermott KM, Black JH III, Makary MA, Hicks CW. Low-value Peripheral Vascular Interventions are Becoming Increasingly Prevalent in the Treatment of Claudication. J Vasc Surg. 2023;77(6):e217-e218.

35. Keegan AC, Bose S, Dun C, McDermott KM, **Stonko D**, O'Banion LA, Hicks CW. Temporal Trends in Venous Stenting Practice Patterns in a US Commercial Database. J Vasc Surg. 2023;78(4):e117-e118.

36. **Stonko DP**, Edwards J, Abdou H, Walker PF, Treffalls RN, DeMartino RR, Mendes BC, Hicks CW, Morrison JJ. TEVAR Acutely Increases Left Ventricular Work in an Animal Model. Ann Vasc Surg. 2023;89:114-115.

37. Treffalls R, Rodrigues D, Price C, Jacobs J, **Stonko D**, DeMartino RR, Walker PF, Morrison J. Lower Extremity Extracorporeal Distal Revascularization (LEEDR) as a Novel Approach to Limb Salvage with Prolonged Ischemia. Circulation. 2024;150(Suppl 1). [Abstract 4145459]

38. Dun C, Bose S, **Stonko D**, McDermott KM, Black JH III, Kalbaugh CA, Holscher CM, Weaver L, Conte MS, Makary MA, Hicks CW. Competitive Regional Markets Are Associated With Higher Rates Of Tibial Peripheral Vascular Interventions For The Treatment Of Claudication: A National Claims Analysis. J Vasc Surg. 2024;79(6):e319-e320.

39. Aru RG, **Stonko DP**, Tan LT, Sorber RA, Hicks CW, Black JH III. Utility of Motor Evoked Potentials in Open Thoracoabdominal Aortic Repair and Risk Factors Associated with Spinal Cord Ischemia. J Vasc Surg. 2024;79(2):e22-e23.

40. Jodlowski G, Rousseau MC, Jacobs JF, Nelson J, Dvir M, **Stonko DP**, Walker PF, Morrison JJ. Practical application of pressure-volume loop analysis in a swine model of medical cardiac arrest, Eur Heart J. 2025;46(Suppl 1):ehaf784.2190.

41. Bose S, Kiang SC, Roh D, Mao J, Cabrera AJ, **Stonko D**, Black JH III, et al. Validation of ICD-10 codes to distinguish claudication and chronic limb-threatening ischemia using Medicare-matched registry data. J Investig Med. 2025;73(1):456-457.

42. Holscher CM, Dun C, **Stonko D**, White M, Wu A, Columbo JA, Schermerhorn M, Black JH III, Abularrage CJ, Hicks CW. Impact of the 2023 Centers for Medicare and Medicaid Services Policy Change on Carotid Artery Stenting Utilization Among Medicare Beneficiaries. J Vasc Surg. 2025;81(6):e247-e248.

43. **Stonko DP**, Aru RG, Tan LT, Kawaji Q, Gerling KA, Lum YW, Hicks CW, Black JH III. Top-down Vs. Bottom-up Approach In Open Thoracoabdominal Aortic Reconstruction. Ann Vasc Surg. 2026;126:246-247.

44. Colling M, Tan LT, **Stonko DP**, Reifsnyder T. Dialysis Access Maturation Is Superior After Failed Renal Transplantation. J Vasc Surg. 2026;84(1):e261-e262.

45. Colling M, **Stonko D**, Perdomo D, Reifsnyder T. Outcomes of Infrainguinal Bypass Using Arm Vein: Vein is Vein. J Vasc Surg. 2026;84(4):e308-e309.

Published Curricula, Learner Assessment Tools, Educational Evaluations, Assessment/Evaluation Instruments [PC]

1. **Stonko DP**, Juboori H. Item writer, TWIS Vascular module: Venous Disease of the Upper and Lower Extremity: DVT (Vlab), Part 1 of 1 quiz. The SCORE Portal. October 2025.

2. **Stonko DP**. Item writer, TWIS Vascular module: Uncommon Carotid Complications: Fibromuscular Dysplasia, Aneurysm, Carotid Body Tumor, Part 1 of 1 quiz. The SCORE Portal. November 2025.

White Papers [WP]

NONE

Media Releases or Interviews [MR]

NONE

Other Media [OM]

1. **Stonko DP**, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Morrison JJ. PV Loop Data Analysis: raw pressure-volume loop recordings and MATLAB analysis code. 2022.

2. **Stonko DP**. aortic-segmenter-and-surgery-planner (EVAR Planner): an open-source automated aortic segmenter and endovascular aneurysm repair planner built from contrast CT angiography. MATLAB. Version 1.5.0, 2026. MIT License. https://github.com/davidstonko/aortic-segmenter-and-surgery-planner

3. **Stonko DP**. dfwc-calc: an open-source diabetic foot ulcer healing-probability calculator derived from a five-variable logistic model (1,141 ulcers from 387 patients), Johns Hopkins Diabetic Foot and Wound Clinic. 2026. https://github.com/davidstonko/dfwc-calc

4. **Stonko DP**. jh-surgery-format: an open-source AI (Claude) formatting skill for Johns Hopkins Department of Surgery presentations, posters and letterhead. Version 2.6, 2026. https://github.com/davidstonko/jh-surgery-format

5. **Stonko DP**. stonkoCV: an open-source AI (Claude) skill that converts any curriculum vitae into a print-ready academic Excel CV. 2026. https://github.com/davidstonko/stonkocv

6. **Stonko DP**. jhsomCV: an open-source AI (Claude) skill that converts any curriculum vitae into the ABMF-required Johns Hopkins University School of Medicine appointment and promotion format. 2026. https://github.com/davidstonko/jhsomcv

7. **Stonko DP**. The Local Minimum: a short, roughly weekly newsletter on AI and how it relates to surgery and medicine, written for surgeons, trainees, scientists and engineers, with a library of essays, recorded talks and open-source Claude skills. 2026 - present. https://localminimum.us

8. **Stonko DP**. stonko-format: an open-source AI (Claude) skill that puts a Word manuscript into a standard journal-submission format and carries a house style for reporting statistics, tables, figures and references, including Journal of Vascular Surgery conventions. 2026. https://github.com/davidstonko/stonko-format
9. **Stonko DP**. jvsformat: an open-source AI (Claude) skill, a fork of stonko-format, that takes a formatted manuscript to a complete Journal of Vascular Surgery submission package, with cover letter, conformance pass, AI-use disclosure, figure files, a draft visual abstract and a consistency audit of every file. 2026. https://github.com/davidstonko/stonko-format
10. **Stonko DP**. jhbiosketch: an open-source AI (Claude) skill that drafts a biosketch tailored to a specific grant from the investigator's CV and proposal, as paste-ready SciENcv text for the 2026 NIH, NSF and DoD forms, the classic NIH-format biosketch, or a 2-page version for internal awards, with every item traced to the CV. 2026. https://github.com/davidstonko/jhbiosketch

Funding

Extramural Funding

Research Extramural Funding

Current

NONE

Pending

AMPLIFI-1: A Pivotal Study to Evaluate the Effect of the Amplifi Vein Dilation System on Outflow Vein Dilation and Arteriovenous Fistula Maturation. ClinicalTrials.gov NCT07211035.

Sponsor: Amplifi Vascular, Inc. (FDA IDE approved September 2025, FDA Breakthrough Device Designation November 2025, FDA/CMS Category B)

Primary Investigator: multicenter randomized pivotal study, n = 160, 2:1 randomization

Total direct cost: pending

Role: site principal investigator, Johns Hopkins. Status: pending.

Previous

NONE

Educational Extramural Funding

NONE

Clinical Extramural Funding

NONE

System Innovation or Quality Improvement Extramural Funding

NONE

Other Extramural Funding, including philanthropy

NONE

Intramural Funding

Research Intramural Funding

Current

12/2025 - present

Comparing Carotid Stenting Approaches: using EHR and claims data to compare use and outcomes of TCAR and transfemoral carotid stenting across systems

Sponsor: 2025 Hopkins Business of Health Initiative (HBHI) Truveta Pilot Grant, Phase II

Primary Investigator: Caitlin W. Hicks, MD, MS

Total direct cost: $25,000 plus data fees

Role: co-investigator. Status: awarded.

Pending

1/2027 - 1/2028

Before, During and After Surgery: An Open, AI-Ready Reference Library of Complete Patient Episodes for Vascular World Models and Digital Twins (EVAR-Pair)

Sponsor: Johns Hopkins Data Science and AI Institute (DSAI), Trusted Dataset Award, Fall 2026

Primary Investigators: **David P. Stonko**, MD, MS and Caitlin W. Hicks, MD, MS (co-PIs)

Total direct cost: $50,000

Role: co-principal investigator (3% effort) and dataset lead. Status: submitted November 2026, pending.

Previous

2022 - 2023
Quantifying the Cardiovascular Implications of Aortic Compliance Changes Secondary to Endovascular Aortic Stenting
Sponsor: Physician Scientist Training Program, The Johns Hopkins University School of Medicine
Primary Investigator: **David P. Stonko**, MD, MS
Total direct cost: $5,000
Role: principal investigator. Status: complete.

5/2022 - 2023
Vascular Isolation and Perfusion of the Mesenteric Circulation After SMV Trauma
Sponsor: R Adams Cowley Shock Trauma Center, Department of Surgery Designated Funds (DDF), University of Maryland
Primary Investigator: Jonathan J. Morrison, MB ChB, PhD (mentor)
Total direct cost: $24,842
Role: grant author and co-investigator. Status: complete.

1/2023 - 2024
Vascular Isolation and Perfusion for Enteric Rescue (VIPER) Device and Pharmacologic Animal Feasibility Study
Sponsor: Mayo Clinic Ventures, Mayo Clinic
Primary Investigator: Jonathan J. Morrison, MB ChB, PhD
Total direct cost: $100,000 plus additional in-kind support
Role: grant author and co-investigator. Status: complete.

4/2023 - 3/2024
Minimally Invasive Vascular Surveillance System: Initial Prototype and Proof of Concept
Sponsor: Mayo Clinic Department of Surgery
Primary Investigator: Jonathan J. Morrison, MB ChB, PhD
Total direct cost: $100,000
Role: grant author. Status: complete.

Educational Intramural Funding
NONE

Clinical Intramural Funding
NONE

System Innovation or Quality Improvement Intramural Funding
NONE

Other Intramural Funding
NONE

Clinical Activities

Clinical Focus

I practice vascular and endovascular surgery. I focus on complex aortic disease, including open and endovascular thoracoabdominal and juxtarenal repair. I treat vascular trauma, chronic limb-threatening ischemia and limb salvage, carotid disease and hemodialysis access, with a special interest in image-guided technique and vascular devices. The part of this work I value most is open vascular surgery in the service of other surgeons: being the person a colleague calls when an operation gets into trouble, and the person they plan with when a case involves a major vessel. That lets surgeons in other specialties offer operations they otherwise could not.

Certification

Medical, other state/government licensure

2021 - present
State of Maryland Medical License, Medicine & Surgery, #D0091037, Active

Boards, other specialty certification

11/19/2025
American Board of Surgery, General Surgery, Certified

current
BLS, ACLS and ATLS certified. ASSET and ATOM trained. FLS and FES certified. da Vinci/Intuitive robotic surgery credentialed and certified.

Clinical (Service) Responsibilities

7/2018 - 6/2025
I cared for general and emergency general surgery patients as an intern through chief resident at The Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center.

8/2025 - present
I provide inpatient and outpatient vascular surgical care as the vascular surgery fellow at The Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center: open and endovascular operations, vascular laboratory interpretation, and vascular surgery consultation and call coverage.

Clinical Productivity

NONE

Clinical Draw from outside local/regional area

NONE

Membership in or examiner for specialty board

NONE

Clinical Program Building/Leadership

NONE

Clinical Demonstration Activities to external audience, on or off campus

11/2025 - 9/2026	I participated in the Johns Hopkins aortic program's first endovascular aortic arch repair with the Artivion Nexus device, one of the first in the United States after FDA approval. The work began with a device feasibility study at Johns Hopkins in November 2025, and the staged repair (cervical debranching, then the Nexus endoarch) was performed on September 7, 2026. I helped organize the program and operated.
12/17/2025	I helped organize and operated on the first Philips VesselNavigator image-fusion (CT to fluoroscopy) case at The Johns Hopkins Hospital.
9/15/2026	I helped organize and operated on the first Philips LumiGuide (fiber-optic 3D device guidance) case in the state of Maryland, at The Johns Hopkins Hospital.

Development of nationally/internationally recognized clinical standard of care

Vascular trauma	My work in vascular trauma, hemorrhage and resuscitation includes twenty-six peer-reviewed articles and a book chapter. It covers large-animal models of hemorrhage and aortic occlusion, multicenter outcomes after traumatic arterial and venous injury, and trauma systems, and it is cited in four international clinical practice guidelines. The fullest example is the European Society for Vascular Surgery 2025 Clinical Practice Guidelines on the Management of Vascular Trauma (Eur J Vasc Endovasc Surg. 2025;69(2):179-237). They cite five of my studies, three of them as first author, and draw on my work for their recommendations on autogenous versus synthetic interposition grafting for traumatic arterial injury, the management of major abdominal vascular injury including the inferior vena cava, and postoperative antiplatelet and anticoagulation therapy after arterial repair. My work is also cited in the American Association for the Surgery of Trauma and World Society of Emergency Surgery guidelines on major thoracic vascular injuries (2026), the WSES guidelines on the management of trauma in elderly and frail patients (2023), and the European clinical practice guideline update on initial surgical management of upper extremity injuries in the severely injured (2026).
Peripheral arterial and venous disease	My work on peripheral vascular intervention and venous disease is cited in two Society for Vascular Surgery clinical practice guidelines. The 2025 focused update on the management of intermittent claudication cites two of my studies, on the practice patterns and reintervention burden of index atherectomy and of tibial intervention for claudication. The 2022 Society for Vascular Surgery, American Venous Forum and American Vein and Lymphatic Society guidelines on the management of varicose veins of the lower extremities also cite my work.

Educational Activities

Educational Focus

Vascular education and running a surgical team are among my favorite parts of this job, and often what gets me out of bed in the morning. I like the gritty, day-to-day teaching on a busy surgical service: at the bedside, on rounds and in the operating room. Surgical care is team care, so that is how I teach, with the resident, the student, the advanced practice provider and the nurse all working the same problem together. I teach vascular surgical anatomy, exposure and technique to general surgery residents and medical students in lectures, simulation and large-animal laboratories, and in the operating room. I teach quantitative and machine-learning methods for surgical research. I write board-style assessment items for the SCORE/TWIS vascular curriculum, and I mentor medical students and research trainees in surgical outcomes research and translational large-animal research. I also teach surgeons and trainees to understand and use AI, through my Department of Surgery Grand Rounds, "AI for Surgeons," the AI and Surgery Interest Group I founded and its weekly newsletter, and open-source Claude skills that colleagues use for presentations, CVs and manuscripts.

Teaching

Classroom instruction

JHMI/Regional

1. I gave the talk "Thoracic Endovascular Aortic Repair" to the Divisions of Vascular Surgery and Interventional Radiology at the Johns Hopkins multidisciplinary conference. August 2021.
2. I gave the talk "Guide to Research Years and Moonlighting" to the Johns Hopkins surgical residents entering their research years. July 2022.
3. I gave the lecture "Inflow, Outflow, Cashflow: a guide to personal finances for a surgical resident" to the new interns starting residency at The Johns Hopkins Hospital. June 2024 and June 2025.
4. I gave the lecture "Vascular Surgery ABSITE Review" to the Johns Hopkins General Surgery residency in preparation for the 2025 ABSITE. January 2025.
5. I gave the talk "Esprit BTK Stent for CLTI" to the Divisions of Vascular Surgery and Interventional Radiology at the Johns Hopkins multidisciplinary conference. October 2025.
6. I direct the Johns Hopkins side of the Stevenson University BME 380 "Clinical Immersion Course" collaboration. Each semester I host junior undergraduate biomedical engineering students at The Johns Hopkins Hospital and act as the clinical client for a semester-long team design project based on what they see. Successful junior-year projects become the students' senior BME capstone, a graduation requirement. I run this jointly with Leora Goldbloom-Helzner, PhD, Assistant Professor of Biomedical Engineering at Stevenson University. 2025 - present.

7. I gave the talk "Iliac Artery Aneurysms and the Zenith Iliac Branch Device" to the Johns Hopkins Divisions of Vascular Surgery and Interventional Radiology at the multidisciplinary conference. January 2026.
8. I gave the lecture "The General Surgery Oral Boards: How the Exam Works and How to Answer a Case" to the Johns Hopkins General Surgery residency at the Resident Education Conference: an introduction to the ABS Certifying Examination with four mock oral cases. September 2026.
9. I presented the case "Nexus Endoarch Repair of a Post-Dissection Arch Aneurysm After Prior Type A Dissection Repair" to the Johns Hopkins Divisions of Vascular Surgery and Interventional Radiology at the combined case conference. October 2026.

National

NONE

International

1. I gave the invited talk "Matching into Surgery" to the general surgery interest group at Western Atlantic University School of Medicine, Bahamas, remotely by Zoom. July 2026.

Clinical instruction

JHMI/Regional

1. I teach general surgery residents, vascular surgery rotators and medical students intraoperatively, at the bedside and in clinic at The Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center. 2019 - present.

National

NONE

International

NONE

CME instruction

JHMI/Regional

NONE

National

NONE

International

NONE

Workshops/Seminars

JHMI/Regional

1. I taught "Vascular Dissection and Aortic Exposure" in the swine laboratory to PGY-2 and PGY-3 general surgery residents, covering the fundamentals of vascular surgical exposure. February 12, 2026.
2. I taught "Vascular Anastomosis" in the open vascular surgery laboratory to Johns Hopkins PGY-1 and PGY-2 general surgery residents. April 30, 2026.
3. I served as a regional General Surgery Mock Oral Board examiner. May 2026.
4. I served as a regional General Surgery Mock Oral Board examiner. October 2026.

National

NONE

International

NONE

Mentoring

Pre-doctoral Advisees/Mentees *substantive, sustained mentoring only*

2021 - 2024	Rebecca N. Treffalls. I supervised her, directly and indirectly, from MS2 through MS4 at the University of the Incarnate Word School of Medicine on several projects in the Shock Trauma Hemorrhage Control and Resuscitation Laboratory under its principal investigator, Dr. Morrison. Our work together produced several posters and peer-reviewed journal articles. She is now an integrated vascular surgery resident at the Mayo Clinic.
2021 - 2023	Eric Lang. I supervised his large-animal physiology work in the Shock Trauma Hemorrhage Control and Resuscitation Laboratory while he was a research assistant before medical school. He is now a medical student at Western Atlantic University School of Medicine. We co-authored several peer-reviewed articles and abstracts.

2025 - present Morgan Colling. I supervised her directly and indirectly during her one-year research sabbatical in vascular surgical outcomes with the Division of Vascular Surgery, and again during her clerkship and clinical sub-internship. We co-authored several peer-reviewed journal articles. She is applying to integrated vascular surgery residencies.

Post-doctoral Advisees/Mentees

NONE

Thesis committees

NONE

Educational Program Building/Leadership

2025 - present I write board-style assessment items for the vascular surgery fellowship curriculum as an item writer for the SCORE Portal / TWIS Vascular modules (see Published Curricula, above).

8/2026 - present I founded the AI and Surgery Interest Group in the Johns Hopkins Department of Surgery and write its weekly newsletter on AI in surgery for surgeons, trainees, scientists and engineers, published as The Local Minimum (see Other Media, above).

Educational Demonstration Activities to external audiences, on or off campus

NONE

Research Activities

Research Focus

Artificial intelligence in surgery is my main research program, and all of my ongoing research is directed at it. I came to it through mathematics. My graduate work in applied mathematics built models of collective cell migration. During medical school and residency I built neural networks for surgical prediction. One predicted six-month outcome after pediatric traumatic brain injury better than CT grading systems (AUC 0.95 versus 0.78 to 0.84), others forecast trauma volume and acuity and held their accuracy across five Level I trauma centers, and another automated trauma triage. My current work is anatomy-informed neural networks, a class of models I am developing that builds anatomic knowledge into deep learning, as soft priors in the loss function and hard constraints in the architecture. The aim is to keep predictions anatomically plausible when data are scarce, as they usually are in surgery. The first problem is predicting how a stiff guidewire deforms the aortoiliac tree during endovascular repair, which I formulate as an obstacle problem on SE(3) and supervise against two-dimensional fluoroscopic projections. It bears directly on EVAR and TEVAR planning and on future autonomous endovascular navigation. The framework is posted as a preprint, with its mathematics checked against known ground truth. The next step is training on patient CT and fluoroscopy, and this work is the focus of my next funding applications, including a career development (K) award. My other research feeds this program with clinical questions and data: vascular trauma outcomes (five studies cited in the ESVS 2025 Clinical Practice Guidelines on the Management of Vascular Trauma), outcomes of open thoracoabdominal aortic repair and carotid revascularization, and Department of Defense funded large-animal models of hemorrhage and aortic occlusion.

Research Program Building/Leadership

2021 - 2024 I helped Jonathan J. Morrison, MB ChB, PhD, found the Mayo Clinic Vascular and Endovascular Innovation Laboratory and move the entire laboratory from the R Adams Cowley Shock Trauma Center to the Mayo Clinic. That meant transferring the large-animal research program, re-establishing protocols and regulatory approvals at the new institution, and building the device-development portfolio. The grants supporting this work are listed under Funding, above.

Research Demonstration Activities to external audience, on or off campus

NONE

Inventions, Patents, Copyrights

1a. US Provisional Patent App. No. 63/273083. **David P. Stonko**. Suspended Intravascular Fluid Bag Pressurizing Apparatus and Method of Use. Submitted October 28, 2021.

1b. PCT. International Publication Number WO 2023/076322. **David P. Stonko**. Intravascular Fluid Bag Pressurizing Apparatus and Method of Use. Published May 5, 2023.

Technology Transfer Activities

2021 - present Patapsco Biomedical, LLC. I founded the company to develop and commercialize the suspended intravascular fluid-bag pressurizing device described above.

2023 - 2024 Mayo Clinic Ventures. I co-developed the VIPER vascular isolation and perfusion device through institutional technology transfer, including the device and pharmacologic feasibility program.

System Innovation and Quality Improvement Activities

System Innovation Focus

I take a pragmatic approach to surgical quality improvement. When I see a problem that affects my patients, I fix it, and wherever possible I capture the data the fix generates, share it and publish it. The projects below range from a single service line to a national Medicare population, and four of the seven have been published or presented.

System Innovation and Quality Improvement efforts within JHMI

2021 - 2024 I led a quality improvement project in the Division of Vascular Surgery at Johns Hopkins to improve long-term follow-up after carotid revascularization. We redesigned the discharge workflow so that perioperative and one-year follow-up appointments were made at the time of surgery and patients received automated reminders. Overall long-term follow-up improved from 64.9% to 78.8% across 269 consecutive patients (interrupted time series, Q1 2019 to Q1 2022). [SI/QI] (See Original Research: "Automatic 1-year follow-up appointment creation and reminders can improve long-term follow-up after carotid revascularization.")

2024 - 2025 As a chief resident I led a cohort of surgical residents on a Johns Hopkins multi-center quality improvement project to reduce variability in post-discharge education after arteriovenous fistula and graft creation for hemodialysis access. We characterized the problem with a fishbone analysis, engaged attending surgeons, vascular fellows, advanced practice providers and PACU nursing across the Bayview, Johns Hopkins Hospital and Howard County sites, and built a standardized discharge instruction package. [SI/QI] (See Local, Regional and Other Research Talks: "Reducing Variability in Post-Discharge Education After Arteriovenous Fistula and Graft Creation: A Multi-Center Quality Improvement Project.")

2026 - present I am taking part in the pilot rollout of electronic case posting in Epic for the Division of Vascular Surgery at Johns Hopkins, testing the surgical case-posting workflow and giving feedback before departmental deployment. [SI/QI]

2026 - present I wrote the first draft, with Catherine Sims, PA, of a Johns Hopkins Hospital policy on upper extremity tourniquet use in cardiac and vascular surgery. It includes an evidence review, a benchmark of published guidance and peer institutional policies, and an institutional policy for radial artery harvest and upper-extremity bloodless-field management. First draft September 2026. The policy is pending final approval.

8/2026 - present I build and maintain open-source AI (Claude) skills that standardize recurring professional work. Colleagues in the Johns Hopkins Department of Surgery use them (residents, fellows, faculty, and department staff and leadership), as do members of the Johns Hopkins Data Science and AI Institute and Johns Hopkins undergraduates. jh-surgery-format turns a one-line request into a department-branded draft of a grand rounds or conference deck, poster, abstract or letter on Johns Hopkins Medicine letterhead, built from placeholders so that no patient information enters the AI. jhsomCV and stonkoCV convert a curriculum vitae into the School of Medicine promotions format required by the ABMF. stonko-format puts manuscripts into a standard submission format with a house style for statistical reporting. jvsformat builds the full Journal of Vascular Surgery submission package from that manuscript. jhbiosketch drafts a biosketch tailored to a grant from the investigator's CV and proposal. I fold what users report back into the public versions. [SI/QI] (See Other Media 4, 5, 6, 8, 9 and 10.)

System Innovation and Quality Improvement efforts outside of JHMI

2017 - 2018 I led the development, scientific validation and implementation of an automated trauma-activation level assignment application at Vanderbilt University Medical Center. The Life Flight transport team used the application to assign the trauma activation level for incoming patients, reducing under- and over-triage errors. [SI/QI] (See Original Research: "Trauma Quality Improvement: Reducing Triage Errors by Automating the Level Assignment Process.")

2018 - 2021 I was first author on the evaluation of a national prospective quality improvement intervention, led by Caitlin W. Hicks, MD, MPH and Martin A. Makary, MD, MPH, in which individualized peer-benchmarked performance reports on endovenous thermal ablation use were distributed to every US physician treating Medicare beneficiaries in November 2018. I designed and performed the analysis and wrote the paper. Across 1,558 physicians and 188,976 patients, ablations per patient and between-physician variability fell, 78.9% of outlier physicians reduced their use, and the associated Medicare savings were an estimated $6.3 million in 2019. [SI/QI] (See Original Research: "Evaluation of a Physician Peer-Benchmarking Intervention for Practice Variability and Costs for Endovenous Thermal Ablation.")

System Innovation and Quality Improvement Program Building/Leadership

NONE

Organizational Activities

Institutional Administrative Appointments

NONE

Editorial Activities

Editorial Board appointments

NONE

Journal peer review activities

2019	Engineering Science and Technology, an International Journal
2021 - 2022	BMC Musculoskeletal Disorders
2022 - present	Surgery
2022 - present	Journal of Vascular Surgery (trainee co-reviewer)
2022 - 2023	Trauma and Acute Care Surgery Open
2022 - 2023	Frontiers in Physiology
2022 - present	Seminars in Vascular Surgery
2024 - present	Annals of Vascular Surgery
2024 - present	Journal of Stroke and Cerebrovascular Disease
2025 - present	Scientific Reports
2025 - present	Journal of Vascular Surgery Cases, Innovations and Techniques
2025 - present	Journal of the American Heart Association
2026	Advances in Clinical and Experimental Medicine

Other peer review activities [non medico-legal]
NONE

Advisory Committees, Review Groups/Study Sections

2023	National Science Foundation SBIR Phase II review panel, Medical Diagnostics, Devices & Healthcare Workflow.
2025 - present	Communications Committee member, Vascular and Endovascular Surgery Society.
8/11/2026	Invited participant, IRCAD North America strategic planning and training session on robotic and remote robotic surgery, Charlotte, NC, with Julie A. Freischlag, MD. I contributed to the strategic discussion and completed the associated training.
2026 - present	Scientific Advisory Board, stealth endovascular device company.
10/2026 - present	Member, Simulated Experiment Workgroup, Johns Hopkins Medicine, led by Sanjay Desai, MD, MACP, Vice Dean for Education. The workgroup plans how the Johns Hopkins Medicine and OpenEvidence collaboration, announced October 2026, is deployed across undergraduate and graduate medical education and the faculty, and how its process and patient outcomes are studied.

Professional Societies

2018 - present	American College of Surgeons: Medical Student Member (2018), Resident Member (2019-2025)
2020 - 2024	Eastern Association for the Surgery of Trauma: Resident Member
2020 - 2021	Society for American Gastrointestinal and Endoscopic Surgeons: Resident Member
2021 - present	Vascular and Endovascular Surgery Society (VESS): Candidate Member
2022 - 2023	Shock Society: Trainee/Resident Member
2022 - 2024	Association of Academic Surgery, Candidate Member
2022 - present	Society for Vascular Surgery, General Surgery Trainee Member (2022-2025), Vascular Trainee Member (2025-present)

Conference Organizer

JHMI/Regional
NONE

National
NONE

International
NONE

Session Chair

JHMI/Regional
NONE

National
NONE

International
NONE

Consultantships

2021	Sonovex, EchoMark. Consultant. I provided technical and surgical consultation to a company developing an ultrasound-detectable implantable device for vascular and plastic surgery and seeking data for FDA approval. I implanted prototypes in cadavers, from which we collected force, tension, user and surgeon experience, and ultrasound data.
2021 - present	Vivonics, Inc. Intranasal Cooler for Encephalopathy Prevention In Combat Casualties (ICEPICC), now NeuroIntact. As a postdoctoral fellow, my laboratory ran a paid large-animal trial in swine for the company, testing the safety and efficacy of this rapid brain-cooling device for traumatic brain injury. The data supported the company's FDA application, which was ultimately successful. I did the data analysis and wrote the report that formed part of the FDA IDE application, and I was first author on the research article for the trial. The device has since been sold to a startup headquartered in Baltimore, NeuroIntact, which holds it as its main IP, is working to commercialize it, and is raising venture capital and other nondilutive funding.
2021 - 2023	Sisu Global Health. Research Investigator and Regulatory Consultant. Under an unpaid research agreement, I studied their Hemafuse device in large animals. I also designed their IDE-enabling large-animal trial, gave scientific advice and took part in their FDA interactions as the device moved toward approval. I was senior author and coordinator of the first translational research article on the device, which studied its real-world use in a large-animal translational research laboratory. The device is used in low-resource settings (the war in Ukraine, Africa) but is unlikely to be commercially viable in developed countries.
2022 - 2024	Viz.ai. Consultant and Investigator. I consulted on machine learning strategy and product development for vascular and cardiac surgery applications, focused on aortic and carotid algorithms, and on clinical trial development for established algorithms.
2022 - 2023	Artio Medical, Inc. I performed contracted animal surgery and biomedical research, including STTR preparation and animal use protocol development, and consulted on scientific strategy for a new class of vascular and endovascular devices to treat extremity ischemia from trauma or other causes. The company has since moved this IP into another company, which is enrolling an RCT and raising additional capital.

Recognition

Awards, Honors

2012	First Place: Biological Sciences Poster Division, 15th Annual Undergraduate Creative Achievement and Research Day at UMBC
2013	UMBC Undergraduate Researcher of the Week (March 2013)
2013	Biological Sciences Departmental Graduation Honors
2013	Pi Mu Epsilon Mathematical Honor Society: based on grades and research in math
2013	Mathematics and Statistics Departmental Graduation Honors
2013	Faculty Award for Excellence in the Biological Sciences: highest honor to a graduating senior in biology at UMBC
2015	Microbe and Defense Academic Society: inclusion based on grades in immunology
2017	First Place: Education, Innovation and Outcomes Research Category. ACS Medical Student Research Competition
2018	H. William Scott Prize in Surgery: award given to the top graduating Vanderbilt SOM student going into surgery
2018	Journal cover: my neural network diagram from Hale AT, **Stonko DP**, et al. (Neurosurg Focus. 2018;45(5):E2) was selected as the cover art of Neurosurgical Focus, November 2018, "Predictive Analytics in Medicine"
2021	The Johns Hopkins Hospital Physician Scientist Training Program: competitive inclusion based on research and CV
2021	First Place: Clinical Paper Division, Maryland ACS Committee on Trauma Resident Paper Competition
2021	Second Place: Clinical Paper Division, Region III ACS Committee on Trauma Resident Paper Competition
2022	Society for Vascular Surgery, General Surgery Travel Scholarship for VAM 2022 Meeting in Boston, MA
2022	Eastern Vascular Society, Resident Travel Scholarship for EVS 2022 Meeting in Philadelphia, PA
2024	"Great Catch Award" for avoiding harm to a patient during surgery at Johns Hopkins Bayview Medical Center.
2025	"Applause Award" for outstanding clinical care. From the Sepsis Task Force "Fall Out Case Review".
2025	Alpha Omega Alpha. Competitive nomination and induction to The Johns Hopkins School of Medicine Chapter of AΩA.
2025	Excellence in Overall Performance in Surgery Award. From the Bayview Department of Surgery. Awarded to one graduating chief resident in surgery.
2026	Vascular and Endovascular Surgery Society, Vascular Fellow Travel Scholarship for VESS 2026, Meeting in Tahoe, CA
2026	Travel Scholarship and Support for Level Up 2026, provided by COOK Medical. Ft. Lauderdale, FL.
2026	Travel and course support for The Moore Course, provided by W.L. Gore & Associates.
2026	Eastern Vascular Society, Trainee Travel Award for EVS 2026 Meeting in Washington, DC

Invited Talks

JHMI/Regional

1. **Stonko DP***, Weller JH, Gonzalez Salazar AJ, Abdou H, Edwards J, Byrne JP, Sakran JV, Hicks CW, Haut ER, Morrison JJ, Kent AJ. An ANN to predict which trauma patients will have prolonged length of stay before they leave the ED. Invited Presentation to the Dept. of Emergency Medicine at Johns Hopkins Hospital. November 1, 2020.
2. **Stonko DP**, Enumah Z. Make Vascular Trauma Great Again: Chief resident debate. Johns Hopkins Department of Surgery; Baltimore, MD. Dec 19, 2024.
3. **Stonko DP**, Jopling JK. The New Statistical Literacy: Why Surgeons Should Learn How AI Actually Works. Johns Hopkins Department of Surgery 2026 Summer Faculty Development Series; Baltimore, MD. August 13, 2026.
4. **Stonko DP**. An Obstacle Problem in the Operating Room: Predicting Stiff Guidewire-Induced Aortoiliac Deformation on SE(3). UMBC Department of Mathematics and Statistics Differential Equations Seminar; Baltimore, MD. September 14, 2026.
5. **Stonko DP**. AI for Surgeons: What Is It, How Does It Work, and How Do I Use It? Johns Hopkins Department of Surgery Grand Rounds; Baltimore, MD. September 17, 2026.

National

NONE

International

NONE

Visiting Professorships

NONE

Other Professional Accomplishments (Optional)

Posters (optional)

National and International Conference Posters and E-Posters

1. Kay HF*, Chotai S, Wick JB, **Stonko DP**, McGirt MJ, Devin CJ. Does Depression or Anxiety affect Patient-Reported Outcomes and Satisfaction Following Operative Treatment for Cervical Myelopathy or Radiculopathy? Presentation #22P. December 3, 2015. CSRS Annual Meeting, San Diego, CA.

2. Vasquez-Castellanos RA*, Chotai S, Wick JB, **Stonko DP**, McGirt MJ, Devin CJ. The Profile of a Smoker and its Impact on Outcomes after Cervical Spine Surgery. Presentation #23P. December 3, 2015. CSRS Annual Meeting, San Diego, CA.

3. Armaghani SJ*, Chotai S, Sivaganesan A, Parker SL, Sielatycki JA, **Stonko D**, McGirt MJ, Devin CJ. Patient-Specific Factors Predicting Dissatisfaction after Elective Surgery for Degenerative Spine Diseases. Presentation #24P. December 3, 2015. CSRS Annual Meeting, San Diego, CA.

4. Kay HF, Chotai S, **Stonko DP***, Wick JB, McGirt MJ, Devin CJ. Does Number of Reported Drug Allergies Affect Patient-Reported Outcomes Following Lumbar Spine Surgery? AAOS. March, 2016. Orlando, FL. Poster Tour Presentation.

5. Kay HF, Chotai S, Wick JB, **Stonko D**, McGirt MJ, Devin CJ. Cost per Quality Adjusted Life Years Gained for Anterior Cervical Discectomy and Fusion in Elderly Population. Poster P400. March 2016. AAOS Annual Meeting, Orlando, FL.

6. **Stonko DP***, Glaser ZA, Garcia KL, Huang JJ, Kim JS, Kallos JA, Starnes JR, Fleming JW, Hocking KM, Brophy CM, Eagle SS, Wise ES. Prediction of Prolonged Ventilation after CABG: data from an artificial neural network. ACS Medical Student Poster Conference, Washington DC, Oct. 15, 2016.

7. Kim EJ, Wick JB, **Stonko DP**, Chotai S, Freeman TH Jr, Douleh DG, Mistry AM, Devin CJ. Timing of Operative Intervention in Traumatic Spine Injuries without Neurologic Deficit. E-Poster #56. CSRS Annual Meeting, Toronto, Ontario, Canada. December 1-3, 2016.

8. **Stonko DP***, Dennis BM, Betzold RD, Guillamondegui OD. The Temporal Distribution of Trauma: hours, days, & seasons. ACS Medical Student Poster Conference; First Place in Education, Innovation and Outcomes Research Category. October 22, 2017.

9. Kim E, Chotai S, Wick JB, **Stonko D**, Sivaganesan A, Devin CJ. Predicting the Odds of Returning to Work for Patients Undergoing Elective Cervical Spine Surgery. NASS Annual Meeting, Orlando, FL. October 25, 2017.

10. **Stonko DP***, Azar FK, Betzold RD, Fransman RB, Podbielski JM, Holcomb J, Bee T, Fabian TC, Skarupa DJ, Morrison JJ, Stein DM, Kozar RA, O'Connor JV, Feliciano DV, Scalea TM, DuBose JJ. Management and Outcomes of Injuries to the Inferior Vena Cava. American College of Surgeons Clinical Congress; e-Poster. October 2020.

11. **Stonko DP***, Holscher CM, Reifsnyder T. Management of Critical Lower Extremity Ischemia Ipsilateral to Arteriovenous Access. Society for Clinical Vascular Surgery; e-Poster. March 2021.

12. **Stonko DP***, Betzold RD, Morrison JJ, Charlton-Ouw KM, Scalea TM, Feliciano DV, DuBose JJ. Antiplatelet and/or Anticoagulation Therapy Do Not Affect Post-operative Course After Autologous Vein Repair of Traumatic Arterial Injury. Society for Clinical Vascular Surgery; e-Poster. March 2021.

13. **Stonko DP***, Betzold RD, DuBose JJ, Charlton-Ouw KM, Bee TK, Fabian TC, Morrison JJ, Kundi R, Skarupa DJ, Scalea TM, Feliciano DV. Autologous Vein vs Synthetic Interposition Graft in Civilian Traumatic Arterial Repair: A Propensity Matched Cohort Comparison from the American Association For Trauma (AAST) PROspective Observational Vascular Injury Treatment (PROOVIT) Registry. Society for Clinical Vascular Surgery; e-Poster. March 2021.

14. Edwards J*, **Stonko DP**, Abdou H, Betzold RD, Azar FK, Scalea TM, Feliciano DV, DuBose JJ, Morrison JJ. Contralateral Vs. Ipsilateral Vein Graft For Traumatic Arterial Injury Repair: A Multicenter Prospective Cohort Study. American College of Surgeons Clinical Congress, e-Poster. October 2021.

15. Treffalls RN*, Poe K, **Stonko DP**, Edwards J, Ptak T, White JM, Morrison JJ. Utilization of Intra-arterial Contrast for Abdominal Computed Tomography in a Swine Model. VAM. June 17, 2022. Boston, MA.

16. **Stonko DP***, Edwards J, Abdou H, Elansary N, Lang E, Savidge SG, Hicks CW, Morrison JJ. Quantifying the Cardiovascular Physiology of REBOA and Partial REBOA: How REBOA Facilitates Resuscitation but Also Strains the Left Ventricle. VAM. June 17, 2022. Boston, MA.

17. Harris D, Leers S, **Stonko DP***, Reifsnyder T. Contralateral Femoral Artery Inflow For Lower Extremity Infra-inguinal Revascularization. 51st Annual SCVS. Display Poster. Scottsdale, AZ, USA. Mar 17, 2024.

18. Bose S, Kiang SC, Roh D, Mao J, Cabrera A, **Stonko DP**, Black JH III, Columbo JA, Goodney PP, O'Banion LA, Tomihama RT, Hicks CW. Optimizing Claims Codes To Identify Claudication And Chronic Limb-threatening Ischemia Using A Machine-learning Approach. 51st Annual SCVS, Display Poster. Scottsdale, AZ, USA. March 2024.

19. **Stonko DP***, Hicks CW, Sherman RL, Abularrage CJ. Data Visualization and Prediction of DFU Healing: WIfI Component Outperforms the Composite Stage, and More Sophisticated Models Aren't Much Better. Eastern Vascular Society 40th Annual Meeting; e-Poster. Washington, DC. September 18, 2026.

Local, Regional and Invited Conference Posters

1. **Stonko DP***, Ge X, Peercy BE, Starz-Gaiano M. Building a Mathematical Model to Understand the Molecular Interpretations of Spatial Gradients of Biological Activators. 14th Annual Undergraduate Research and Creative Achievement Day. April, 2011.

2. **Stonko D***, Starz-Gaiano M, Peercy BE. Modeling Cell Fate Determination and Cellular Migration in Drosophila: Mathematics informs a molecular understanding. 15th Annual Undergraduate Research and Creative Achievement Day. April, 2012. First Place: Biological Sciences Division, poster presentation.

3. **Stonko D***, Starz-Gaiano M, Peercy BE. A Force-Based Approach to Unraveling the Mechanism of Cell Migration. 16th Annual Undergraduate Research and Creative Achievement Day. April, 2013.

4. Richardson DB*, **Stonko D**, Moiz B, Weideman A, Starz-Gaiano M, Peercy BE. Development of Cell migration Model to Characterize Clustered Movements. 16th Annual Undergraduate Research and Creative Achievement Day. April, 2013.

5. **Stonko DP***, Kay HF, Chotai S, Wick JB, McGirt MJ, Devin CJ. Depression does not effect improvement in patient-reported outcomes following operative treatment for cervical radiculopathy. GME Research Forum Poster Session. Nashville, TN. April, 2015.

6. **Stonko DP***, Edwards J, Abdou H, Lang E, Elansary N, Savidge SG, Hicks CW, Morrison JJ. The Central Hemodynamic Consequences of Full vs Partial Aortic Occlusion With REBOA. Johns Hopkins Department of Surgery Annual Research Day. June 2, 2022.

7. **Stonko DP***, Jopling JK, Hicks CW, Black JH III. Toward Solving the Wire-Stiffening Problem: Guidewire-Vessel Mechanics on SE(3), and Anatomy-Informed Neural Networks. Johns Hopkins Data Science and AI Institute Fall 2026 Symposium: Artificial Intelligence and Human Learning. Baltimore, MD. October 27, 2026.

Oral/Podium Presentations (optional)

National and International Conference Podium Presentations

1. **Stonko DP***, Starz-Gaiano M, Peercy BE. A Force Based Model of Cell Migration. Undergraduate Research Capstone Conference at The Mathematical Biosciences Institute. Podium Presentation. Columbus, OH. August, 2013.
2. **Stonko DP**, Peercy BE*, Starz-Gaiano M. Collective Cell Migration: Modeling from Initiation to Destination. SIAM Conference on the Life Sciences. Podium Presentation. Charlotte, NC. Aug. 4, 2014.
3. Vasquez RA*, Chotai S, Wick JB, **Stonko DP**, Cheng JS, Devin CJ, Asher AL, McGirt MJ. The Profile of a Smoker and its Impact on Cervical Spine Surgery. Congress of Neurological Surgeons Annual. Sept. 2015.
4. Sielatycki JA*, Chotai S, **Stonko DP**, Wick JB, Kay HF, O'Neill KR, Devin CJ. Is Obesity Correlated with Increased Complications following Cervical Surgery for Degenerative Conditions? Presentation #37. December 3, 2015. CSRS Annual Meeting, San Diego, CA.
5. Chotai S*, Parker SL, Sivaganesan A, **Stonko D**, McGirt MJ, Devin CJ. Where do True Cost Savings Exist following Elective Surgery for Degenerative Spine Disease. Presentation #9. December 3, 2015. CSRS Annual Meeting, San Diego, CA.
6. **Stonko DP***, Chotai S, Parker SL, Sivaganesan A, Asher AL, McGirt MJ, Devin CJ. Effect of Complications on the Patient-Reported Outcomes After Elective Surgery for Lumbar Degenerative Disease. AAOS Annual Meeting. March, 2016. Orlando, FL.
7. **Stonko D***, Chotai S, Kay HF, Sielatycki J, McGirt MJ, Devin CJ. Effect of Depression and Anxiety on Patient Reported Outcomes following Cervical Epidural Steroid Injection. Paper 558. March 3, 2016. AAOS Annual Meeting, Orlando FL.
8. Wick JB*, Chotai S, Kay HF, Sivaganesan A, Parker SL, **Stonko D**, McGirt MJ, Devin CJ. Patient Reported Outcomes after Lumbar Epidural Steroid Injection in Depressed versus Non-depressed patients. Paper 565. March 3, 2016. AAOS Annual Meeting, Orlando, FL.
9. Sielatycki J*, Chotai S, Kay HF, Wick JB, **Stonko D**, McGirt MJ, Devin CJ. Does Obesity Predict Worse Patient-Reported Outcomes Following Lumbar Spine Surgery? Paper 624. March 3, 2016. AAOS Annual Meeting, Orlando, FL.
10. Zuckerman SL*, Chotai S, Devin CJ, Parker SL, **Stonko DP**, Wick JB, Hale AT, McGirt MJ, Cheng JS. Surgical resection of intradural extramedullary spinal tumors: patient reported outcomes and minimum clinically important difference. Rapid Fire Abstract #44. March 5, 2016. SNS Annual Meeting, San Antonio, TX.
11. Chotai S*, Sivaganesan A, Parker SL, Sielatycki JA, Wick J, **Stonko D**, McGirt MJ, Devin CJ. Effect of Complications within 90 Days on Cost-Utility Following Lumbar Decompression with and without Fusion for Degenerative Spine Disease. Paper #20. NASS Annual Meeting, Boston MA. October 26, 2016.
12. Kim E*, Chotai S, **Stonko D**, Wick J, Sielatycki JA, Devin CJ. Two Year Patient-Reported Outcomes Costs and Health Care Resource Utilization for TLIF versus PLF for Single-Level Degenerative Spondylolisthesis. Paper #29. NASS Annual Meeting, Boston MA. October 26, 2016.
13. Kim E*, Wick J, **Stonko D**, Chotai S, Freeman TH, Douleh DG, Mistry AM, Parker SL, Devin CJ. Timing of Operative Intervention in Traumatic Spine Injuries without Neurologic Deficit. Paper #111. NASS Annual Meeting, Boston MA. October 26, 2016.
14. Chotai S*, Zuckerman SL, Parker SL, **Stonko D**, Hale AT, Wick J, McGirt MJ, Cheng JS, Devin CJ. Health Care Resource Utilization and Patient-Reported Outcomes following Elective Surgery for Intradural Extramedullary Spinal Tumors. Paper #216. NASS Annual Meeting, Boston MA. October 28, 2016.
15. Zuckerman SL, Chotai S, Devin CJ, Parker SL, **Stonko D**, Wick J, Hale AT, McGirt MJ, Cheng JS. Surgical Resection of Intradural Extramedullary Spinal Tumors: Patient-reported Outcomes and Minimum Clinically Important Difference. Paper #217. NASS Annual Meeting, Boston MA. October 28, 2016.
16. Kim EJ*, Chotai S, Wick JB, **Stonko D**, Sivaganesan A, Devin CJ. Patient Reported Outcomes and Costs in Revision Cervical Surgery. Presentation #43. CSRS Annual Meeting, Toronto, Ontario, Canada. December 2, 2016.
17. Sivaganesan A*, Chotai S, Kim EJ, **Stonko D**, Wick JB, McGirt MJ, Devin CJ. Predictive Models for Patient-centered Efficacy and Discharge Destination after Elective Cervical Spine Surgery. CSRS Annual Meeting, Toronto, Ontario, Canada. December 3, 2016.
18. Chotai S*, Devin CJ, Kim EJ, Sielatycki J, **Stonko D**, Wick JB. Two-year Patient-reported Outcomes, Costs, and Healthcare Resource Utilization for Transforaminal Lumbar Interbody Fusion versus Posterolateral Fusion for Single Level Degenerative Spondylolisthesis. Paper #561. AAOS Annual Meeting, San Diego, CA. March 16, 2017.
19. Parker SL*, Chotai S, Sielatycki JA, Sivaganesan A, Kay H, **Stonko DP**, Wick J, McGirt MJ, Devin CJ. Cost-utility Analysis of Anterior Cervical Discectomy and Fusion for Degenerative Spine Disease in Elderly Population. Presentation # 243. Spine Summit 2016, Orlando, FL. March 18, 2017.
20. Parker SL*, Sielatycki JA, Chotai S, Sivaganesan A, **Stonko DP**, McGirt MJ, Devin CJ. Effect of Obesity on Cost and Effectiveness after Decompression with and without Fusion for Degenerative Lumbar Disease. Presentation #214. Spine Summit 2016, Orlando, FL. March 18, 2017.
21. **Stonko DP***, Dennis BM, Betzold RD, Peetz AB, Guillamondegui OD. Artificial Intelligence Can Predict Daily Trauma Volume and Average Acuity. Podium. 48th Annual Western Trauma Association, BC Canada, March 2018.
22. Kawaji Q*, Dun C, Walsh C, **Stonko DP**, Abularrage CJ, Black JH III, Perler BA, Makary MA, Hicks CW. Index Atherectomy Peripheral Vascular Interventions Performed for Claudication Are Associated With More Reinterventions Than Nonatherectomy Interventions. SAVS 46th Annual Meeting, Manalapan, FL. January 2022.
23. **Stonko DP***, Sorber R, Deery SE, Kavousi Y, Black JH III, Lum YW, Perler BA, Abularrage CJ, Hicks CW. Drug-Eluting Stents are Associated with Good Mid-Term Outcomes for the Treatment of Failing Infrainguinal Bypass Grafts. VESS 2022 Winter Meeting, Snowmass, CO. January 2022.
24. Gerling KA, **Stonko DP**, Xun H, Shallal CC, Kang SH, Brandacher G, Lauria AL, Kersey AJ, Burmeister DM, Sacks JM, Hicks CW, White JM. Novel Sutureless Anastomotic Device in a Swine Model: A Pilot Study. ASC, Feb. 1-3, 2022, Orlando, FL.
25. Abdou H, Edwards J, Patel N, Elansary N, **Stonko DP**, Lang E, Ptak T, Scalea TM, Morrison JJ. Development of A Swine Model of Raised Intracranial Pressure. ASC, Feb. 1-3, 2022, Orlando, FL.
26. Gelbard RB, Crowley B, et al. Management of Appendicitis & Cholecystitis During the COVID-19 Pandemic: an EAST Multicenter Study. ASC, Feb. 1-3, 2022, Orlando, FL.
27. Beyene RT*, **Stonko DP**, Morrison JJ, Mubang R, Gondek SP, Dennis BM. Identifying Temporal Patterns in Burn Admissions. ABA, March 2022. Las Vegas, NV.

28. Bose S*, Dun C, Sorber RA, **Stonko DP**, Abularrage CJ, Black JH III, Lum YW, Makary MA, Hicks CW. Tibial Interventions for claudication are performed often, but not often by vascular surgeons. VAM, Boston, MA. June 15, 2022.
29. Bose S*, **Stonko DP**, Abularrage CJ, Stoner MC, Hicks CW. Females are underprescribed best medical therapy before presenting for carotid revascularization. June 15, 2022. Rapid Fire Oral Presentation, VAM 2022.
30. **Stonko DP***, Hicks CW, Schul M. High Value Care in Endovenous Thermal Ablation. Architecture of High Value Health Care: National Conference of the High Value Practice Academic Alliance. Baltimore, MD, USA. Oct. 6, 2022.
31. Edwards J*, Abdou H, **Stonko DP**, Treffalls RN, Elansary N, Lang E, Morrison JJ. Partial vs Full Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) in a Swine Model of Raised Intracranial Pressure and Hemorrhagic Shock. Podium. American College of Surgeons: October 17, 2022.
32. Treffalls RN*, **Stonko DP**, Patel N, Edwards J, Abdou H, Elansary N, Walker PF, Morrison JJ. Computed tomography perfusion of cerebral blood flow during open cardiac massage for hypovolemic and normovolemic cardiac arrest in swine. Podium, Resuscitation Science Symposium. 30 Oct 2022. Circulation. 2022;146:A08.
33. **Stonko DP***, Edwards J, Abdou H, Lang E, Treffalls R, Walker PF, Morrison JJ. Can raising systemic pressure delay irreversible intestinal ischemia in a proximal SMA occlusion? 18th Annual Academic Surgical Congress, Basic Science Oral Presentation #1. 8 Feb 2023. Houston, TX, USA.
34. **Stonko DP***, Edwards J, Abdou H, Walker PF, Treffalls RN, DeMartino RR, Mendes BC, Hicks CW, Morrison JJ. TEVAR Acutely Increases Left Ventricular Work in an Animal Model. 47th Annual Vascular and Endovascular Surgery Society, Whistler, BC, Canada. Feb 2023.
35. Edwards J, **Stonko DP**, Abdou H, Treffalls RN*, Walker PF, Rasmussen TE, Propper BW, Morrison JJ. Lower Extremity Extracorporeal Distal Revascularization (LEEDR) in a swine model of prolonged extremity ischemia. 47th Annual Vascular and Endovascular Surgery Society, Whistler, BC, Canada. Feb 2023.
36. Weaver ML, Sorber R, **Stonko DP***, Harris D, Reifsnyder T. Effect of Prior Endovascular Intervention on Outcomes of Lower Extremity Bypass Utilizing Arm Vein Conduit. 51st Annual SCVS 2024. Scottsdale, AZ, USA. Mar 17 2024.
37. Colling M, **Stonko D**, Reifsnyder T. Etiology of Limb Loss After Successful Transmetatarsal Amputation. EVS 2025. Nashville, TN, USA. Sep, 2025.
38. **Stonko DP***, Aru RG, Tan LT, Kawaji Q, Gerling KA, Lum YW, Hicks CW, Black JH III. Top-down Vs. Bottom-up Approach In Open Thoracoabdominal Aortic Reconstruction. 50th Annual VESS. Olympic Valley, CA, USA. Feb 7, 2026.
39. **Stonko DP***, Black JH III. Challenging Case Presentation: Open Staged Thoracoabdominal Aortic Dissection and Aneurysm. 5th Annual Frank J. Veith International Society Conference. New York City, NY, USA, May 7, 2026.
40. Colling M, **Stonko D**, Perdomo D, Reifsnyder T. Outcomes of Infrainguinal Bypass Using Arm Vein: Vein is Vein. EVS 2026. Washington, DC, USA. Sep, 2026.

Local, Regional and Other Research Talks

1. **Stonko DP***, Etchill EW, Giuliano KA, Eisenson D, Heinrichs T, Jones C, Haut ER, Kent AJ. Failure to Rescue in Geriatric Trauma: The effect of any complication increases with age and injury severity in elderly trauma patients. ACS COT Maryland Resident Paper Competition. Nov. 19, 2019.
2. **Stonko DP***, Abdou H, Edwards J, Elansary NN, Lang E, Betzold RD, DuBose JJ, Hicks CW, Morrison JJ. An External Validation of POPSAVEIT with PROOVIT and Modeling Extension Using Machine Learning. 2021 Maryland Resident Trauma Paper Competition. First Place in Clinical Science Competition; Podium. Baltimore, MD USA. Nov. 19, 2021.
3. **Stonko DP***, Edwards J, Abdou H, Elansary NN, Lang E, Savidge SG, Scalea TM, Morrison JJ. How Does REBOA and Partial REBOA Effect Coronary Artery Flow Following Hemorrhage? 2021 Maryland Resident Trauma Paper Competition. Basic Science Category; Podium. Baltimore, MD USA. Nov. 19, 2021.
4. **Stonko DP***, Abdou H, Edwards J, Elansary NN, Lang E, Betzold RD, DuBose JJ, Hicks CW, Morrison JJ. External Validation of the POPSAVEIT Score with PROOVIT and Modeling Extension Using Artificial Intelligence. 2021 Region III ACS Committee on Trauma. Second Place in Clinical Science Competition; Online Podium. Baltimore, MD USA. Dec. 11, 2021.
5. **Stonko DP**. MAP Push with Norepinephrine Delays Bowel Ischemia From SMA Occlusion: a RCT in swine. Johns Hopkins Department of Surgery Annual Research Day; Baltimore, MD. June 2, 2022.
6. **Stonko DP**. Vascular Isolation and Perfusion for Enteric Rescue (VIPER) can restore small bowel blood flow, and is an effective damage control revascularization strategy for acute mesenteric ischemia. Johns Hopkins Department of Surgery Annual Research Day; Baltimore, MD. June 1, 2023.
7. **Stonko DP**. Reducing Variability in Post-Discharge Education After Arteriovenous Fistula and Graft Creation: A Multi-Center Quality Improvement Project. Johns Hopkins Department of Surgery; Baltimore, MD. May 26, 2025.

Military Service (optional)

NONE

Community Services (optional)

NONE

Humanitarian Activities (optional)

NONE

Philanthropic Activities (optional)

NONE

Electronically signed:
David Stonko, MD MS
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Other (optional)

Security Clearance/Background Checks

2021 - 2024 Tier 1 US Federal Public Trust. Required for the biomedical research I conducted under Department of Defense grants and for access to the associated military bases and facilities.

Other Skills and Certifications

AI Skills: I have built my own AI models as academic research projects since 2011. The resulting papers and presentations are listed above, and I have contributed to many other projects in AI development and deployment. I work for Meta as a Medical Knowledge Expert on long time horizon reinforcement learning for physician and surgeon tasks, and I help the Johns Hopkins Department of Surgery with its AI strategy. I am an experienced user of agentic AI in my own programming, research and workflow. I have working familiarity, and in several cases significant experience, with the major foundation models (Anthropic's Claude, OpenAI's ChatGPT, Google's Gemini, Perplexity's Comet and Computer) and with open-source models run locally (OpenClaw, Gemma via LM Studio). My understanding of model building covers the full stack: the underlying linear algebra, hardware selection, and getting the most agent and token productivity out of a given model architecture. I have followed the field closely for fifteen years, through the transformer architecture, reinforcement learning from human feedback and from verifiable rewards, scaling laws, world models and continual learning. I have used this background in AI, mathematics and medicine to invest in AI companies, both pure plays such as Flourish and AI-adjacent companies such as Imperative Care, whose thrombectomy system is AI-enabled. I write about AI in surgery and medicine on my website, The Local Minimum (https://localminimum.us).

Other Computer Skills: Microsoft Office on macOS, Linux and Windows. User of the UMBC High Performance Computing Facility (cluster maya), 2010 - 2013.

Computer Languages: Proficient in MATLAB, Stata, LaTeX, Python, HTML and CSS. Familiar with SAS, R, C and JavaScript.

Electronically signed:
David Stonko, MD MS
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