Curriculum Vitae
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Travis A Gerke

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Scientific Director, Collaborative Data Services

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Education

2009 B.A. (Mathematics), University of Florida, Gainesville, FL
2009 B.S. (Statistics), University of Florida, Gainesville, FL
2011 A.M. (Biostatistics), Harvard University, Cambridge, MA
2014 Sc.D. (Epidemiology), Harvard School of Public Health, Boston, MA

Academic appointments and employment

2008–2009 Research Assistant, Rehabilitation Outcomes Research Center, Department of Veterans Affairs, Gainesville, FL
2011–2012 Statistician I, Department of Epidemiology, Harvard School of Public Health, Boston, MA
2012–2013 Graduate Research Assistant in Biostatistics, Dana-Farber Cancer Institute, Boston, MA
2012–2014 Graduate Research Assistant in Cancer Epidemiology, Harvard School of Public Health, Boston, MA
2014–2016 Assistant Professor, Department of Epidemiology, College of Medicine and College of Public Health and Health Professions, University of Florida, Gainesville, FL
2014– Visiting Scientist, Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA
2016– Assistant Professor, Department of Oncologic Sciences, Morsani College of Medicine, University of South Florida, Tampa, FL
2016– Assistant Member (Secondary Appointment), Department of Genitourinary Oncology, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL
2016– Assistant Member, Department of Cancer Epidemiology, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL
2018– Scientific Director, Collaborative Data Services Core, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL

Teaching

University Courses

2008–2009 Teaching Assistant, Statistics 2023: Introduction to Statistics, Department of Statistics, University of Florida
2011 Lab Instructor, Biostatistics 210: The Analysis of Rates and Proportions, Department of Biostatistics, Harvard School of Public Health

2013 Instructor, Introduction to Biostatistics and Statistical Programming, Summer Program in Epidemiology, Department of Epidemiology, Harvard School of Public Health

2015 Instructor, Epidemiology Methods II (PHC 6011), Department of Epidemiology, University of Florida

2016 Instructor, Measurement in Epidemiology and Outcomes Research (PHC 6711), Department of Epidemiology, University of Florida

Other Courses

2017 Faculty/Instructor, AACR Integrative Molecular Epidemiology Workshop: Bridging Cancer Biology and Precision Medicine, Boston, MA. Sections taught: Publicly Available Online Genomics and 'Omics Resources; Bioinformatics Toolkits for Functional Analysis; Precision Medicine: Predictive Modeling from High-Throughput Results

Invited Lectures

2016 Leveraging big data resources to understand public health disparities. Translational Research and Therapeutics: Bench, Bedside, Community, & Policy; University of Florida course GMS 7593.

2017 Fundamentals of integrative molecular epidemiology. Quantitative Genomics and Genetics; University of South Florida course PHC 6934.

2018 Prostate cancer epidemiology. Cancer Epidemiology; University of South Florida course PHC 6007.

Training

Doctoral dissertation committee membership

2014–2017 Molly Buchanan, Department of Sociology and Criminology & Law, University of Florida

2015 Zahra Shekarkhar, Department of Sociology and Criminology & Law, University of Florida

2015–2016 Abenaa Acheampong, Department of Epidemiology, University of Florida

2015–2017 Yuanfang Ren, Department of Computer & Information Science & Engineering, University of Florida

Master's thesis committee membership

2014–2015 Fangyu Su, Department of Epidemiology, University of Florida (Chair)

2014–2015 Chelsea Lutz, Department of Epidemiology, University of Florida (Chair)

2014–2015 Chi Wang, Department of Epidemiology, University of Florida (Chair)

2014–2015 Danmeng Li, Department of Epidemiology, University of Florida

Honors and awards

2016 William R. Jones Most Valuable Mentor Award, Florida Education Fund McKnight Doctoral Fellowship Program

Research support

Current

External grants

Name of PI: Park

Dates: 12/19/2017 – 10/31/2020
Funding Source: V Foundation
Title: Genomic predictors of aggressive and lethal prostate cancer in African American men.
Funded Effort: 5%
Role in Study: Co-I
Award Amount: $600,000

Name of PI: Sellers
Dates: 02/18/1998 – 01/31/2022 (Gerke start date: 01/01/2018)
Funding Source: National Cancer Institute
Title: Moffitt Cancer Center Support Grant.
Funded Effort: 10%
Role in Study: Co-I

Internal grants

Name of PI: Monteiro
Dates: 07/01/2017 – 06/30/2018
Funding Source: Moffitt Cancer Center, Miles for Moffitt Award
Title: Scaffold/Matrix Attachment Regions: structural genomic elements modulating cancer susceptibility.
Funded Effort: 5%
Role in Study: Co-I
Direct Costs: $100,000
Award Amount: $100,000

Name of PI: Chung/Anderson/Gerke
Dates: 04/01/2018 – 01/31/2019
Funding Source: Moffitt Cancer Center Team Science Award
Title: Precision medicine for thyroid nodules with indeterminate cytology.
Funded Effort: 2%
Role in Study: co-PI
Direct Costs: $100,000

Name of PI: Berglund, Carvajal (co-PI)
Dates: 04/01/2018 – 03/31/2019
Funding Source: Moffitt Cancer Center, Innovative Core Project Award
Title: Complex cohort identification based on patient's timeline (CCIPT-View): an integrated view of a cancer patient.
Funded Effort: 1%
Role in Study: Co-I
Direct Costs: $50,000
Award Amount: $50,000

Pending

External grants

Name of PI: Enderling/Gatenby
Dates: 09/01/2018 – 08/31/2020
Funding Source: NIH/NCI – R21

Title:	Predicting patient-specific responses to personalize androgen deprivation therapy for prostate cancer.
Funded Effort:	10%
Role in Study:	Co-I
Direct Costs:	$800,000

Contracts

Name of PI:	Kantoff
Dates:	09/30/2018 – 09/29/2021
Funding Source:	DoD/Memorial Sloan Kettering Cancer Center
Title:	Mutational landscape of the Y chromosome and prostate cancer.
Funded Effort:	10%
Role in Study:	PI, Subcontract
Direct Costs:	$45,964
Award Amount:	$79,058

Completed funding

Internal grants

Name of PI:	Gerke, Kahveci (co-PI)
Dates:	02/15/2015 – 02/14/2016
Funding Source:	UF Health Cancer Center Pilot Project Award
Title:	Inferring the genetic architecture of gene expression in prostate cancer.
Funded Effort:	0%
Role in Study:	Co-PI
Direct Costs:	$60,000
Award Amount:	$60,000

Name of PI:	Gerke, Rollison (co-PI)
Dates:	12/01/16 – 06/30/17
Funding Source:	Moffitt Innovation Award
Title:	Machine learning approaches to identifying cancer recurrence from EMR data.
Funded Effort:	0%
Role in Study:	PI
Direct Costs:	$40,000
Award Amount:	$40,000

Contracts

Name of PI:	Gerke/Bird/Manini/Prosperi
Dates:	01/01/2016 – 12/31/2017
Funding Source:	UF Cancer-Aging Collaborative Team Grant
Title:	Endotype discovery in prostate cancer and multi-domain analysis of age-related comorbidities.
Funded Effort:	0%
Role in Study:	Co-PI
Direct Costs:	$40,000
Award Amount:	$40,000

Dissertation

Title: Discovering and validating prognostic biomarkers in prostate cancer by focusing on population impact.
Defended: November 12, 2014, Harvard School of Public Health, Boston, MA
Committee: Lorelei Mucci (chair), Giovanni Parmigiani, Meir Stampfer, Christopher Sweeney

Service

Moffitt Cancer Center

2016 Member, Data Documentation and Management Best Practices Task Force. Monthly meetings; 5 hr/month commitment.
2017 Chair, Cancer Epidemiology Research Data Analyst Task Force. Monthly meetings; 5 hr/month commitment.
2017– Member, Unstructured Data Mining Advisory Group. Monthly meetings; 2 hr/month commitment.
2017– Member, High Performance Computing Steering Committee. Bi-monthly meetings; 1 hr/month commitment.
2017– Planning Committee Member, The Biology of Cancer Health Disparities Seminar Series, Monthly meetings; 1 hr/month commitment.

University of Florida

2015–2016 Co-chair, Graduate Admissions Committee, Department of Epidemiology
2015–2016 Member, Epidemiology Faculty Committee, Department of Epidemiology
2015–2016 Member, Seminar Committee, Department of Epidemiology
2015–2016 Member, Cancer Recruitment Committee, Department of Epidemiology
2015–2016 Member, Fundraising Committee, Department of Epidemiology
2015–2016 Member, TL1 Advisory Committee, Clinical and Translational Science Institute
2015–2016 Consultant, Biostatistics, Epidemiology and Research Design Program (BERD), Clinical and Translational Science Institute

Profession

2011–2013 IRB panel member, Brigham and Women's Hospital, Boston, MA
2014 Ad-hoc reviewer: Cancer Medicine
2016 Ad-hoc reviewer: Cancer Epidemiology, Biomarkers & Prevention; IEEE/ACM Transactions on Computational Biology and Bioinformatics
2016 Member, Scientific Review Committee, The Science of Global Prostate Cancer Disparities Conference, Nov 9-12; Orlando, FL.
2016 Session moderator, Personalized Medicine: From Bench to Bedside to Community; The Science of Global Prostate Cancer Disparities Conference, Nov 9-12; Orlando, FL.
2017 Ad-hoc reviewer: Cancer Medicine (4); BMC Urology; Cancer Causes & Control; Cancer Research; Cancer Epidemiology, Biomarkers & Prevention; IEEE/ACM Transactions on Computational Biology and Bioinformatics (2)
2017 Ad-hoc grant reviewer, Genesis Oncology Trust, Research Project Grants Mechanism
2018 Ad-hoc reviewer: Cancer Research; JNCI; JAMA Oncology, IEEE/ACM Transactions on Computational Biology and Bioinformatics; Journal of Open Source Software
2018 Ad-hoc grant reviewer: Cancer Research UK, Population Research Postdoctoral Fellowship Mechanism; University of Florida Informatics Institute (UFII) and Clinical Translational Institute (CTSI), Pilot Project Program

2015– Co-leader, Computational Patho-Epidemiology Working Group, Transdisciplinary Prostate Cancer Partnership (ToPCaP), Boston, MA

2017– Leader, Tampa Bay R Users Group, Tampa, FL

Professional association memberships

2011– Active member, Transdisciplinary Prostate Cancer Partnership (ToPCaP), Boston, MA

2014– Active member, Prostate Cancer Transatlantic Consortium (CaPTC), Gainesville, FL

2015– Active member, American Association for Cancer Research (AACR)

2017– Active member, Molecular Epidemiology Working Group of the AACR (MEG/AACR)

Peer-reviewed publications

1. **Gerke TA**, Randles RH. A method for resolving ties in asymptotic relative efficiency. Stat Probabil Lett 2010; 80:1065–1069.

2. Kachouie NN, **Gerke TA**, Huybers P, Schwartzman A. Nonparametric regression for estimation of spatiotemporal mountain glacier retreat from satellite images. IEEE Trans Geosci Remote Sens 2014; 53(3): 1135–1149.

3. Shui IM, Lindström S, Berndt SI, Campa D, **Gerke TA**, Penney KL, Albanes D, Berg C, Bueno-de-Mesquita HB, Chanock S, Crawford ED, Diver WR, Gapstur SM, Gaziano JM, Hoover R, Johansson M, Ma J, Navarro C, Overvad K, Siddiq A, Stampfer MJ, Stevens VL, Travis R, Trichopoulos D, Vineis P, Mucci LA, Yaeger M, Giovannucci EL, Kraft P. Prostate Cancer (PCa) Risk Variants and Risk of Fatal PCa in the National Cancer Institute Breast and Prostate Cancer Cohort Consortium. Eur Urol 2014; 65(6): 1069–1075. PMID: 24411283. PMCID: PMC4006298.

4. Bismar TA, Alshalalfa M, Petersen LF, Teng LH, **Gerke TA**, Bakkar A, Al-Mami A, Liu S, Dolph M, Mucci LA, Alhajj R. Interrogation of ERG gene rearrangements in prostate cancer identifies a prognostic 10-gene signature with relevant implication to patients' clinical outcome. Brit J Urol Int 2014; 113(2): 309–319. PMID: 24006850.

5. Penney KL, Sinnott JA, Tyekucheva S, **Gerke TA**, Shui IM, Kraft P, Sesso HD, Freedman M, Loda MF, Mucci LA, Stampfer MJ. Association of prostate cancer risk variants with gene expression in normal and tumor tissue. Cancer Epidemiol Biomarkers Prev 2015; 24(1): 255–260. PMID: 25371445. PMCID: PMC4294966.

6. Shui IM, Mondul AM, Lindström S, Tsilidis KK, Travis RC, **Gerke TA**, Albanes D, Black A, Berg CD, Bueno-de-Mesquita HB, Gapstur SM, Haiman C, Henderson B, Hoover R, Hunter DJ, Johansson M, Key TJ, Khaw K, Marchand L, Ma J, McCullough ML, Siddiq A, Stampfer M, Stram DO, Stevens VL, Trichopoulos D, Tumino R, Willett W, Ziegler RG, Kühn T, Barricarte A, Tjønneland A, Mucci LA, Giovannucci E, Kraft P. Circulating vitamin D, vitamin D-related genetic variation, and risk of fatal prostate cancer in the National Cancer Institute Breast and Prostate Cancer Cohort Consortium. Cancer 2015; 121(12): 1949–1956. PMID: 25731953. PMCID: PMC4457645.

7. Sinnott JA, Rider JR, Carlsson J, **Gerke TA**, Tyekucheva S, Penney K, Sesso HD, Loda M, Parmigiani G, Fall K, Stampfer MJ, Mucci LA, Pawitan Y, Andersson S, Andrén O. Molecular Differences in Transition Zone and Peripheral Zone Prostate Tumors. Carcinogenesis 2015; 36(6): 632–638. PMID: 25870172. PMCID: PMC4572920.

8. Rider JR, Fiorentino M, Kelly R, **Gerke TA**, Jordahl K, Sinnott JA, Giovannucci EL, Loda MF, Mucci LA, Finn S. Tumor expression of Adiponectin Receptor 2 and

lethal prostate cancer. Carcinogenesis 2015; 36(6): 639–647. PMID: 25863129. PMCID: PMC4481603.

9. Terry RS, **Gerke TA**, Mason JB, Sorenson MD, Joseph JP, Dahm P, Su L. Postoperative rhabdomyolysis following robotic renal and adrenal surgery: a cautionary tale of compounding risk factors. J Robotic Surg 2015; 9(3): 195–200. PMID: 26531199.

10. Martin NE, **Gerke TA**, Sinnott JA, Stack EC, Andrén O, Andersson S, Johansson J, Fiorentino M, Finn S, Fedele G, Stampfer MJ, Kantoff PW, Mucci LA, Loda MF. Measuring PI3K activation: Clinicopathologic, immunohistochemical, and RNA expression analysis in prostate cancer. Mol Cancer Res 2015; 13(10): 1431–1440. PMID: 26124442. PMCID: PMC4618038.

11. **Gerke TA***, Martin NE*, Ding Z, Nuttall E, Stack EC, Giovannucci EL, Lis RT, Stampfer MJ, Kantoff PW, Parmigiani G, Loda MF, Mucci LA. Evaluating a 4-marker signature of aggressive prostate cancer using time-dependent AUC. Prostate 2015; 75(16): 1926–1933. PMID: 26469352. PMCID: PMC4738177.

12. Ahearn T, Pettersson A, Ebot EM, **Gerke TA**, Graff R, Morais CL, Hicks J, Wilson KM, Rider JR, Sesso HD, Fiorentino M, Flavin R, Finn S, Giovannucci EL, Loda M, Stampfer MJ, De Marzo AM, Mucci LA, Lotan TL. A prospective investigation of PTEN loss and ERG expression in lethal prostate cancer. JNCI 2015; 108(2): pii djv346. PMID: 26615022 PMCID: PMC4862436.

13. Conboy L, **Gerke TA**, Hsu KY, St John M, Goldstein M, Schnyer R. The effectiveness of individualized acupuncture protocols in the treatment of Gulf War Illness: A pragmatic randomized clinical trial. PLoS One 2016; 11(3): e0149161. PMID: 27031099. PMCID: PMC4816551.

14. Lu D, Sinnott JA, Valdimarsdóttir U, Fang F, **Gerke TA**, Tyekucheva S, Fiorentino M, Lambe M, Sesso HD, Sweeney CJ, Wilson KM, Giovannucci EL, Loda M, Mucci LA, Fall K. Stress-related signaling pathways in lethal and non-lethal prostate cancer. Clin Cancer Res 2016; 22(3): 765–772. PMID: 26490316. PMCID: PMC4738177.

15. Stopsack KH, **Gerke TA**, Sinnott JA, Penney KL, Tyekucheva S, Sesso HD, Andersson S, Andrén O, Cerhan JR, Giovannucci EL, Mucci LA, Rider JR. Cholesterol metabolism and lethal prostate cancer. Cancer Res 2016; 76(16): 4785–4790. PMID: 27325648. PMCID: PMC4987257.

16. Preston MA, Batista JL, Carlsson SV, **Gerke TA**, Sjoberg DD, Dahl DM, Sesso H, Feldman AS, Gann PH, Vickers AJ, Mucci LA. Baseline prostate-specific antigen (PSA) levels in midlife predict lethal prostate cancer. J Clin Oncol 2016; 34(23): 2705–2711. PMID: 27298404. PMCID: PMC5019757.

17. Moore II RA, **Gerke TA**, Bourgoine D, Eamranond PP. Transition coach program implementation associated with thirty-day readmission rates in a community hospital setting. Arch Community Med Public Health 2016; 2(1): 022-026. DOI: 10.17352/2455-5479.000012.

18. Waniga HM, **Gerke TA**, Shoemaker A, Bourgoine D, Eamranond P. The impact of revised discharge instructions on patient satisfaction. J Patient Experience 2016; 3(3): 64–68.

19. Kelly RS, Sinnott JA, Rider JR, Ebot E, **Gerke TA**, Bowden M, Pettersson A, Loda M, Sesso H, Kantoff PW, Martin NE, Giovannucci EL, Tyekucheva S, Vander Heiden M, Mucci LA. The role of tumor metabolism as a driver of prostate cancer progression and lethal disease: Results from a nested case-control study. Cancer

Metab 2016; 4(22): DOI 10.1186/s40170-016-0161-9. PMID: 27980733. PMCID: PMC5142400.

20. Sinnott JA, Peisch S, Tyekucheva S, **Gerke TA**, Lis RT, Rider JR, Fiorentino M, Stampfer MJ, Mucci LA, Loda M, Penney KL. Prognostic utility of a new mRNA expression signature of Gleason score. Clin Cancer Res 2017; 23(1): 81–87. PMID: 27663590. PMCID: PMC5215643.

21. Fankhauser CD, Mucci LA, **Gerke TA**. Re: New prostate cancer grading system predicts long-term survival following surgery for Gleason score 8-10 prostate cancer. Eur Urol 2017; 72(1): e9–e10. PMID: 28108146.

22. Pettersson A*, **Gerke TA***, Fall K, Pawitan Y, Holmberg L, Giovannucci EL, Kantoff PW, Adami H, Rider JR, Mucci LA. The ABC model of prostate cancer: a conceptual framework for the design and interpretation of prognostic studies. Cancer 2017; 123(9): 1490–1496. PMID: 28152172. PMCID: PMC5716345.

23. Zareba P, Flavin R, Isikbay M, Rider JR, **Gerke TA**, Finn S, Pettersson A, Giunchi F, Unger RH, Andersson SO, Giovannucci EL, Andrén O, Fall K, Fiorentino M, Mucci LA. Perineural invasion and risk of lethal prostate cancer. Cancer Epidemiol Biomarkers Prev 2017; 26(5): 719–726. PMID: 28062398. PMCID: PMC5413395.

24. Chen Z, **Gerke TA**, Bird V, Prosperi M. Trends in gene expression profiling for prostate cancer risk assessment: a systematic review. Biomed Hub 2017; 2:472146.

25. Ebot E, **Gerke TA**, Labbé D, Sinnott J, Zadra G, Rider J, Tyekucheva S, Wilson K, Kelly R, Shui I, Loda M, Kantoff P, Finn S, Vander Heiden M, Giovannucci E, Brown M, Mucci LA. Gene expression profiling of prostate tissue identifies chromatin regulation as a potential link between obesity and lethal prostate cancer. Cancer 2017; 123(21): 4130–4138. PMID: 28700821. PMCID: PMC5802874.

26. Mucci LA, Pernar CH, Peisch S, **Gerke TA**, Wilson KM. Prostate cancer incidence as an iceberg. Eur J Epidemiol 2017; 32(6): 477–479. PMID: 28560536. PMCID: PMC5709244.

27. Stopsack KH, **Gerke TA**, Andrén O, Andersson S, Giovannucci EL, Mucci LA, Rider JR. Cholesterol uptake and regulation in high-grade and lethal prostate cancers. Carcinogenesis 2017; 38(8): 806–811. PMID: 28595267.

28. Wang K, Chen X, Bird VY, **Gerke TA**, Manini TM, Prosperi M. Association between age-related reductions in testosterone and risk of prostate cancer – an analysis of patients' data with prostatic diseases. Int J Cancer 2017; 141(9): 1783–1793. PMID: 28699177.

29. Li D, Mai V, **Gerke TA**, Pinney SM, Yaghjyan L. Interactions of family history of breast cancer with radiotherapy in relation to the risk of breast cancer recurrence. J Breast Cancer 2017; 20(4): 333–339. PMID: 29285037 PMCID: PMC5743992.

30. Pettersson A*, **Gerke TA***, Penney KL, Lis R, Stack EC, Pértega-Gomes N, Zadra G, Tyekucheva S, Giovannucci EL, Mucci LA, Loda M. MYC overexpression at the protein and mRNA level and cancer outcomes among men treated with radical prostatectomy for prostate cancer. Cancer Epidemiol Biomarkers Prev 2018; 27(2): 201–207. PMID: 29141848 PMCID: PMC5831163.

31. Graff RE, Ahearn TU, Pettersson A, Ebot EM, **Gerke TA**, Penney KL, Wilson KM, Markt S, Pernar CH, Gonzalez-Feliciano AG, Song M, Lis R, Schmidt DR, Vander Heiden MG, Fiorentino M, Giovannucci EL, Loda M, Mucci LA. Height,

obesity, and the risk of TMPRSS2:ERG-defined prostate cancer. Cancer Epidemiol Biomarkers Prev 2018; 27(2): 193–200. PMID: 29167279 PMCID: PMC5809280.

32. Jones AA, **Gerke TA**, Striley CW, Whitehead N, Osborne V, Cottler LB. One step at a time: A latent transitional analysis on changes in substance use, exposure to violence, and HIV/AIDS risk behaviors among female offenders. Am J Crim Just 2018; In press: DOI:10.1007/s12103-017-9419-1.

33. Jones AA, O'Leary CC, Striley CW, **Gerke TA**, Striley CW, Crecelius R, Sullivan J, Cottler LB. Substance use, victimization, HIV/AIDS risk, and recidivism among females in a therapeutic justice program. J Subst Use 2018; In press: DOI:10.1080/14659891.2018.1436604.

34. Williams V, Awasthi S, Fink A, Pow-Sang J, Park J, **Gerke TA**, Yamoah K. African American Men and prostate cancer specific mortality: A competing risk analysis of a large institutional cohort, 1989–2015. Cancer Med 2018; In press.

35. Komura K, Yoshikawa Y, Shimamura T, Chakraborty G, **Gerke TA**, Hinohara K, Chadalavada K, Jeong SH, Armenia J, Du S, Mazzu YZ, Taniguchi K, Ibuki N, Meyer CA, Nanjangud G, Inamoto T, Lee GM, Mucci L, Azuma H, Sweeney CJ, Kantoff P. Synthetic lethality by ATR inhibition in aggressive prostate cancer deficient in male specific histone demethylase KDM5D. J Clin Investig 2018; In press.

36. Peeri NC*, Creed J*, Anic GM, Olson JJ, LaRocca RV, Chowdhary SJ, Brockman JD, **Gerke TA**, Nabors LB, Egan KM. Toenail selenium, genetic variation in selenoenzymes and risk and outcome in glioma. Cancer Epidemiol 2018; In press.

Preprints

1. **Gerke TA**, Tyekucheva S, Mucci LA, Parmigiani G. Logistic push: a regression framework for partial AUC optimization. arXiv:1606.06562 [stat.AP]. https://arxiv.org/abs/1606.06562.

2. Creed JH, Monteiro AN, **Gerke TA**. epiTAD: a web application for visualizing high throughput chromosome conformation capture data in the context of genetic epidemiology. bioRxiv 243840. https://www.biorxiv.org/content/early/2018/01/05/243840

Conference papers

1. Tradigo G, Vaccac R, Manini T, Bird V, **Gerke T**, Veltri P, Prosperi M. A new approach to disentangle genetic and epigenetic components on disease comorbidities: studying correlation between genotypic and phenotypic disease networks. Procedia Computer Science 2017; 110: 453–458. In: The 14th International Conference on Mobile Systems and Pervasive Computing (MobiSPC): 2017 Jul 24–26; Leuven, Belgium.

2. Ren Y, Ay A, **Gerke T**, Kahveci T. Searching jointly correlated gene combinations. In: International Conference on Bioinformatics and Computational Biology (BICoB): 2018 Mar 19–21; Las Vegas, NV. Award: Best Paper.

Conference presentations

∗ *denotes oral presentation,* – *denotes poster presentation*

– Martin NE, **Gerke TA**, Loda MF, Stampfer MJ, Finn S, Rider JR, Mucci LA. Tumor adiponectin signaling underlies the association between obesity and lethal outcome in

prostate cancer. In: American Association for Cancer Research Annual Meeting: 2012 Mar 31-Apr 4; Chicago, IL.

∗ Zareba P, Pettersson A, **Gerke TA**, Fiorentino M, Flavin R, Rider JR, Giovannucci EL, Finn S, Loda MF, Mucci LA. Immunohistochemical expression of BRCA1 and prostate cancer progression in a large radical prostatectomy cohort. In: 32nd Congress of the Société Internationale d'Urologie: 2012 Sep 30-Oct 4; Fukuoka, Japan.

– Shui IM, Lindström S, **Gerke TA**, Kraft P. Prostate cancer risk variants and disease progression in the NCI Breast and Prostate Cancer Cohort Consortium. In: Proceedings of the AACR Special Conference on Post-GWAS Horizons in Molecular Epidemiology: Digging Deeper into the Environment: 2012 Nov 11-14; Hollywood, FL.

∗ **Gerke TA**, Fiorentino M, Choudhury D, Pettersson A, Zareba P, Kantoff P, Loda MF, Finn S, Mucci LA. Molecular markers associated with altered BRCA1 expression in prostate cancer. In: Sixth Annual Prostate Cancer Program Retreat: 2013 Mar 18-20; Fort Lauderdale, FL.

– Ahearn TU, Pettersson A, Stack EC, Ma J, **Gerke TA**, Meisner A, Pollak MN, Finn S, Stampfer MJ, Loda M, Giovannucci EL, Mucci LA. The IGF/insulin signaling axis TMPRSS2:ERG and prostate cancer survival. In: American Association for Cancer Research Annual Meeting: 2013 Apr 6-10; Washington, DC.

– Schwartzman A, Kachouie NN, Huybers P, **Gerke TA**. Spatiotemporal estimation of mountain glacier retreat. In: American Statistical Association Conference on Statistical Practice: 2014 Feb 20-22; Tampa, FL.

– Preston M, Batista J, Carlsson S, **Gerke T**, Dahl D, Feldman A, Gann P, Vickers A, Stampfer M, Mucci L. Prostate-specific antigen (PSA) levels in men <60 years of age predicts lethal prostate cancer. In: American Urological Association Annual Meeting: 2014 May 16-21; Orlando, FL.

– **Gerke T**, Tyekucheva S, Penney K, Sweeney C, Lis R, Nuttall I, Loda M, Stampfer M, Parmigiani G, Mucci L. Discovering a gene expression signature of prostate cancer prognostication by focusing on indolent tumors. In: American Urological Association Annual Meeting: 2014 May 16-21; Orlando, FL.

– Peisch SF, **Gerke T**, Wilson KM, Giovannucci EL, Signorello LB, Mucci LA. Racial disparities in prostate cancer: Estimating the role of diet, lifestyle, and genetic factors among African-American and Caucasian-American men. In: Proceedings of the Thirteenth Annual AACR International Conference on Frontiers in Cancer Prevention Research: 2014 Sep 27-Oct 1; New Orleans, LA.

* **Gerke T**. Bioinformatics 101: Big data's role in addressing prostate cancer disparities. In: The Third Biennial Science of Global Prostate Cancer Disparities in Black Men: 2014 Nov 5-8; Montego Bay, Jamaica.

* **Gerke T**, Peisch SF, Wilson KM, Giovannucci EL, Signorello LB, Mucci LA. Racial disparities in prostate cancer: Estimating the role of diet, lifestyle, and genetic factors among African-American and European-American men. In: The Third Biennial Science of Global Prostate Cancer Disparities in Black Men: 2014 Nov 5-8; Montego Bay, Jamaica.

– **Gerke T**, Tyekucheva S, Penney K, Sweeney C, Lis R, Sesso H, Nuttall E, Loda M, Stampfer M, Parmigiani G, Mucci L. Discovery and validation of a 30-gene expression signature to identify prostate cancer patients who are candidates for active surveillance. In: Genitourinary Cancers Symposium: 2015 Feb 26-28; Orlando, FL.

– Kelly RS, Sinnott JA, Rider JR, Ebot E, **Gerke TA**, Penney KL, Bowden M, Pettersson A, Loda M, Stampfer M, Kantoff PW, Martin NE, Giovannucci EL, Tyekucheva S, Vander Heiden M, Mucci LA. Tumor metabolism as a driver of lethal prostate cancer. In: AACR Special Conference, Metabolism and Cancer: 2015 June 7-10; Bellevue, WA.

– Ebot EM, **Gerke T**, Tyekucheva S, Labbé DP, Zadra G, Kelly RS, Bowden M, Rider JR, Wilson KM, Martin NE, Brown M, Vander Heiden MG, Giovannucci EL, Loda M, Mucci LA. Identifying obesity-linked gene expression changes in prostate cancer. In: AACR Special Conference, Metabolism and Cancer: 2015 June 7-10; Bellevue, WA.

– Stopsack KH, **Gerke T**, Cerhan JR, Mucci LA, Rider JR. Increased cholesterol synthesis via squalene monooxygenase to predict lethal prostate cancer. In: Genitourinary Cancers Symposium: 2016 Jan 7-9; San Francisco, CA.

– Wilson KM, **Gerke T**, Ebot E, Sinnott JA, Rider JR, Mucci LA. Differential gene expression in prostate tissue according to vasectomy. In: Genitourinary Cancers Symposium: 2016 Jan 7-9; San Francisco, CA.

– Barber LE, **Gerke T**, Markt SC, Parmigiani G, Mucci LA. A family affair: Prostate cancer risk and family history of breast or prostate cancer. In: American Association for Cancer Research Annual Meeting: 2016 Apr 16-20; New Orleans, LA.

– Stopsack KH, **Gerke T**, Mucci LA, Rider JR. PTEN expression, cholesterol metabolism, and lethal prostate cancer. In: American Association for Cancer Research Annual Meeting: 2016 Apr 16-20; New Orleans, LA.

– Rider JR, Wilson KM, **Gerke T**, Ebot E, Sinnott JA, Mucci LA. Differential gene expression in prostate tissue according to sexual behaviors. In: American Urological Association Annual Meeting: 2016 May 6-10; San Diego, CA.

– Preston M, Wilson K, **Gerke T**, Carlsson S, Sjoberg D, Kibel A, Trinh Q, Signorello L, Steinwandel M, Vickers A, Lilja H, Mucci L. Baseline prostate-specific antigen (PSA) levels in midlife predict total and aggressive prostate cancer in African-American men. In: American Urological Association Annual Meeting: 2016 May 6-10; San Diego, CA.

* Stopsack KH, **Gerke T**, Mucci LA, Rider JR. Prostate cancer prognostication based on an actionable metabolic pathway. In: AACR Improving Cancer Risk Prediction for Prevention and Early Detection: 2016 Nov 16-19; Orlando, FL.

– Fankhauser C, Wilson K, Rider J, Penney K, Peisch S, Fiorentino M, Kantoff P, Moch H, Mucci L, **Gerke T**. Do more granular Gleason categorizations lead to better prognostic accuracy over time? In: Annual European Association of Urology Congress: 2017 Mar 24-28; London, England.

– **Gerke T**, Börnigen D, Beltran H, Tyekucheva S, Huttenhower C, Lee G, Lotan T, Trock B, Mucci L, Sweeney C. Loss of the tumor suppressor Zinc Finger Protein-36 and risk of lethal prostate cancer. In: American Association for Cancer Research Annual Meeting: 2017 Apr 1-5; Washington, DC.

– Berglund AE, **Gerke T**, Awasthi S, Grass GD, Park HY, Cleveland JL, Park JY, Yamoah K, Rounbehler RJ. Tristetraprolin is a prognostic biomarker for biochemical recurrence in low Gleason score patients. In: American Association for Cancer Research Annual Meeting: 2017 Apr 1-5; Washington, DC.

– Ebot E, Isikbay M, **Gerke T**, Ahearn TU, Kelly RS, Tyekucheva S, Pettersson A, Penney KL, Mucci L. Gene expression profiling of prostate tissue identifies biological pathways associated with TMPRSS2:ERG gene fusion. In: American Association for Cancer Research Annual Meeting: 2017 Apr 1-5; Washington, DC.

– Preston M, Downer MK, **Gerke T**, Carlsson S, Sesso H, Kibel A, Trinh Q, Lilja H, Vickers A, Wilson K, Mucci L. Prostate-specific antigen (PSA) levels in men aged 60 to 70 and development of lethal prostate cancer over 30 years: Implications for risk-stratified screening. In: American Urological Association Annual Meeting: 2017 May 12-16; Boston, MA.

– Creed JH, **Gerke T**, Monteiro A. EpiTAD Viewer: A Software Application for Visualizing and Contextualizing HI-C Data in Genetic Epidemiology. In: Moffitt Scientific Symposium: 2017 May 4; Tampa, FL. Award: Population Science Poster Winner.

– Sweeney C, **Gerke T**, Beltran H, Sboner A, Karnes RJ, Klein EA, Davicioni E, Yousefi K, Ross A, Mucci LA, Trock BJ. Association of loss of tumor suppressor ZFP36 with lethal prostate cancer. In: ASCO Annual Meeting: 2017 Jun 2-6; Chicago, IL.

– Sweeney CJ, Geybels M, Markt SC, Wang V, Penney K, **Gerke T**, Pomerantz MM, Lee GS, Nitsch D, Huttenhower C, Mucci L. 821PA polymorphism in the promoter of the FRAS1 gene is associated with metastatic prostate cancer. In: European Society for Medical Oncology Congress: 2017 Sep 8-12; Madrid, Spain.

– Yuan ZM, Yang GQ, Oliver DE, Takhar M, Erho NG, Berglund AE, Park J, Rounbehler RJ, **Gerke T**, Jordan J, Davicioni E, Torres-Roca JF, Mulé JJ, Rayford W, Yamoah K. Integrative characterization of the 12-chemokine gene expression signature in prostate cancer. In: Proceedings of the American Society for Radiation Oncology (ASTRO): 2017 Sep 24–27; San Diego, CA.

– Yamoah K, Rounbehler RJ, Takhar M, **Gerke T**, Park J, Awasthi S, Erho NG, Davicioni E, Cleveland JL, Berglund AE. Distinct AR-dependent transcriptional program in TMPRSS2-ERG fusion negative tumors in African-American men with prostate cancer. In: Proceedings of the American Society for Radiation Oncology (ASTRO): 2017 Sep 24–27; San Diego, CA.

* **Gerke T**. Prognostic indicators in prostate cancer. In: New Frontiers in Urologic Oncology: 2017 Nov 2–4; Clearwater, FL.

– Ostrom Q, Egan K, Nabors B, Amos C, Armstrong G, Bernstein J, Chowdhary S, Claus E, Eckel-Passow J, **Gerke T**, Houlston R, Il'yasova D, Jenkins R, Johansen C, Lachance D, Lai R, LaRocca R, Lau C, Merrell R, Olson JJ, Olson S, Sadetzki S, Schildkraut J, Shete S, Thompson R, Wrensch M, Wiencke J, Melin B, Bondy M, Barnholtz-Sloan J. Evaluating glioma risk associated with extent of European admixture in African-Americans and Latinos. In: Society for Neuro-Oncology (SNO) Annual Meeting: 2017 Nov 16–19; San Francisco, CA.

– **Gerke T**, Tyekucheva S, Creed JH, Penney KL, Sinnott JA, Ebot E, Berglund AE, Loda M, Stampfer MJ, Kraft P, Parmigiani G, Mucci LA. All happy families are alike: Transcriptomic homogeneity in indolent prostate tumors is a useful prognostic biomarker. In: Prostate Cancer: Advances in Basic, Translational, and Clinical Research (AACR Special Conference): 2017 Dec 2–5; Orlando, FL.

– Mazzu YZ, **Gerke T**, Chakraborty G, Armenia J, Atiq MO, Komura K, Yoshikawa Y, Lee GS, Mucci LA, Kantoff PW. Prognostic and therapeutic significance of ribonucleotide reductase small subunit M2 in prostate cancer. In: Genitourinary Cancers Symposium: 2018 Feb 8-10; San Francisco, CA.

– Stopsack KH, **Gerke T**, Tyekucheva S, Mucci LA, Kantoff PW. Regulation of the tumor suppressor PLZF and prostate cancer prognosis. In: Genitourinary Cancers Symposium: 2018 Feb 8-10; San Francisco, CA.

– Ostrom QT, Egan KM, Nabors L, **Gerke T**, Thompson RC, Olson JJ, LaRocca R, Chowdhary S, Eckel-Passow JE, Armstrong G, Wiencke JKW, Amos CI, Bernstein JL, Claus EB, Il'yasova D, Johansen C, Lachance DH, Lai R, Merrell RT, Olson SH, Sadetzki S, Schildkraut J, Shete S, Houlston RS, Jenkins RB, Melin B, Bondy ML, Barnholtz-Sloan JS. Evaluating glioma risk associated with extent of European admixture in African-Americans and Latinos. In: American Association for Cancer Research Annual Meeting: 2018 Apr 14-18; Chicago, IL.

– Wang K, Chen X, **Gerke T**, Bird V, Prosperi M. Getting rid of obesity in middle-to-late adulthood relates to lower prostate cancer risk: Another piece of evidence supporting the "rapid testosterone reduction theory." In: American Association for Cancer Research Annual Meeting: 2018 Apr 14-18; Chicago, IL.

– Khan NA, Stopsack KH, Allott EH, **Gerke T**, Giovannucci EL, Mucci LA, Kantoff PW. Intratumoral CYP27A1 expression in relation to cholesterol synthesis and vitamin D signaling and its association with lethal prostate cancer. In: American Association for Cancer Research Annual Meeting: 2018 Apr 14-18; Chicago, IL.

– Mazzu YZ, Armenia J, Chakraborty G, Yoshikawa Y, **Gerke T**, Coggins SA, Qiu X, Atiq M, Stopsack K, Lee GS, Long HW, Kim B, Freedman ML, Pomerantz MM, Mucci LA, Kantoff PW. Targeting poor-prognosis subtypes of prostate cancer by inhibition of DNA repair gene ribonucleotide reductase small subunit M2. In: American Association for Cancer Research Annual Meeting: 2018 Apr 14-18; Chicago, IL.

Invited seminars

2009 A method for resolving ties in asymptotic relative efficiency. Undergraduate Research Symposium, University of Florida.

2010 Spatial design and geometry with applications in environmental statistics. Department of Biostatistics Summer Project Presentation Series, Harvard School of Public Health.

2011 Estimation of mountain glacier retreat via analysis of satellite imagery. Environmental Statistics Seminar Series, Harvard School of Public Health.

2012 Gene expression data management and analysis pipeline: an applied example. Bioinformatics Working Group, Channing Division of Network Medicine.

2012, 2013 IRB panels and ethics in human subjects research. Undergraduate Seminar in Ethics, Values, and Diversity, Northeastern University.

2013 Epidemiologic methods for case-control studies of gene expression. Cancer Epidemiology Fellows Seminar, Harvard School of Public Health.

2015 Understanding molecular cancer research. Alachua County Prostate Cancer Alliance.

2015 Building clinically useful prognostic models from high-dimensional feature spaces by focusing on partial AUC. University of Florida Department of Statistics Seminar Series.

2015 Computational approaches to the challenge of molecular discovery in prostate cancer. University of Florida Health Cancer Center Seminar Series.

2016 Designing molecular epidemiology studies. University of Florida Biostatistics, Epidemiology and Research Design (BERD) Studio.

2017 Confounding. Moffitt Cancer Center Population Science Seminar Series for Research Staff.

2018 Estimating the effectiveness of non-randomized treatment regimes with the parametric g-formula. Integrated Mathematical Oncology / Physical Sciences in Oncology Center Seminar Series; Moffitt Cancer Center.

Software development

Barr CD, **Gerke TA**, Diez DM. `voronoi`: Methods and applications related to Voronoi tessellations. R package 2011; version 1.0.

Creed JH, Monteiro AN, **Gerke TA**. `epiTAD`: A web application for visualizing high throughput chromosome conformation capture data in the context of genetic epidemiology, https://gerkelab.shinyapps.io/epiTAD/. R Shiny Application 2018; latest development version https://github.com/tgerke/epiTAD.

Creed JH, **Gerke TA**. `ShinyDAG`: A web application for building, analyzing, and visualizing directed acyclic graphs (DAGs), https://gerkelab.shinyapps.io/shinyDAG/. R Shiny Application 2018; latest development version https://github.com/tgerke/ShinyDAG.

Other education

Frontiers in Causal Inference Workshop: 2012 March 23-24; Harvard University, Cambridge, MA.

AACR Workshop on Integrative Molecular Epidemiology: 2016 August 5-9; Boston, MA.