

# Emily C. Zabor

## Curriculum Vitae

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### Education

- 2013–2019 **Doctor of Public Health**, *Columbia University*, New York, NY, Biostatistics.  
Dissertation topic: Statistical methods for the study of etiologic heterogeneity  
Advisors: Dr. Colin Begg and Dr. Shuang Wang
- 2008–2010 **Master of Science**, *The University of Minnesota*, Minneapolis, MN, Biostatistics.
- 1999–2003 **Bachelor of Arts**, *Grinnell College*, Grinnell, IA, Anthropology.

### Professional positions

- 2019–Present **Assistant Staff**, CLEVELAND CLINIC, Cleveland, OH.  
Department of Quantitative Health Sciences & Taussig Cancer Institute
- 2018–2019 **Senior Research Biostatistician**, MEMORIAL SLOAN KETTERING CANCER CENTER, New York, NY.  
Department of Epidemiology & Biostatistics
- 2015–2017 **Research Biostatistician II**, MEMORIAL SLOAN KETTERING CANCER CENTER, New York, NY.  
Department of Epidemiology & Biostatistics
- 2012–2015 **Research Biostatistician I**, MEMORIAL SLOAN KETTERING CANCER CENTER, New York, NY.  
Department of Epidemiology & Biostatistics
- 2010–2012 **Assistant Research Biostatistician**, MEMORIAL SLOAN KETTERING CANCER CENTER, New York, NY.  
Department of Epidemiology & Biostatistics

### Academic positions

- 2020–Present **Assistant Professor of Medicine**, CLEVELAND CLINIC LERNER COLLEGE OF MEDICINE AT CASE WESTERN RESERVE UNIVERSITY, Cleveland, OH.  
Department of Medicine
- 2016–2017 **Adjunct Professor**, HUNTER COLLEGE, New York, NY.  
Fundamentals of Biostatistics

### Other employment

- Fall 2017 **Teaching Assistant**, COLUMBIA UNIVERSITY, New York, NY.  
Data Science I
- 2009 **Summer Intern in Biomedical Research**, NATIONAL INSTITUTES OF HEALTH, Bethesda, MD.  
Eunice Kennedy Shriver National Institute for Child Health & Human Development

- 2009–2010 **Research Assistant**, THE UNIVERSITY OF MINNESOTA, Minneapolis, MN.  
Coordinating Centers for Biometric Research
- 2008–2010 **Teaching Assistant**, THE UNIVERSITY OF MINNESOTA, Minneapolis, MN.  
Introduction to Biostatistics  
Advanced Topics in Clinical Trials
- 2008–2009 **Research Assistant**, THE UNIVERSITY OF MINNESOTA, Minneapolis, MN.  
Division of Health Policy and Management
- 2006–2008 **Account Coordinator**, US BANK, Minneapolis, MN.  
Corporate Payment Systems
- 2003–2006 **Volunteer**, US PEACE CORPS, Ghana, West Africa.  
Natural Resources for Livelihood Sustainability Program

## Methodologic publications

1. (Under review) **Zabor, E. C.**, Seshan, S.E., Wang, S., & Begg, C. B. Validity of a method for identifying disease subtypes that are etiologically heterogeneous.
2. (In press) **Zabor, E. C.**, Kaizer, A. M., & Hobbs, B. P. (2020). Randomized Controlled Trials. *CHEST*.
3. **Zabor, E. C.** (2019). riskclustr: Functions to Study Etiologic Heterogeneity. *Journal of Open Source Software*, 4(35), 1269.
4. **Zabor, E. C.**, & Begg, C. B. (2017). A comparison of statistical methods for the study of etiologic heterogeneity. *Stat Med*, 36(25), 4050-4060.
5. Mauguen, A., **Zabor, E. C.**, Thomas, N. E., Berwick, M., Seshan, V. E., & Begg, C. B. (2017). Defining Cancer Subtypes With Distinctive Etiologic Profiles: An Application to the Epidemiology of Melanoma. *J Am Stat Assoc*, 112(517), 54-63.
6. Begg, C. B., Seshan, V. E., **Zabor, E. C.**, Furberg, H., Arora, A., Shen, R., ... Hsieh, J. J. (2014). Genomic investigation of etiologic heterogeneity: methodologic challenges. *BMC Med Res Methodol*, 14, 138.
7. **Zabor, E. C.**, Gonen, M., Chapman, P. B., Panageas, K. S. (2013). Dynamic prognostication using conditional survival estimates. *Cancer*, 119(20), 3589-3592.
8. Begg, C. B., **Zabor, E. C.**, Bernstein, J. L., Bernstein, L., Press, M. F., Seshan, V. E. (2013). A conceptual and methodological framework for investigating etiologic heterogeneity. *Stat Med*, 32(29), 5039-5052.
9. Begg, C. B., **Zabor, E. C.** (2012). Detecting and exploiting etiologic heterogeneity in epidemiologic studies. *Am J Epidemiol*, 176(6), 512-518.

## Collaborative publications

1. Walsh, S. M., **Zabor, E. C.**, Flynn, J., Stempel, M., Morrow, M., & Gemignani, M. L. (2020). Breast cancer in young black women. *Br J Surg*, 107(6), 677-686. doi:10.1002/bjs.11401
2. Valero, M. G., Muhsen, S., Moo, T. A., **Zabor, E. C.**, Stempel, M., Pusic, A., . . . Sacchini, V. S. (2020). Increase in Utilization of Nipple-Sparing Mastectomy for Breast Cancer: Indications, Complications, and Oncologic Outcomes. *Ann Surg Oncol*, 27(2), 344-351. doi:10.1245/s10434-019-07948-x
3. Valero, M. G., **Zabor, E. C.**, Park, A., Gilbert, E., Newman, A., King, T. A., & Pilewskie, M. L. (2020). The Tyrer-Cuzick Model Inaccurately Predicts Invasive Breast Cancer Risk in Women With LCIS. *Ann Surg Oncol*, 27(3), 736-740. doi:10.1245/s10434-019-07814-w
4. Tadros, A. B., Moo, T. A., **Zabor, E. C.**, Gillespie, E. F., Khan, A., McCormick, B., . . . Braunstein, L. Z. (2020). Feasibility of Breast-Conservation Therapy and Hypofractionated Radiation in the Setting of Prior Breast Augmentation. *Pract Radiat Oncol*.

doi:10.1016/j.prro.2020.01.003

5. Tadros, A. B., Moo, T. A., Stempel, M., **Zabor, E. C.**, Khan, A. J., & Morrow, M. (2020). Axillary management for young women with breast cancer varies between patients electing breast-conservation therapy or mastectomy. *Breast Cancer Res Treat*, 180(1), 197-205. doi:10.1007/s10549-019-05520-5
6. Raghunathan, N. J., **Zabor, E. C.**, Anderson, N., Oeffinger, K., Tonorezos, E. S., & Korenstein, D. (2020). Communicating cardiovascular risk to high-risk cancer survivors: a mixed-methods pilot study of a statin risk communication tool. *J Cancer Surviv*. doi:10.1007/s11764-020-00860-4
7. Minami, C. A., **Zabor, E. C.**, Gilbert, E., Newman, A., Park, A., Jochelson, M. S., . . . Pilewskie, M. L. (2020). Do Body Mass Index and Breast Density Impact Cancer Risk Among Women with Lobular Carcinoma In Situ? *Ann Surg Oncol*. doi:10.1245/s10434-019-08126-9
8. Iyer, G., Tully, C. M., **Zabor, E. C.**, Bochner, B. H., Dalbagni, G., Herr, H. W., . . . Bajorin, D. F. (2020). Neoadjuvant Gemcitabine-Cisplatin Plus Radical Cystectomy-Pelvic Lymph Node Dissection for Muscle-invasive Bladder Cancer: A 12-year Experience. *Clin Genitourin Cancer*. doi:10.1016/j.clgc.2020.02.014
9. Christian, N., **Zabor, E. C.**, Cassidy, M., Flynn, J., Morrow, M., & Gemignani, M. L. (2020). Contralateral Prophylactic Mastectomy Use After Neoadjuvant Chemotherapy. *Ann Surg Oncol*, 27(3), 743-749. doi:10.1245/s10434-019-08038-8
10. Walsh, S. M., Brennan, S. B., **Zabor, E. C.**, Rosenberger, L. H., Stempel, M., Lebron-Zapata, L., & Gemignani, M. L. (2019). Does Breast Density Increase the Risk of Re-excision for Women with Breast Cancer Having Breast-Conservation Therapy? *Ann Surg Oncol*, 26(13), 4246-4253. doi:10.1245/s10434-019-07647-7
11. Walsh, S. M., **Zabor, E. C.**, Stempel, M., Morrow, M., & Gemignani, M. L. (2019). Does race predict survival for women with invasive breast cancer? *Cancer*, 125(18), 3139-3146. doi:10.1002/cncr.32296
12. Van Zee, K. J., **Zabor, E. C.**, Di Donato, R., Harmon, B., Fox, J., Morrow, M., . . . Fineberg, S. A. (2019). Comparison of Local Recurrence Risk Estimates After Breast-Conserving Surgery for DCIS: DCIS Nomogram Versus Refined Oncotype DX Breast DCIS Score. *Ann Surg Oncol*, 26(10), 3282-3288. doi:10.1245/s10434-019-07537-y
13. Spanheimer, P. M., Murray, M. P., **Zabor, E. C.**, Stempel, M., Morrow, M., Van Zee, K. J., & Barrio, A. V. (2019). Long-Term Outcomes After Surgical Treatment of Malignant/Borderline Phyllodes Tumors of the Breast. *Ann Surg Oncol*, 26(7), 2136-2143. doi:10.1245/s10434-019-07210-4
14. Pilewskie, M., **Zabor, E. C.**, Gilbert, E., Stempel, M., Petruolo, O., Mangino, D., . . . Jochelson, M. S. (2019). Differences between screen-detected and interval breast cancers among BRCA mutation carriers. *Breast Cancer Res Treat*, 175(1), 141-148. doi:10.1007/s10549-018-05123-6
15. Pietzak, E. J., **Zabor, E. C.**, Bagrodia, A., Armenia, J., Hu, W., Zehir, A., . . . Iyer, G. (2019). Genomic Differences Between "Primary" and "Secondary" Muscle-invasive Bladder Cancer as a Basis for Disparate Outcomes to Cisplatin-based Neoadjuvant Chemotherapy. *Eur Urol*, 75(2), 231-239. doi:10.1016/j.eururo.2018.09.002
16. Moo, T. A., Jochelson, M. S., Zabor, E. C., Stempel, M., Raiss, M., Mamtani, A., . . . Morrow, M. (2019). Is Clinical Exam of the Axilla Sufficient to Select Node-Positive Patients Who Downstage After NAC for SLNB? A Comparison of the Accuracy of Clinical Exam Versus MRI. *Ann Surg Oncol*, 26(13), 4238-4243. doi:10.1245/s10434-019-07867-x
17. Miller, M. E., Muhsen, S., **Zabor, E. C.**, Flynn, J., Olcese, C., Giri, D., . . . Pilewskie, M. (2019). Risk of Contralateral Breast Cancer in Women with Ductal Carcinoma In Situ Associated with Synchronous Ipsilateral Lobular Carcinoma In Situ. *Ann Surg Oncol*,

- 26(13), 4317-4325. doi:10.1245/s10434-019-07796-9
18. Mamtani, A., **Zabor, E. C.**, Stempel, M., & Morrow, M. (2019). Lobular Histology Does Not Predict the Need for Axillary Dissection Among ACOSOG Z0011-Eligible Breast Cancers. *Ann Surg Oncol*, 26(10), 3269-3274. doi:10.1245/s10434-019-07536-z
  19. Mamtani, A., **Zabor, E. C.**, Rosenberger, L. H., Stempel, M., Gemignani, M. L., & Morrow, M. (2019). Was Reexcision Less Frequent for Patients with Lobular Breast Cancer After Publication of the SSO-ASTRO Margin Guidelines? *Ann Surg Oncol*, 26(12), 3856-3862. doi:10.1245/s10434-019-07751-8
  20. Mamtani, A., Nakhliis, F., Downs-Canner, S., **Zabor, E. C.**, Morrow, M., King, T. A., & Van Zee, K. J. (2019). Impact of Age on Locoregional and Distant Recurrence After Mastectomy for Ductal Carcinoma In Situ With or Without Microinvasion. *Ann Surg Oncol*, 26(13), 4264-4271. doi:10.1245/s10434-019-07693-1
  21. Grabenstetter, A., Moo, T. A., Hajiyeva, S., Schuffler, P. J., Khattar, P., Friedlander, M. A., . . . Edelweiss, M. (2019). Accuracy of Intraoperative Frozen Section of Sentinel Lymph Nodes After Neoadjuvant Chemotherapy for Breast Carcinoma. *Am J Surg Pathol*, 43(10), 1377-1383. doi:10.1097/pas.0000000000001311
  22. Flanagan, M. R., **Zabor, E. C.**, Stempel, M., Mangino, D. A., Morrow, M., & Pilewskie, M. L. (2019). Chemoprevention Uptake for Breast Cancer Risk Reduction Varies by Risk Factor. *Ann Surg Oncol*, 26(7), 2127-2135. doi:10.1245/s10434-019-07236-8
  23. Flanagan, M. R., **Zabor, E. C.**, Romanoff, A., Fuzesi, S., Stempel, M., Mehrara, B. J., . . . Gemignani, M. L. (2019). A Comparison of Patient-Reported Outcomes After Breast-Conserving Surgery and Mastectomy with Implant Breast Reconstruction. *Ann Surg Oncol*, 26(10), 3133-3140. doi:10.1245/s10434-019-07548-9
  24. Engel, L. S., **Zabor, E. C.**, Satagopan, J., Widell, A., Rothman, N., O'Brien, T. R., . . . Grimsrud, T. K. (2019). Prediagnostic serum organochlorine insecticide concentrations and primary liver cancer: A case-control study nested within two prospective cohorts. *Int J Cancer*, 145(9), 2360-2371. doi:10.1002/ijc.32175
  25. Downs-Canner, S., **Zabor, E. C.**, Wind, T., Cobovic, A., McCormick, B., Morrow, M., & Heerdt, A. (2019). Radiation Therapy After Breast-Conserving Surgery in Women 70 Years of Age and Older: How Wisely Do We Choose? *Ann Surg Oncol*, 26(4), 969-975. doi:10.1245/s10434-018-07151-4
  26. Christian, N., Zabor, E. C., Cassidy, M., Flynn, J., Morrow, M., & Gemignani, M. L. (2019). Contralateral Prophylactic Mastectomy Use After Neoadjuvant Chemotherapy. *Ann Surg Oncol*. doi:10.1245/s10434-019-08038-8
  27. Benefield, H. C., **Zabor, E. C.**, Shan, Y., Allott, E. H., Begg, C. B., & Troester, M. A. (2019). Evidence for Etiologic Subtypes of Breast Cancer in the Carolina Breast Cancer Study. *Cancer Epidemiol Biomarkers Prev*, 28(11), 1784-1791. doi:10.1158/1055-9965.Epi-19-0365
  28. Baker, J. L., Muhsen, S., **Zabor, E. C.**, Stempel, M., & Gemignani, M. L. (2019). Does Lymph Node Status Prior to Neoadjuvant Chemotherapy Influence the Number of Sentinel Nodes Removed? *Ann Surg Oncol*, 26(2), 336-342. doi:10.1245/s10434-018-7004-6
  29. Assel, M., Sjoberg, D., Elders, A., Wang, X., Huo, D., Botchway, A., . . . Vickers, A. J. (2019). Guidelines for Reporting of Statistics for Clinical Research in Urology. *J Urol*, 201(3), 595-604. doi:10.1097/ju.0000000000000001
  30. Assel, M., Sjoberg, D., Elders, A., Wang, X., Huo, D., Botchway, A., . . . Vickers, A. J. (2019). Guidelines for Reporting of Statistics for Clinical Research in Urology. *Eur Urol*, 75(3), 358-367. doi:10.1016/j.eururo.2018.12.014
  31. Assel, M., Sjoberg, D., Elders, A., Wang, X., Huo, D., Botchway, A., . . . Vickers, A. J. (2019). Guidelines for reporting of statistics for clinical research in urology. *BJU Int*,

123(3), 401-410. doi:10.1111/bju.14640

32. **Zabor, E. C.**, Coit, D., Gershenwald, J. E., McMasters, K. M., Michaelson, J. S., Stromberg, A. J., & Panageas, K. S. (2018). Variability in Predictions from Online Tools: A Demonstration Using Internet-Based Melanoma Predictors. *Ann Surg Oncol*, 25(8), 2172-2177.
33. **Zabor, E. C.**, Furberg, H., Lee, B., Campbell, S., Lane, B. R., Thompson, R. H., . . . Russo, P. (2018). Long-Term Renal Function Recovery following Radical Nephrectomy for Kidney Cancer: Results from a Multicenter Confirmatory Study. *J Urol*, 199(4), 921-926.
34. Winer, A. G., **Zabor, E. C.**, Vacchio, M. J., Hakimi, A. A., Russo, P., Coleman, J. A., & Jaimes, E. A. (2018). The Effect of Patient and Surgical Characteristics on Renal Function After Partial Nephrectomy. *Clin Genitourin Cancer*, 16(3), 191-196.
35. Teo, M. Y., Bambury, R. M., **Zabor, E. C.**, Jordan, E., Al-Ahmadie, H., Boyd, M. E., . . . Rosenberg, J. E. (2018). Commentary on "DNA damage response and repair gene alterations are associated with improved survival in patients with platinum-treated advanced urothelial carcinoma.". *Urol Oncol*, 36(7), 345-346.
36. Silk, M. T., Mikkilineni, N., Silk, T. C., **Zabor, E. C.**, Ostrovnaya, I., Hakimi, A. A., . . . Durack, J. C. (2018). Prospective Evaluation of Unprocessed Core Needle Biopsy DNA and RNA Yield from Lung, Liver, and Kidney Tumors: Implications for Cancer Genomics. *Anal Cell Pathol (Amst)*, 2018, 2898962.
37. Scott, J. M., **Zabor, E. C.**, Schwitzer, E., Koelwyn, G. J., Adams, S. C., Nilsen, T. S., . . . Jones, L. W. (2018). Efficacy of Exercise Therapy on Cardiorespiratory Fitness in Patients With Cancer: A Systematic Review and Meta-Analysis. *J Clin Oncol*, 36(22), 2297-2305.
38. Romanoff, A., **Zabor, E. C.**, Stempel, M., Sacchini, V., Pusic, A., & Morrow, M. (2018). A Comparison of Patient-Reported Outcomes After Nipple-Sparing Mastectomy and Conventional Mastectomy with Reconstruction. *Ann Surg Oncol*, 25(10), 2909-2916.
39. Romanoff, A., **Zabor, E. C.**, Petruolo, O., Stempel, M., El-Tamer, M., Morrow, M., & Barrio, A. V. (2018). Does nonmetastatic inflammatory breast cancer have a worse prognosis than other nonmetastatic T4 cancers? *Cancer*, 124(22), 4314-4321.
40. Moo, T. A., Edelweiss, M., Hajiyeva, S., Stempel, M., Raiss, M., **Zabor, E. C.**, . . . Morrow, M. (2018). Is Low-Volume Disease in the Sentinel Node After Neoadjuvant Chemotherapy an Indication for Axillary Dissection? *Ann Surg Oncol*, 25(6), 1488-1494.
41. Lee, B. H., **Zabor, E. C.**, Tennenbaum, D., Furberg, H., Benfante, N., Coleman, J. A., . . . Russo, P. (2018). Renal function recovery after radical nephroureterectomy for upper tract urothelial carcinoma. *World J Urol*, 36(2), 257-263.
42. Francis, J. H., Levin, A. M., **Zabor, E. C.**, Gobin, Y. P., & Abramson, D. H. (2018). Ten-year experience with ophthalmic artery chemosurgery: Ocular and recurrence-free survival. *PLoS One*, 13(5), e0197081.
43. Cronin, P. A., Romanoff, A., **Zabor, E. C.**, Stempel, M., Eaton, A., Smyth, L. M., . . . Gemignani, M. L. (2018). Influence of Age on the Clinical Outcome of Breast Cancer for Men and the Development of Second Primary Cancers. *Ann Surg Oncol*, 25(13), 3858-3866.
44. Cassidy, M. R., **Zabor, E. C.**, Stempel, M., Mehrara, B., & Gemignani, M. L. (2018). Does response to neo-adjuvant chemotherapy impact breast reconstruction? *Breast J*, 24(4), 567-573.
45. Weber, J. J., Jochelson, M. S., Eaton, A., **Zabor, E. C.**, Barrio, A. V., Gemignani, M. L., . . . El-Tamer, M. (2017). MRI and Prediction of Pathologic Complete Response in the Breast and Axilla after Neoadjuvant Chemotherapy for Breast Cancer: MRI and Pathologic Complete Response. *J Am Coll Surg*, 225(6), 740-746.
46. Teo, M. Y., Bambury, R. M., **Zabor, E. C.**, Jordan, E., Al-Ahmadie, H., Boyd, M. E., . . . Rosenberg, J. E. (2017). DNA Damage Response and Repair Gene Alterations Are Associated with Improved Survival in Patients with Platinum-Treated Advanced Urothelial

- Carcinoma. *Clin Cancer Res*, 23(14), 3610-3618.
47. Schwitzer, E., Orlow, I., **Zabor, E. C.**, Begg, C. B., Berwick, M., Thomas, N. E., ... Jones, L. W. (2017). No association between prediagnosis exercise and survival in patients with high-risk primary melanoma: A population-based study. *Pigment Cell Melanoma Res*, 30(4), 424-427.
  48. Salz, T., **Zabor, E. C.**, de Nully Brown, P., Dalton, S. O., Raghunathan, N. J., Matasar, M. J., ... Johansen, C. (2017). Preexisting Cardiovascular Risk and Subsequent Heart Failure Among Non-Hodgkin Lymphoma Survivors. *J Clin Oncol*, 35(34), 3837-3843.
  49. Pilewskie, M., **Zabor, E. C.**, Mamtani, A., Barrio, A. V., Stempel, M., & Morrow, M. (2017). The Optimal Treatment Plan to Avoid Axillary Lymph Node Dissection in Early-Stage Breast Cancer Patients Differs by Surgical Strategy and Tumor Subtype. *Ann Surg Oncol*, 24(12), 3527-3533.
  50. McCartan, D. P., **Zabor, E. C.**, Morrow, M., Van Zee, K. J., & El-Tamer, M. B. (2017). Oncologic Outcomes After Treatment for MRI Occult Breast Cancer (pT0N+). *Ann Surg Oncol*, 24(11), 3141-3147.
  51. Manley, B. J., **Zabor, E. C.**, Casuscelli, J., Tennenbaum, D. M., Redzematovic, A., Becerra, M. F., ... Hakimi, A. A. (2017). Integration of Recurrent Somatic Mutations with Clinical Outcomes: A Pooled Analysis of 1049 Patients with Clear Cell Renal Cell Carcinoma. *Eur Urol Focus*, 3(4-5), 421-427.
  52. Gilbert, E., **Zabor, E. C.**, Stempel, M., Mangino, D., Heerdt, A., & Pilewskie, M. (2017). Differences Among a Modern Cohort of BRCA Mutation Carriers Choosing Bilateral Prophylactic Mastectomies Compared to Breast Surveillance. *Ann Surg Oncol*, 24(10), 3048-3054.
  53. Gentile, L. F., Plitas, G., **Zabor, E. C.**, Stempel, M., Morrow, M., & Barrio, A. V. (2017). Tumor Biology Predicts Pathologic Complete Response to Neoadjuvant Chemotherapy in Patients Presenting with Locally Advanced Breast Cancer. *Ann Surg Oncol*, 24(13), 3896-3902.
  54. Francis, J. H., Brodie, S. E., Marr, B., **Zabor, E. C.**, Mondesire-Crump, I., & Abramson, D. H. (2017). Efficacy and Toxicity of Intravitreal Chemotherapy for Retinoblastoma: Four-Year Experience. *Ophthalmology*, 124(4), 488-495.
  55. Cho, G. Y., Gennaro, L., Sutton, E. J., **Zabor, E. C.**, Zhang, Z., Giri, D., ... Thakur, S. B. (2017). Intravoxel incoherent motion (IVIM) histogram biomarkers for prediction of neoadjuvant treatment response in breast cancer patients. *Eur J Radiol Open*, 4, 101-107.
  56. Casuscelli, J., Weinhold, N., Gundem, G., Wang, L., **Zabor, E. C.**, Drill, E., ... Hsieh, J. J. (2017). Genomic landscape and evolution of metastatic chromophobe renal cell carcinoma. *JCI Insight*, 2(12).
  57. Casuscelli, J., Becerra, M. F., Manley, B. J., **Zabor, E. C.**, Reznik, E., Redzematovic, A., ... Hakimi, A. A. (2017). Characterization and Impact of TERT Promoter Region Mutations on Clinical Outcome in Renal Cell Carcinoma. *Eur Urol Focus*.
  58. Campbell, P. T., Rebbeck, T. R., Nishihara, R., Beck, A. H., Begg, C. B., Bogdanov, A. A., ... Ogino, S. (2017). Proceedings of the third international molecular pathological epidemiology (MPE) meeting. *Cancer Causes Control*, 28(2), 167-176.
  59. Boursiquot, B. C., **Zabor, E. C.**, Glezerman, I. G., & Jaimes, E. A. (2017). Hypertension and VEGF (Vascular Endothelial Growth Factor) Receptor Tyrosine Kinase Inhibition: Effects on Renal Function. *Hypertension*.
  60. Begg, C. B., Rice, M. S., **Zabor, E. C.**, & Tworoger, S. S. (2017). Examining the common aetiology of serous ovarian cancers and basal-like breast cancers using double primaries. *Br J Cancer*, 116(8), 1088-1091.
  61. Alanee, S. R., Shah, S., **Zabor, E. C.**, Vijai, J., Ostrovnaya, I., Garcia-Grossman, I.

- R., ... Bajorin, D. F. (2017). Evaluating the association of multiple single nucleotide polymorphisms with response to gemcitabine and platinum combination chemotherapy in urothelial carcinoma of the bladder. *Int J Clin Pharmacol Ther*, 55 (2017)(3), 203-209.
62. **Zabor, E. C.**, Heller, G., Schwartz, L. H., Chapman, P. B. (2016). Correlating Surrogate Endpoints with Overall Survival at the Individual Patient Level in BRAFV600E-Mutated Metastatic Melanoma Patients Treated with Vemurafenib. *Clin Cancer Res*, 22(6), 1341-1347.
  63. **Zabor, E. C.**, Furberg, H., Mashni, J., Lee, B., Jaimes, E. A., Russo, P. (2016). Factors Associated with Recovery of Renal Function following Radical Nephrectomy for Kidney Neoplasms. *Clin J Am Soc Nephrol*, 11(1), 101-107.
  64. Yu, A. F., Raikhelkar, J., **Zabor, E. C.**, Tonorezos, E. S., Moskowitz, C. S., Adsuar, R., ... Liu, J. E. (2016). Two-Dimensional Speckle Tracking Echocardiography Detects Subclinical Left Ventricular Systolic Dysfunction among Adult Survivors of Childhood, Adolescent, and Young Adult Cancer. *Biomed Res Int*, 2016, 9363951.
  65. Tully, C. M., Apolo, A. B., **Zabor, E. C.**, Regazzi, A. M., Ostrovnaya, I., Furberg, H. F., ... Bajorin, D. F. (2016). The high incidence of vascular thromboembolic events in patients with metastatic or unresectable urothelial cancer treated with platinum chemotherapy agents. *Cancer*, 122(5), 712-721.
  66. Thong, A. E., Petruzella, S., Orlow, I., **Zabor, E. C.**, Ehdaie, B., Ostroff, J. S., ... Barnes, H. F. (2016). Accuracy of Self-reported Smoking Exposure Among Bladder Cancer Patients Undergoing Surveillance at a Tertiary Referral Center. *Eur Urol Focus*, 2(4), 441-444.
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97. Hakimi, A. A., Furberg, H., **Zabor, E. C.**, Jacobsen, A., Schultz, N., Ciriello, G., ... Russo, P. (2013). An epidemiologic and genomic investigation into the obesity paradox in renal cell carcinoma. *J Natl Cancer Inst*, 105(24), 1862-1870.
98. Ehdaie, B., Furberg, H., **Zabor, E. C.**, Ostroff, J. S., Shariat, S. F., Bochner, B. H., ... Dalbagni, G. (2013). Impact of smoking status at diagnosis on disease recurrence and death in upper tract urothelial carcinoma. *BJU Int*, 111(4), 589-595.
99. Moskowitz, C. S., **Zabor, E. C.**, Jochelson, M. (2012). Breast imaging: understanding how accuracy is measured when lesions are the unit of analysis. *Breast J*, 18(6), 557-563.
100. Kadota, K., Suzuki, K., Kachala, S. S., **Zabor, E. C.**, Sima, C. S., Moreira, A. L., ... Travis, W. D. (2012). A grading system combining architectural features and mitotic count predicts recurrence in stage I lung adenocarcinoma. *Mod Pathol*, 25(8), 1117-1127.
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104. Brader, P., Abramson, S. J., Price, A. P., Ishill, N. M., **Zabor, E. C.**, Moskowitz, C. S., ... Ginsberg, M. S. (2011). Do characteristics of pulmonary nodules on computed tomography in children with known osteosarcoma help distinguish whether the nodules are malignant or benign? *J Pediatr Surg*, 46(4), 729-735.
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## Other publications

1. **Zabor, E. C.** (2018). ASO Author Reflections: Careful Development and Thoughtful Interpretation are Needed when Developing Online Prognostic Tools. *Ann Surg Oncol*, 25(Suppl 3), 916-917.
2. Begg, C. B., Seshan, V. E., & **Zabor, E. C.** (2018). RE: "A MULTINOMIAL REGRESSION APPROACH TO MODEL OUTCOME HETEROGENEITY". *Am J Epidemiol*, 187(5), 1129-1130.
3. Moskowitz, C. S., **Zabor, E. C.**, Jochelson, M. (2013). Response to the "letter to the editor" by Dr. Thomas Filleron. *Breast J*, 19(2), 227.

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## R Packages

- riskclustr: functions related to the study of etiologic heterogeneity, <https://cran.r-project.org/web/packages/riskclustr/>.
- condsurv: calculation and plotting of conditional survival estimates, <https://github.com/zabore/condsurv>. *Note that this package is currently under development.*
- ezfun: convenience and utility functions for use in my clinical applications work, with a focus on producing tables for R Markdown output to Microsoft Word, <https://github.com/zabore/ezfun>. *Note that this package is primarily for personal use.*

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## R Tutorials

- "Survival Analysis in R." Memorial Sloan Kettering Cancer Center Department of Strategy & Innovation R Presenter Series. August 30, 2018. Materials available online at [http://www.emilyzabor.com/tutorials/survival\\_analysis\\_in\\_r\\_tutorial.html](http://www.emilyzabor.com/tutorials/survival_analysis_in_r_tutorial.html)
- "Creating Websites in R." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics R User Group. January 23, 2018. Re-presented at the R-Ladies NYC Meetup on February 15, 2018. Materials available online at [http://www.emilyzabor.com/tutorials/rmarkdown\\_websites\\_tutorial.html](http://www.emilyzabor.com/tutorials/rmarkdown_websites_tutorial.html)
- "Demonstration of utility functions for R Markdown reports in Word." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics R User Group. December 6, 2016.
- "Longitudinal data analysis." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics Masters Seminar Series. July 28, 2015.
- "Conditional survival." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics Masters Seminar Series. November 13, 2012.
- "Binary recursive partitioning with rpart and rpart.plot." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics Masters Seminar Series. August 23, 2011.

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## Presentations

### Invited

- "Etiologic heterogeneity in cancer." Cleveland Clinic Florida Cancer Grand Rounds, Weston, FL, January 3, 2020.
- "Statistical methods for the study of etiologic heterogeneity." Memorial Sloan Kettering Cancer Center Department of Epidemiology & Biostatistics, New York, NY, December 10, 2018.

- “Statistical methods for the study of etiologic heterogeneity.” Cleveland Clinic Department of Quantitative Health Sciences, Cleveland, OH, November 16, 2018.
- “Statistical methods for the study of etiologic heterogeneity.” NYU School of Medicine Department of Population Health, Division of Biostatistics, New York, NY, October 30, 2018.
- “Validity of a method for identifying etiologically heterogeneous disease subtypes.” Mayo Clinic Department of Health Sciences Research, Rochester, MN, September 25, 2018.
- “Teaching survival analysis to clinical collaborators.” R/Medicine Conference, New Haven, CT, September 7, 2018.
- “How long will I live? The statistics behind prognosis in cancer research.” New York R Conference, New York, NY, April 21, 2018.

### **Contributed**

- “Validity of a method for identifying disease subtypes that are etiologically heterogeneous.” Joint oral and poster presentation at the Joint Statistical Meetings, Vancouver, BC, Canada, July 31, 2018.
- “Validity of a method for identifying disease subtypes that are etiologically heterogeneous.” Eastern North American Region of the International Biometric Society, Atlanta, GA, March 27, 2018.
- “Dimension reduction in the study of etiologic heterogeneity, Oral presentation.” Joint Statistical Meetings, Baltimore, MD, August 1, 2017.
- “A comparison of statistical methods for the study of etiologic heterogeneity.” Poster presentation at the Society for Epidemiologic Research, Seattle, WA, June 20, 2017.
- “A comparison of statistical methods for the study of etiologic heterogeneity.” Poster presentation at the Eastern North American Region of the International Biometric Society, Washington DC, March 12, 2017.
- “A review of statistical methods for evaluating etiologic heterogeneity.” Third International Molecular Pathologic Epidemiology Meeting, Boston, MA, May 12, 2016.
- “Initial reactions to tobacco and risk of future regular tobacco use.” Poster presentation at the Third North American Congress of Epidemiology, Montreal, QC, Canada, June 23, 2011.
- “Association between periodontal disease, bacterial vaginosis, and sexual risk behaviours.” Oral presentation at the American Association for Dental Research Meetings, Washington DC, March 5, 2010.

## **Service and memberships**

### **Intramural**

- 2019 Statistician Contributor, 2nd Annual Advances in Early Lung Cancer Detection Conference Breakout Sessions.
- 2019 Faculty Assessor, Cleveland Clinic Lerner College of Medicine Clinical Research Block Presentations.
- 2018–2019 Founder and Chair, Memorial Sloan Kettering Department of Epidemiology & Biostatistics Coding Workshop. Introduced a monthly workshop with the goal of learning best practices for coding style and efficiency, through peer-review of code.

2016–2019 Member, Memorial Sloan Kettering Department of Epidemiology & Biostatistics R User Group

### **Extramural**

2019–Present Member, Council on Emerging and New Statisticians, Eastern North American Region of the International Biometric Society

2019–Present Editorial Board, European Urology

2018–Present Editorial Board of Statisticians, Journal of Urology. After four years serving as an *ad hoc* statistical reviewer, in January 2018 I joined a 10-member editorial board comprised of statisticians. In addition to performing statistical peer review, we have collaborated to establish statistical guidelines for the journal to give authors a reference when preparing manuscripts and to expedite the review process.

2018–Present *Ad hoc* reviewer, Journal of the American Statistical Association

2017–Present *Ad hoc* reviewer, Journal of Clinical Oncology

2016–2019 Board member, R-Ladies NYC. R-Ladies is a worldwide organization to promote gender equality in the R programming community. As a board member I assist in planning monthly meetings where women and gender minorities in our local R community present on topics related to their work in R. From January 2017–December 2018, I was the lead organizer of the quarterly R-Ladies NYC book club. In November 2018 I used R blogdown to write the R-Ladies NYC website (<http://www.rladiesnyc.org/>) and have served as the webmaster from November 2018–May 2019.

2013–2017 *Ad hoc* statistical reviewer, Journal of Urology

### **Memberships**

2017–Present Society for Epidemiologic Research, Member

2015–2020 American Society of Clinical Oncology, Member

2011–Present Eastern North American Region of the International Biometric Society, Member

2010–Present American Statistical Association, Member

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### **Honors and awards**

2017 Travel Awardee, American Statistical Association Section on Statistics in Epidemiology

2009 Outstanding Teaching Assistant Award, The University of Minnesota

2003 Ralph A. Leubben Prize for Anthropology, Grinnell College

2002–2003 Mortar Board Honor Society, Grinnell College