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Curriculum Vitae

NEIL VASAN, MD, PHD

Contact Information

Office address: 1130 St. Nicholas Avenue, Room 321KA, New York, NY 10032
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Additional Information

Place of birth: Washington, DC USA

Current Appointments and Leadership Positions

Faculty Appointment

05/2025 – present	Assistant Professor, Tenure-Eligible, Department of Medicine, New York University Grossman School of Medicine, New York, NY
07/2021 – 04/2025	Assistant Professor, Tenure-Eligible, Department of Medicine, Columbia University College of Physicians & Surgeons, New York, NY

Hospital Appointment

05/2025 – present	Physician, Department of Medicine, Perlmutter Cancer Center, NYU Langone Health, New York, NY
07/2021 – 04/2025	Physician, Department of Medicine, New York-Presbyterian Hospital and Columbia University Irving Medical Center, New York, NY

Administrative Leadership Positions

05/2025 – present	Director of Translational Research, Breast Cancer, Perlmutter Cancer Center, NYU Langone Health, New York, NY

Other Professional Positions

2022 – 2026	Standing Member, Oncologic Drugs Advisory Committee (ODAC), U.S. Food and Drug Administration, Silver Spring, MD

Education and Training

Education

2005	AB	Chemistry	Harvard College	Cambridge, MA
2005	AM	Chemistry	Harvard University	Cambridge, MA
2011	PhD	Cell Biology	Yale University	New Haven, CT
2013	MD	Medicine	Yale University	New Haven, CT

Postdoctoral Training

07/2013 – 06/2015	Intern/Resident, Internal Medicine, Massachusetts General Hospital, Boston, MA
07/2015 – 06/2018	Fellow, Medical Oncology, Memorial Sloan Kettering Cancer Center, New York, NY
07/2016 – 06/2017	Chief Fellow, Medical Oncology, Memorial Sloan Kettering Cancer Center, New York, NY
07/2016 – 08/2019	Research Fellow, Human Oncology and Pathogenesis Program, Memorial Sloan Kettering Cancer Center, New York, NY
09/2019 – 06/2021	Postdoctoral Researcher, Cancer Cell Signaling, Weill Cornell Medicine, New York, NY

Specialty Certification

2018	American Board of Internal Medicine: Medical Oncology
2017	American Board of Internal Medicine: Internal Medicine

Licensure

2015 New York #281568
DEA number: FV7416969
NPI number: 1932546165

Previous Appointments and Leadership Positions

Faculty Academic Appointments

07/2021 – 04/2025	Assistant Professor, Tenure-Eligible, Department of Medicine, Columbia University College of Physicians & Surgeons, New York, NY
07/2018 – 06/2021	Instructor in Medicine, Not Tenure-Eligible, Department of Medicine, Weill Cornell Medicine, New York, NY
07/2015 – 06/2018	Fellow, ABIM Medical Research Track, Medical Oncology, Memorial Sloan Kettering Cancer Center, New York, NY
07/2013 – 06/2015	Internship/PGY2, ABIM Medical Research Track, Department of Medicine, Massachusetts General Hospital, Boston, MA

Hospital Appointments

07/2018 – 06/2021	Assistant Attending Physician, Breast Medicine Service, Not Tenure-Eligible, Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY

Awards, Honors, and Memberships in Honorary Societies

Internal

2022	Columbia University Irving Medical Center	VELOCITY Fellow
2022	Columbia University Irving Medical Center	Louis V. Gerstner Jr. Scholar
2016	Memorial Sloan Kettering Cancer Center	John Mendelsohn Teaching Award
2005 – 2013	Yale University School of Medicine	Medical Scientist Training Program
2001 – 2005	Harvard College	Harvard College Scholarship

External

2025	New York Times Magazine	New York Super Doctors Rising Star 2025
2024	New York Times Magazine	New York Super Doctors Rising Star 2024
2023	NIH	NIH Director's New Innovator Award
2023	Breast Cancer Alliance	Young Investigator Award
2023	New York Times Magazine	New York Super Doctors Rising Star 2023
2022	American Society for Clinical Investigation	Young Physician-Scientist Award
2022	New York Times Magazine	New York Super Doctors Rising Star 2022
2020	American Association of Cancer Research	AACR NextGen Star
2020	Food and Drug Administration (FDA)	FDA Oncology Educational Fellowship
2019	European Society of Medical Oncology	Member
2018	Stand Up To Cancer (SU2C)	Emperor of Science Award Mentor
2017	Society for Translational Oncology (STO)	STO Fellows' Forum

Research Activity

Research Activities

Major Research Interests include:

1. PI3K signaling and inhibition in cancer
2. Genetic models of kinome catalytic inhibition
3. Functional characterization of phosphoproteins in breast cancer
4. Mechanisms of resistance to targeted therapies in breast cancer
    a. Therapeutic mechanisms of resistance in breast cancer, CUIMC IRB-AAAV2424, PI

Grant History

Grants and Clinical Trials

Current

Funding Agency	Role	Effort %	Project Title	Award Grant # Type	Project ID	Project Start Date	Project End Date	Annual Project Direct Costs	Annual Project Indirect Costs	Annual Project Total Costs	Total Project Direct Costs	Total Project Indirect Costs	Total Project Costs
NIH	PI	25	Base-Editing the Cancer Kinome to Enable Drug Discovery	DP2	CA290245	09/19/2023	08/31/2028	$300,000	$193,500	$493,500	$1,500,000	$967,500	$2,467,500
NIH	PI	50	Investigating a hierarchical model for PI3K activation and inhibition in breast cancer by double PIK3CA mutations in cis	K08	CA245192	08/13/2020	06/30/2025	$243,550	$19,484	$263,034	$1,217,750	$97,420	$1,315,170

Past

Funding Agency	Role	Effort %	Project Title	Award Grant # Type	Project ID	Project Start Date	Project End Date	Annual Project Direct Costs	Annual Project Indirect Costs	Annual Project Total Costs	Total Project Direct Costs	Total Project Indirect Costs	Total Project Costs
Breast Cancer Alliance, Inc.	PI	10	Large-scale functional analysis of *PIK3CA* variants in cancer	2023 Young Investigator Grant		03/01/2023	02/28/2025	$57,870	$4,360	$62,500	$115,740	$9,260	$125,000
Gilead	PI	5	Large-scale functional analysis of PIK3CA variants in cancer	Gilead Sciences Research Scholars		07/01/2022	06/30/2024	$59,091	$5,909	$65,000	$118,182	$11,818	$130,000
Susan G. Komen	PI	35	Double hit compound PIK3CA mutations in ER+ metastatic breast cancer	Career Catalyst Research Grant		08/01/2019	07/31/2022	$120,000	$30,000	$150,000	$360,000	$90,000	$450,000
Columbia	PI	0	Large scale functional examination of PIK3CA variants and PI3K inhibitor sensitivity in breast cancer	VELOCITY Cancer Research Awards		07/01/2022	06/30/2023	$100,000	$0	$100,000	$100,000	$0	$100,000

NIH	Co-I	1	Genomic Instability in Breast Cancer: Developmental Research Program	P50 SPORE	CA247749	08/1/2021	07/31/2022	$50,000	$0	$50,000	$50,000	$0	$50,000
NIH	Co-I	10	Mechanisms of action of dual compound oncogenic PIK3CA mutations	R21	CA223789	08/01/2018	07/31/2020	$105,487	$83,968	$189,455	$210,974	$167,936	$421,948
ASCO	PI	30	Dual compound PIK3CA mutations in the pathogenesis and treatment of metastatic breast cancer	YIA		07/01/2018	06/30/2019	$47,500	$2,500	$50,000	$47,500	$2,500	$50,000
Society of Memorial Sloan Kettering	PI	30	Discovery and Validation of Tandem Mutations Driving Cancer	Research Grant		07/01/2018	06/30/2019	$50,000	$0	$50,000	$50,000	$0	$50,000
Innovations in Cancer Informatics	PI	30	Discovery and Validation of Tandem Mutations Driving Cancer	Grant	GC240757	06/01/2018	05/31/2020	$100,000	$0	$100,000	$200,000	$0	$200,000
NIH	PI	90	Structural Studies of the Exocyst	F30	HL097628	09/01/2009	08/31/2012	$46,176	$0	$46,176	$138,528	$0	$138,528

Clinical Activity

05/2025 – present Inpatient Ward attending for NYU Langone Health Oncology Service, 2 weeks/year
02/2022 – 04/2025 Inpatient Ward attending for Columbia University Irving Medical Center (CUIMC) Oncology Service, 2 weeks/year
09/2021 – 04/2025 Outpatient medical oncologist with CUIMC Breast Oncology group, ½ day weekly
07/2018 – 06/2021 Inpatient Ward attending for Memorial Sloan Kettering Cancer Center (MSKCC) Breast Medicine Service, 2 weeks/year
07/2018 – 06/2021 Outpatient medical oncologist on MSKCC Breast Medicine Service, ½ day weekly

Service

Professional Service

Professional Service for Professional Organizations

09/2024 – present Member, AACR Annual Meeting Cell Growth Signaling Pathways Section of the Molecular/Cellular Biology and Genetics Subcommittee of the Program Committee
07/2022 – present Standing Member, Oncology Drugs Advisory Committee (ODAC), U.S. Food and Drug Administration, Silver Spring, MD
04/2022 – present Member, Caris Precision Oncology Alliance Breast Disease Group

Peer Review Groups, Grant Application Review Groups, and Study Sections

03/2025 – present NIH R41/R42/R43/R44 Small Business Innovation Research (SBIR) Study Section Member
10/2024 – present Susan G. Komen Career Catalyst Award, Reviewer
09/2024 UK - Cancer Research UK (CRUK), Clinical Research Expert Review Panel
08/2024 Italy - Gianni Bonadonna Fellowship, Reviewer
2020 – 2023 Cancer Prevention & Research Institute of Texas (CPRIT) Product Development, Reviewer
2020 – 2022 Innovation in Cancer Informatics (ICI) Grant Review, Committee member

Organizing Roles in Scientific Meetings

12/2023 – 01/2025 Program Planning Committee Member, San Antonio Breast Cancer Symposium
05/2020 – 12/2022 Co-Chair, PI3K Disease Modeling and Drug Targeting Worldwide Zoom Seminar Series

Editorial and Journal Positions

2023 – present	Associate Editor, *Breast Cancer Research*
2022	Peer reviewer, ESMO Handbook of Targeted Therapies and Precision Oncology
2022	Peer reviewer, ASCO Educational Book

Ad-hoc reviewer for:
American Journal of Clinical Pathology
Breast Cancer Research
Cancer
Cancer Discovery
Cancer Research
Cancer Research Communications
Cell Death and Differentiation
Clinical Breast Cancer
ESMO Open
Hematology/Oncology and Stem Cell Therapy
Journal of Clinical Investigation
Journal of Clinical Investigation Insight
Journal of Clinical Oncology: Precision Oncology
Nature
Nature Communications
Oncogene
Proceedings of the National Academy of Sciences
Science Advances

Military Service

None

Bibliography

Publications

Peer-reviewed Publications

1. Shin AE, Sugiura K, Kariuki SW, Cohen DA, Flashner SP, Klein-Szanto AJ, Nishiwaki N, De D, **Vasan N**, Gabre JT, Lengner CJ, Sims PA, Rustgi AK. LIN28B-mediated PI3K/AKT pathway activation promotes metastasis in colorectal cancer models. *J Clin Invest* 2025 in press.

2. Yasin F, Sokol E, **Vasan N**, Pavlick DC, Huang RSP, Pelletier M, Levy MA, Pusztai L, Lacy J, Zhang JY, Ross JS, Cecchini M. Molecular characteristics of advanced colorectal cancer and multi-hit PIK3CA mutations. *Oncologist* 2024 29:1059-1067.

3. Basin MF, Miguel CM, Jacob JM, Goldberg H, Grivas P, Spiess PE, Necchi A, Kamat AM, Pavlick DC, Huang RSP, Lin DI, Danziger N, Sokol ES, Sivakumar S, Graf R, Cheng L, **Vasan N**, Ross J, Basnet A, Bratslavsky G. Single-hit and multi-hit PIK3CA short variant genomic alterations in clinically advanced prostate cancer: a genomic landscape study. *Target Oncol* 2024 in press.

4. Sathe C, Raghunathan R, Ulene S, McAuley F, Bhatt KA, McGuinness JE, Trivedi MS, **Vasan N**, Kalinsky KM, Crew KD, Faheem KF, Harden E, Law C, Hershman DL, Accordino MK. Use of a Smartphone Application to Promote Adherence to Oral Medications in Patients With Breast Cancer. *JCO Oncol Pract* 2024 in press.

5. Walsh ZH, Shah P, Kothapalli N, Shah SB, Nikolenyi G, Brodtman DZ, Leuzzi G, Rogava M, Mu M, Ho P, Abuzaid S, **Vasan N**, AlQuraishi M, Milner JD, Ciccia A, Melms JC, Izar B. Mapping variant effects on anti-tumor hallmarks of primary human T cells with base-editing screens. *Nat Biotechnol* 2024 https://doi.org/10.1038/s41587-024-02235-x.

6. Yaron-Barir TM, Joughin BA, Huntsman EM, Kerelsky A, Cizin DM, Cohen BM, Regev A, Song J, **Vasan N**, Lin TY, Orozco JM, Schoenherr C, Sagum C, Bedford MT, Wynn RM, Tso SC, Chuang DT, Li L, Li SS, Creixell P, Krismer K, Takegami M, Lee H, Zhang B, Lu J, Cossentino I, Landry SD, Uduman M, Blenis J, Elemento O, Frame MC, Hornbeck PV, Cantley LC, Turk BE, Yaffe MB, Johnson JL. The intrinsic substrate specificity of the human tyrosine kinome. *Nature* 2024 629:1174-1181.

7. Lin TY, Ramsamooj S, Liberatore K, Lantier L, **Vasan N**, Karukurichi K, Hwang SK, Kesicki EA, Kastenhuber ER, Wiederhold T, Yaron TM, Zhu M, Ma Y, Paddock MN, Zhang G, Hopkins BD, McGuinness O, Schwartz RE, Cantley LC, Johnson JL, Goncalves MD. Epinephrine inhibits PI3K alpha via the Hippo Kinases. *Cell Rep* 2023 42:113535.

8. Ho P, Melms JC, Rogava M, Frangieh CJ, Shah SB, Walsh Z, Kyrysyuk O, Amin AD, Caprio L, Fullerton BT, Soni R, Ager CR, Biermann J, Wang Y, Khosravi-Maharlooei M, Zanetti G, Mu M, Fatima H, Moore EK, **Vasan N**, Bakhoum SF, Reiner SL, Bernatchez C, Sykes M, Mace EM, Wucherpfennig KW, Schandendorf D, Bechter O, Shah P, Schwarz GK, Marine JC, Izar B. The CD58:CD2 axis is co-regulated with PD-L1 via CMTM6 and shapes anti-tumor immunity. *Cancer Cell* 2023 41:1207-1221.

9. Johnson JL, Yaron, TM, Huntsman EM, Kerelsky A, Song J, Regev A, Lin TY, Liberatore K, Cizin DM, Cohen BM, **Vasan N**, Ma Y, Krismer K, Robles JT, van de Kooij V, van Vlimmeren AE, Andree-Busch N, Kaufer N, Dorovkov MV, Ryazanov AG, Takagi Y, Kastenhuber ER, Goncalves MD, Elemento O. Taatjes DJ, Maucuer A, Uamashita A, Degterev A, Linding R, Blenis J, Hornbeck PV, Turk BE, Yaffe MB, Cantley LC. An atlas of substrate specificities for the human serine/threonine kinome. *Nature* 2023 613:759-766.

10. Sivakumar S, Jin DX, Rathod R, Ross J, Cantley LC, Scaltriti M, Chen J, Hutchinson KE, Wilson TR, Sokol ES*, **Vasan N***. Genetic heterogeneity and tissue-specific patterns of tumors with multiple *PIK3CA* mutations. *Clin Cancer Res* 2023 29:1125-1136.

11. Taylor SR, Ramsamooj S, Liang RJ, Katti A, Pozovskiy R, **Vasan N**, Hwang SK, Nahiyaan N, Francoeur NJ, Schatoff EM, Johnson JL, Shah MA, Dannenberg AJ, Sebra RP, Dow LE, Cantley LC, Kyu KY, Goncalves MD. Dietary fructose improves intestinal cell survival and nutrient absorption. *Nature* 2021 597:263-267.

12. Li J, Duran MA, Dhanota N, Chatila WK, Kwon J, Sriram RK, Humphries MP, Salto-Tellez M, James JA, Hanna MG, Melms JC, Vallabhaneni S, Litchfield K, Martin ML, Dorsaint P, Cavallo JA, Li P, Pauli C, Gottesdiener L,

DiPardo BJ, Hollmann TJ, Merghoub T, Wen HY, Reis-Filho JS, Riaz N, Dr. Kalbasi A, **Vasan N**, Wolchok JD, Elemento O, Swanton C, Shoushtari AN, Bettigole SE, Powell SN, Usaite I, Biswas D, Li HW, Su SM, Bareja R, Parkes EE, Izar B, Bakhoum S. Metastasis and immune evasion from extracellular cGAMP hydrolysis. *Cancer Discov* 2021 11:1212-1227.

13. Cocco E, Lee JE, Kannan S, Schram AM, Won HH, Shifman S, Kulick A, Baldino L, Toska E, Arruabarrena-Aristorena A, Kittane S, Wu F, Cai Y, Arena S, Mussolin B, Kannan R, **Vasan N**, Gorelick AN, Berger MF, Novoplansky O, Jagadeeshan S, Liao Y, Rix U, Misale S, Taylor BS, Bardelli A, Hechtman JF, Hyman DM, Elkabets M, de Stanchina E, Verma CS, Ventura A, Drilon A, Scaltriti M. TRK xDFG mutations trigger a sensitivity switch from type I to II kinase inhibitors. *Cancer Discov* 2020 11:126-141.

14. Gorelick A, Sanchez-Rivera F, Cai Y, Bielski C, Biederstedt E, Jonsson P, Richards A, **Vasan N**, Penson A, Friedman N, Ho YJ, Baslan T, Bandlamudi C, Scaltriti M, Schultz N, Lowe S, Reznik E, Taylor B. Phase and context shape the function of composite oncogenic mutations. *Nature* 2020 582:100-103.

15. Razavi P, Dickler MN, Shah PD, Toy W, Brown DN, Won HH, Li BT, Shen R, **Vasan N**, Modi S, Jhaveri K, Caravella BA, Patil S, Selenica P, Zamora S, Cowan AM, Comen E, Singh A, Covey A, Berger MF, Hudis CA, Norton L, Nagy RJ, Odegaard JI, Lanman RB, Solit DB, Robson ME, Lacouture ME, Brogi E, Reis-Filho JS, Moynahan ME, Scaltriti M, Chandarlapaty S. Alterations in *PTEN* and *ESR1* promote clinical resistance to alpelisib plus aromatase inhibitors. *Nat Cancer* 2020 1:382-393.

16. **Vasan N**, Razavi P, Johnson JL, Shao H, Shah H, Antoine A, Ladewig E, Gorelick A, Lin TY, Toska E, Xu G, Kazmi A, Chang MT, Taylor BS, Dickler MN, Jhaveri K, Chandarlapaty S, Rabadan R, Reznik E, Smith ML, Sebra R, Schimmoller F, Wilson TR, Friedman LS, Cantley LC, Scaltriti M*, Baselga J*. Double *PIK3CA* mutations in *cis* increase oncogenicity and sensitivity to PI3Kα inhibitors. *Science* 2019 366:714-723.

17. Razavi P, Chang MT, Xu G, Bandlamudi C, Ross DS, **Vasan N**, Cai Y, Bielski CM, Donoghue MTA, Jonsson P, Penson A, Shen R, Pareja F, Kundra R, Middha S, Cheng ML, Zehir A, Kandoth C, Patel R, Huberman K, Smyth LM, Jhaveri K, Modi S, Traina TA, Dang C, Zhang W, Weigelt B, Li BT, Ladanyi M, Hyman DM, Schultz N, Robson ME, Hudis C, Brogi E, Viale A, Norton L, Dickler MN, Berger MF, Iacobuzio-Donahue CA, Chandarlapaty S, Scaltriti M, Reis-Filho JS, Solit DB*, Taylor BS*, Baselga J*. The genomic landscape of endocrine resistant advanced breast cancers. *Cancer Cell* 2018 34:427-438.

18. **Vasan N**, Braghiroli MI, Shoushtari AN, *et al.* An elderly man with remote history of metastatic melanoma now with localized pancreas cancer and new liver masses. *Journal of Gastrointestinal Oncology* 2017 8:596-602.

19. **Vasan N**, Yelensky R, Wang K, Moulder S, Dzimitrowicz H, Avritscher R, Wang B, Wu Y, Cronin MT, Palmer G, Symmans WF, Miller VA, Stephens P, Pusztai L. A Targeted Next Generation Sequencing Assay Detects a High Frequency of Therapeutically Targetable Alterations in Primary and Metastatic Breast Cancers: Implications for Clinical Practice. *Oncologist* 2014 19:453-458.

20. **Vasan N**, Saglan O, Killelea BK. Metastatic leiomyosarcoma presenting as bilateral, multifocal breast masses. *BMJ Case Reports* 2012 doi:10.1136/bcr-2012-007188.

21. **Vasan N,** Hutagalung A, Novick P, and Reinisch KM. Structure of a C-terminal fragment of its Vps53 subunit suggests similarity of the Golgi-associated retrograde protein (GARP) complex to a family of tethering complexes. *PNAS* 2010 107:14176-81.

Peer-reviewed reviews

22. **Vasan N** and Cantley LC. At a crossroad: how to translate the roles of PI3K in oncogenic and metabolic signalling into improvements in cancer therapy. *Nat Rev Clin Oncol* 2022 19:471-485.

23. Mullangi S and **Vasan N.** Genomic Characterization of De Novo Metastatic Breast Cancer. *Clin Breast Cancer* 2022 22:98-102.

24. **Vasan N**, Hyman DM, and Baselga, J. A view on drug resistance in cancer. *Nature* 2019 575:299-309.

25. **Vasan N***, Toska E*, Scaltriti M. Overview of the relevance of PI3K pathway in HR-positive breast cancer. *Ann Oncol* 2019 30:3-11.

26. **Vasan N**, Boyer JL, and Herbst RS. A Ras renaissance: emerging targeted therapies for KRas-mutated non-small cell lung cancer. *Clin Cancer Res* 2014 20:3921-3930.

Non peer-reviewed publications

27. **Vasan N** and Dickler MN State-of-the-Art Update: CDK4/6 Inhibitors in ER+ Metastatic Breast Cancer. *AJHO* 2017 13:16-22.

Book Chapters, Books

28. Choudhury N, Muciano-Goroff YR, Drilon A*, **Vasan N***. Pocket Oncology, 3rd edition. Lippincott, Williams, & Wilkins, 2022. Advisor.

29. **Vasan N***, Carlo M*, Drilon A, Postow M. Pocket Oncology, 2nd edition. Lippincott, Williams, & Wilkins, 2018. Editor and Author.

30. Bhushan V, Le T, **Vasan, N**, Tolles J. First Aid for the USMLE Step 1 2010. McGraw-Hill Company, 2010. Editor.

31. Bhushan V, Le T, Grimm L, **Vasan N**. First Aid for the USMLE Step 1 2009. McGraw-Hill Company, 2009. Editor.

Editorials and Commentaries

32. Karvonen H and **Vasan N**. Therapeutic potential of inhibiting the PI3Kγ complex for leukemia. *Cell Chem Biol* 2024 31:1244-1246.

33. Kearney AL and **Vasan N**. A new wave of PI3Kα inhibitors. *Cancer Discovery* 2023 13:2313-2315.

34. Castel P, Toska E, **Vasan N**, Cocco E, Scaltriti M. José Baselga (1959-2021). *Cancer Cell* 2021 39:581-582.

Book reviews

None

Meeting Reports, Consensus Reports, practice guidelines and any other publication

35. Blow T, Hyde PN, Falcone JN, Neinstein A, **Vasan N**, Chitkara R, Hurd MA, Sardesai S, Lustberg MB, Flory JH, Volek JS, Goncalves MD. Treating Alpelisib-Induced Hyperglycemia with Very Low Carbohydrate Diets and Sodium-Glucose Co-Transporter 2 Inhibitors: A Case Series. *Integr Cancer Ther* 2021 20: 15347354211032283.

Other Media including Research and Analytic tools (Please include description)

36. **Vasan N**. Structural studies of the GARP tethering complex. Thesis. Yale University School of Medicine, 2011.

Abstracts

1. Jacqueline Tao, Saumya Sisoudiya, Smruthy Sivakumar, Ethan Sokol, **Neil Vasan**. Clinicogenomic landscape and function of PIK3CA, AKT1, and PTEN mutations in breast cancer. Proceedings of the 2024 San Antonio Breast Cancer Symposium; 2024 Dec 10-13; San Antonio, TX.

2. **Neil Vasan**, Remkes Scheele, Malcolm Wells, Sophia Abrahamson, Prashath Karunaraj, Ruchita Rathod, Anum Glasgow. Functional Cancer Phosphoproteomics reveals Conserved Receptor Tyrosine Kinase Phosphorylation and Activation of the Tyrosine Phosphatase SHP2. FASEB Cell Signaling in Cancer: From Mechanisms to Therapy. June 16-20, 2024. Tucson, AZ.

3. **Neil Vasan**, Moumita Chaki, Mona Benrashid, Subir Puri, Smruthy Sivakumar, Ethan Sokol. Concordance between tissue (tumor DNA) and liquid (ctDNA) biopsy next-generation sequencing (NGS) data in detection of *PIK3CA*, *AKT1*, and *PTEN* alterations in breast cancer: A retrospective analysis. Proceedings of the 2024 American Society of Clinical Oncology Annual Meeting; Chicago, IL.

4. Sophie Ulene, Shikun Wang, Joshua Cook, Fiona McAuley, Margaux Wooster, Khadija Faheem, Julia Elizabeth McGuinness, **Neil Vasan**, Meghna S. Trivedi, Katherine D. Crew, Erik Harden, Cynthia Law, Dawn L. Hershman, Melissa Kate Accordino. Continuous glucose monitoring and rates of hyperglycemia during chemotherapy for early-stage breast cancer. Proceedings of the 2024 American Society of Clinical Oncology Annual Meeting; Chicago, IL.

5. Zachary Hudson Walsh, Parin Shah, Neeha Kothapalli, Gergo Nikolenyi, Shivem Shah, Giuseppe Leuzzi, **Neil Vasan**, Mohammed AlQuarishi, Alberto Ciccia, Johannes Melms, Benjamin Izar. Massively parallel base-editing screens to map variant effects on anti-tumor hallmarks of primary human T cells and improve cell-based cancer immunotherapies. Proceedings of the American Association for Cancer Research Annual Meeting 2024; 2024 Apr 5-10; San Diego, CA.

6. Hope Rugo, Alessandra Gennari, Stephen Chia, Dejan Juric, **Neil Vasan**, Sherko Küemmel, Patrick Neven, Florence Lerebours, Manuel Ruíz - Borrego, Pedram Razavi, Jyotika Singh, Yogesh Chattar, Murat Akdere, Eva Ciruelos. Effect of Alpelisib Dose Modification for AE Management on Progression-Free Survival and Treatment Duration in SOLAR-1 and BYLieve Clinical Trials. Proceedings of the 2023 San Antonio Breast Cancer Symposium; 2023 Dec 5-9; San Antonio, TX.

7. Carla Miguel, Gennady Bratslavsky, Joseph M Jacob, Petros Grivas, Philippe E. Spiess, Andrea Necchi, Dean C. Pavlick, Richard S.P. Huang, Douglas I. Lin, Natalie Danziger, Ethan Sokol, Smruthy Sivakumar, Ryon Graf, **Neil Vasan**, Jeffrey S. Ross. Single and multi-hit *PIK3CA* short variant (SV) genomic alterations (GA) in clinically advanced prostate cancer (CAPC): A genomic landscape study. Proceedings of the 2023 ASCO Genitourinary Cancers Symposium; Feb 16-18; San Francisco, CA.

8. Michael Cecchini, Ethan Sokol, **Neil Vasan**, Dean C. Pavlick, Richard S.P. Huang, Maureen Pelletier, Mia Alyce Levy, Lajos Pusztai, Jill Lacy, Joseph Paul Eder, Janie Yue Zhang, Jeffrey S. Ross. Molecular characteristics of advanced colorectal cancer and multi-hit *PIK3CA* mutations. Proceedings of the 2022 American Society of Clinical Oncology Annual Meeting; Chicago, IL.

9. Jing Xi, Kathleen Harnden, Jingqin Luo, Greg S. Call, Elizabeth Mauer, Karyn Ronski, Cynthia X. Ma, **Neil Vasan**. Genomic landscape of HER2-negative advanced or metastatic breast cancer with PIK3CA gain-of-function mutations Proceedings of the 2021 San Antonio Breast Cancer Symposium; 2021 Dec 7-10; San Antonio, TX.

10. **Neil Vasan**, Smruthy Sivakumar, Dexter Jin, Joseph S. Ross, Lewis Cantley, Maurizio Scaltriti, Ethan Sokol. A pan-cancer analysis of double *PIK3CA* mutations. Annals of Oncology (2020) 31 (suppl_4): S1034-S1051. ESMO 2020 Virtual Congress.

11. **Neil Vasan**, Pedram Razavi, Jared L. Johnson, Hong Shao, Hardik Shah, Alesia Antoine, Erik Ladewig, Alexander Gorelick, Ting-Yu Lin, Eneda Toska, Guotai Xu, Abiha Kazmi, Matthew T. Chang, Barry S. Taylor, Maura N. Dickler, Komal Jhaveri, Sarat Chandarlapaty, Raul Rabadan, Ed Reznik, Melissa L. Smith, Robert Sebra, Frauke Schimmoller, Timothy R. Wilson, Lori S. Friedman, Lewis C. Cantley, Maurizio Scaltriti, Jose Baselga. Double *PIK3CA* mutations in *cis* increase oncogenicity and sensitivity to PI3Kα inhibitors. Proceedings of the Annual Meeting of the American Association for Cancer Research 2020; 2020 Apr 27-28 and Jun 22-24.

12. Emiliano Cocco, Ji Eun Lee, Srinivasaraghavan Kannan, Alison M. Schram, Helen H. Won, Sophie Shifman, Amanda Kulick, Laura Baldino, Eneda Toska, Sabrina Arena, Benedetta Mussolin, Ram Kannan, **Neil Vasan**, Alexander N. Gorelick, Michael F. Berger, Yi Liao, Uwe Rix, Alberto Bardelli, Jacklyn Hechtman, Elisa de Stanchina, David M. Hyman, Chandra Verma, Andrea Ventura, Alexander Drilon, Maurizio Scaltriti. TRK xDFG mutations trigger a sensitivity switch from type I to II kinase inhibitors. Proceedings of the Annual Meeting of the American Association for Cancer Research 2020; 2020 Apr 27-28 and Jun 22-24.

13. **Neil Vasan**, Pedram Razavi, Jared L Johnson, Hong Shao, Timothy Wilson, Frauke Schimmoller, Hardik Shah, Alesia Antoine, Erik Ladewig, Alexander Gorelick, Ting-Yu Lin, Eneda Toska, Guotai Xu, Abiha Kazmi, Matthew T Chang, Barry S. Taylor, Maura N. Dickler, Komal Jhaveri, Sarat Chandarlapaty, Raul Rabadan, Ed Reznik, Melissa L Smith, Robert Sebra, Lori Friedman, Lewis C Cantley, Maurizio Scaltriti, José Baselga. Double *PIK3CA* mutations in *cis* drive oncogene addiction and enhance sensitivity to PI3K alpha inhibitors in breast cancer. Proceedings of the 2019 San Antonio Breast Cancer Symposium; 2019 Dec 10-14; San Antonio, TX.

14. **Neil Vasan**, Pedram Razavi, Jared L Johnson, Hong Shao, Timothy Wilson, Frauke Schimmoller, Hardik Shah, Alesia Antoine, Erik Ladewig, Alexander Gorelick, Ting-Yu Lin, Eneda Toska, Guotai Xu, Abiha Kazmi, Matthew T Chang, Barry S. Taylor, Maura N. Dickler, Komal Jhaveri, Sarat Chandarlapaty, Raul Rabadan, Ed Reznik, Melissa L Smith, Robert Sebra, Lori Friedman, Lewis C Cantley, Maurizio Scaltriti, José Baselga. Double *PIK3CA* mutations in *cis* enhance PI3Kα oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer. Proceedings of ESMO Breast Cancer 2019; 2019 Dec 10-14; Berlin, Germany.

15. **Neil Vasan**, Pedram Razavi, Jared Johnson, Hong Shao, Hardik Shah, Alesia Antoine, Erik Ladewig, Alexander Gorelick, Eneda Toska, Guotai Xu, Abiha Kazmi, Matthew T. Chang, Barry S. Taylor, Maura N. Dickler, Komal Jhaveri, Raul Rabadan, Ed Reznik, Melissa L. Smith, Robert Sebra, Lewis C. Cantley, Maurizio Scaltriti, Jose Baselga. Double *PIK3CA* mutations in *cis* enhance oncogene activation and sensitivity to PI3K alpha inhibitors in breast cancer. Proceedings of the American Association for Cancer Research Annual Meeting 2019; 2019 Mar 29-Apr 3; Atlanta, GA.

16. **Neil Vasan**, Pedram Razavi, Jared Johnson, Hong Shao, Hardik Shah, Alesia Antoine, Erik Ladewig, Alexander Gorelick, Eneda Toska, Guotai Xu, Abiha Kazmi, Matthew T. Chang, Barry S. Taylor, Maura N. Dickler, Komal Jhaveri, Raul Rabadan, Ed Reznik, Melissa L. Smith, Robert Sebra, Lewis C. Cantley, Maurizio Scaltriti, Jose Baselga. Double *PIK3CA* mutations in *cis* enhance PI3K oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer. The Tumour Cell: Plasticity, Progression and Therapy 2019; 2019 Mar 3-6; New York, NY.

17. **Neil Vasan**, Jared Johnson, Hong Shao, Pedram Razavi, Alexander Gorelick, Erik Ladewig, Alesia Antoine, Hardik Shah, Eneda Toska, Guotai Xu, Abiha Kazmi, Barry Taylor, Komal Jhaveri, Maura Dickler, Elisa de Stanchina, Eduard Reznik, Raul Rabadan, Melissa Smith, Robert Sebra, Lewis Cantley, Maurizio Scaltriti, Jose Baselga. Compound *PIK3CA* mutations support a mutational dose-response model for oncogene activation and response to PI3K inhibitor targeted therapy in breast cancer. Proceedings of the AACR Special Conference on Targeting PI3K/mTOR Signaling; 2018 Nov 30-Dec 8; Boston, MA.

18. **Neil Vasan,** Alex Hutagalung, Peter Novick, and Karin Reinisch. Structure of a C-terminal fragment of its Vps53 subunit suggests similarity of the GARP complex to a family of tethering complexes. Proceedings of the American Society for Cell Biology Annual Meeting 2010, Philadelphia, PA.

19. **Neil Vasan,** Alex Hutagalung, Peter Novick, and Karin Reinisch. Structural studies of the GARP tethering complex. Proceedings of the American Society for Biochemistry and Molecular Biology Special Symposium on the Secretory and Endocytic Pathways 2010, Tahoe City, CA.

20. **Neil Vasan,** Alex Hutagalung, Peter Novick, and Karin Reinisch. Structural studies of the GARP tethering complex. Proceedings of the National MD/PhD Student Conference 2010, Keystone, CO.

Oral and poster presentations

02/2025 Kinase Activation and Inhibition in Breast Cancer. Memorial Sloan Kettering Cancer Center Department of Radiation Oncology Grand Rounds – Visiting Professor.

02/2025 Kinase Activation and Inhibition in Breast Cancer. Beth Israel Deaconess Medical Center Cancer Research Institute Seminar Series invited speaker, Boston, MA

12/2024 Plenary Talk – Year In Review – Basic Science. 2024 San Antonio Breast Cancer Symposium, San Antonio, TX

12/2024 Case Based Clinical Approach to ER Positive Metastatic Breast Cancer. 2024 San Antonio Breast Cancer Symposium, San Antonio, TX

09/2024 PI3K Past, Present, and Future, University of Oklahoma College of Medicine Hematology/Oncology Grand Rounds (virtual)

07/2024 Kinase Activation and Inhibition in Breast Cancer. NYU Langone / Perlmutter Cancer Center Grand Rounds, New York, NY

06/2024 Functional Cancer Phosphoproteomics reveals Conserved Receptor Tyrosine Kinase Phosphorylation and Activation of the Tyrosine Phosphatase SHP2. FASEB Cell Signaling in Cancer: From Mechanisms to Therapy. Tucson, AZ

06/2024 Targeting PI3K in Cancer, Advanced Cancer Therapeutics Summit, Yonsei University, Seoul, Korea

05/2024 PI3K Past, Present, and Future. Scorpion Therapeutics, Boston, MA

03/2024 FDA Oncology Center of Excellence (OCE) Conversations on Cancer: ODAC Chronicles - the Past, Present, and Future of Oncology Advisory Committees (virtual)

12/2023 PI3K Past, Present, and Future, 2023 San Antonio Breast Cancer Symposium, San Antonio, TX

12/2023 Materials and Methods: Basic Science to Breast Oncology Workshop, 2023 San Antonio Breast Cancer Symposium, San Antonio, TX

10/2023 Kinase Inhibitors in Cancer. Hungarian Society for Immunology (virtual)

09/2023 Functional Analysis of *PIK3CA* Variants in Cancer, Forbeck Forum "Targeting Lipid Biology in Cancer", Monterey, CA

09/2023 Functional Analysis of *PIK3CA* Variants in Cancer, Lewis Cantley Laboratory Retreat, Yarmouth, MA

05/2023 Functional Analysis of *PIK3CA* Variants in Cancer, Memorial Sloan Kettering Cancer Center Department of Medicine Grand Rounds, New York, NY

05/2023 Functional Analysis of *PIK3CA* Variants in Cancer. Case Western Comprehensive Cancer Center, Department of Genetics, Cleveland, OH

04/2023 Invited speaker, Functional Analysis of *PIK3CA* Variants in Cancer, Herbert Irving Comprehensive Cancer Center (HICCC) Seminar Series, New York, NY

12/2022 PI3K/AKT Pathway Inhibition, Therapeutic Approaches for HR+ / HER2- Breast Cancer. Spotlight Poster Discussion Session. 2022 San Antonio Breast Cancer Symposium, San Antonio, TX

11/2022 *PIK3CA* mutations in breast cancer: sequence, structure, function, and inhibition, University of Texas Southwestern Medical Center Komen Breast Cancer Forum seminar series, Dallas, TX

04/2022 Functional Analysis of *PIK3CA* Variants in Cancer Invited Speaker, Herbert Irving Comprehensive Cancer Center (HICCC) Seminar Series, New York, NY

02/2022 Novel strategies to improve PI3K inhibitor efficacy and toxicity in cancer, FDA Oncology Center of Excellence (OCE) Clinical Rounds (virtual)

03/2021 Looking Beyond ER, PR, and HER2, FDA Oncology Center of Excellence Minisymposium on Emerging Biomarkers in Breast Cancer (virtual)

12/2021 Genomic landscape of HER2-negative advanced or metastatic breast cancer with *PIK3CA* gain-of-function mutations, San Antonio Breast Cancer Symposium 2021, San Antonio, TX

09/2020 A pan-cancer analysis of double *PIK3CA* mutations, ESMO 2020 Virtual Congress

06/2020 Identifying novel ways to overcome or prevent drug resistance. AACR 2020 Virtual Conference.

06/2020 Double *PIK3CA* mutations in *cis* enhance PI3Kα oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer, AACR 2020 Virtual Conference

12/2019 Double *PIK3CA* mutations in *cis* enhance PI3Kα oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer, San Antonio Breast Cancer Symposium 2019. San Antonio, TX

05/2019 Double *PIK3CA* mutations in *cis* enhance PI3Kα oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer, ESMO Breast Cancer. Berlin, Germany

04/2019 Double *PIK3CA* mutations in *cis* enhance PI3K oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer, AACR Annual Meeting, Atlanta, GA

03/2019 Double *PIK3CA* mutations in *cis* enhance PI3K oncogene activation and sensitivity to PI3Kα inhibitors in breast cancer, The Tumour Cell: Plasticity, Progression and Therapy, New York, NY

06/2017 On the Shoulders of Giants. American Society of Clinical Oncology. Chicago, IL

12/2018 Compound *PIK3CA* mutations support a mutational dose response model for oncogene activation and response to PI3K inhibitor targeted therapy in breast cancer, AACR Targeting PI3K/mTOR Signaling, Boston, MA

12/2010 Structure of a C-terminal fragment of its Vps53 subunit suggests similarity of the GARP complex to a family of tethering complexes, American Society for Cell Biology annual meeting, Philadelphia, PA

10/2010 Structural studies of the GARP tethering complex, American Society for Biochemistry and Molecular Biology Special Symposium on the Secretory and Endocytic Pathways, Tahoe City, CA

07/2010 Structural studies of the GARP tethering complex, National MD/PhD Student Conference, Keystone, CO

12/2020 Oncogene additivity in the PI3K pathway, Labroots (virtual)

10/2020 Oncogene additivity in the PI3K pathway, 8th Annual Cancer Research and Oncology (virtual)

09/2020 Oncogene additivity in the PI3K pathway, NCI Women's Malignancies Branch seminar series (virtual)

02/2018 Targeting Cell Cycle Progression: The latest advances on CDK4/6 inhibition in metastatic breast cancer. Peninsula Regional Medical Center Grand Rounds, Salisbury, MD

01/2018 Targeting Cell Cycle Progression: The latest advances on CDK4/6 inhibition in metastatic breast cancer. Grand Rounds, Maimonides Cancer Center Grand Rounds, Brooklyn, NY

01/2018 Targeting Cell Cycle Progression: The latest advances on CDK4/6 inhibition in metastatic breast cancer. Grand Rounds, John Theurer Cancer Center Grand Rounds, Hackensack, NJ

07/2016 Applying for Fellowship…What Do I Need to Know? *NEJM* Resident 360 (virtual)

06/2016 Physicians Learning and Teaching in Oncology (PLATO) 5th Annual Fellows Forum in Breast Oncology. Chicago, IL

Patents

Vasan N, Baselga J. U.S. Patent Number US20210189503A1: "Biomarkers for Determining Responsiveness of a Cancer to PI3K Inhibitors," Patent granted February 27, 2020.

Vasan N, Sanjana N "Compositions and Methods For Base Editing Kinase Genes," U.S. Provisional Patent No. 18/824,298, filed September 4, 2024.