

AMY TRENTHAM-DIETZ, PhD, MS

Professor, Population Health Sciences
School of Medicine and Public Health
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PERSONAL STATEMENT

As a cancer epidemiologist, Dr. Trentham-Dietz's research is focused on cancer prevention, early detection and outcomes. She employs novel and traditional epidemiologic approaches in her studies complemented by methods deriving from health services research and simulation modeling. She has approached cancer prevention and detection by focusing on 1) modifiable factors including obesity, physical activity, and environmental factors to better understand cancer etiology and reveal avenues for prevention in women; 2) ductal carcinoma *in situ* (DCIS) of the breast which, often detected through mammography, is a non-obligate precursor for invasive breast cancer; and 3) simulation modeling of breast cancer to examine risk-based approaches to screening to improve the balance of benefits and harms of screening programs.

EDUCATION

PhD, Epidemiology

University of Wisconsin-Madison, Madison, Wisconsin

MS, Statistics with emphasis in Biostatistics

University of Wisconsin-Madison, Madison, Wisconsin

BS, Mathematics

University of Puget Sound, Tacoma, Washington

PRESENT POSITION/APPOINTMENTS

Associate Director of Population Sciences & Community Engagement

Carbone Cancer Center

University of Wisconsin-Madison

Professor

Department of Population Health Sciences

University of Wisconsin-Madison

PROFESSIONAL SOCIETY MEMBERSHIPS

1999-present	American Society of Preventive Oncology
1998-present	Society for Epidemiologic Research

HONORS AND AWARDS

Kellett Mid-Career Award, Office of the Vice Chancellor for Research, University of Wisconsin-Madison
Vilas Associates Award, Office of the Vice Chancellor for Research and Graduate Education, University of Wisconsin-Madison
Excellence in Teaching Award, Preventive Medicine Residency Program, UW-Madison School of Medicine and Public Health
Distinguished Service Award, American Society of Preventive Oncology
Article of the Year, American Journal of Epidemiology (1 of 10)
Research Committee Travel Award, Graduate School, UW-Madison
Engage Digital Media Award, UW-Madison
Teaching Academy Summer Institute Grant: Risk Taking in Teaching and Learning, UW-Madison
Mid-Career Women Faculty Professional Development Seminar, Association of American Medical Colleges, Scottsdale, Arizona
Teaching Academy Summer Institute Grant: Teaching and Learning in the New Millennium, UW-Madison
Medical Education Development and Leadership Program: Art and Science of Teaching, UW-Madison Medical School
Academic Staff Professional Development Award, UW-Madison
New Investigator's Workshop, American Society of Preventive Oncology
Phi Beta Kappa Honor Society, University of Puget Sound

RESEARCH SUPPORT (Selected)

Population Modeling to Optimize Equitable Ovarian Cancer Outcomes

Principal Investigator: A. Trentham-Dietz

Source: **Congressionally Directed Medical Research (Ovarian Cancer) Award, US Army, HT94252510224**

Total direct costs: \$1,000,000

Role: Principal Investigator
2025-2030

Comparative Modeling of Precision Breast Cancer Control Across the Translational Continuum

Principal Investigator: A. Trentham-Dietz, O. Alagoz, J. Mandelblatt, X. Huang, S. Lee, S. Plevritis, N. van Ravesteyn, and H. de Koning

Source: **NIH U01 CA253911**

Total direct costs: \$9,152,630
2020-2025

Coordinating Center for the Breast Cancer and the Environment Research Program

Principal Investigator: A. Trentham-Dietz

Source: **NIH U01 ES026127**

Total direct costs: \$3,000,000
2015-2022

Comparative Modeling: Informing Breast Cancer Control Practice and Policy

Principal Investigators: A. Trentham-Dietz, J. Mandelblatt, D. Berry, S. Lee, S. Plevritis, and H. de Koning

Source: **NIH/NCI CA199218**
Total direct costs: \$4,000,000 (UW: \$576,733)
2015–2020

Tumor Microenvironment and Progression to Invasion after a Diagnosis of Ductal Carcinoma *in situ*

Principal Investigator: A. Trentham-Dietz
Source: **Congressionally Directed Medical Research (Breast Cancer) Program Idea Award (Department of Defense), W81XWH-11-0214**
Total direct costs: \$155,622
2011-2014

Comparative Modeling: Informing Breast Cancer Control Practice and Policy

Principal Investigators: A. Trentham-Dietz, J. Mandelblatt, D. Berry, S. Lee, S. Plevritis, and H. de Koning
Source: **NIH U01 CA152958**
Total direct costs: \$4,908,145
2010-2015

Breast Carcinoma *in situ*: Predicting Risk and Outcomes

Principal Investigator: A. Trentham-Dietz
Source: **NIH R01 CA067264**
Total direct costs: \$2,440,427
2009-2015

Total Xenoestrogen Body Burden in Relation to Mammographic Density, A Marker of Breast Cancer Risk

Principal Investigator: A. Trentham-Dietz
Source: **Congressionally Directed Medical Research (Breast Cancer) Program Synergistic Idea Award (Department of Defense), W81XWH-07-1-0522**
Total direct costs: \$364,490
2007-2011

Breast Cancer *in situ*: Recurrence and Quality of Life

Principal Investigator: A. Trentham-Dietz
Source: **NIH R01 CA67264**
Total direct costs: \$1,250,000
2002-2008

PUBLICATIONS (Selected from 290)

^G Graduate student with thesis/dissertation committee including Dr. Trentham-Dietz.

Underlined names indicate graduate students with Dr. Trentham-Dietz as major advisor.

1. **Trentham-Dietz A**, Lawler TP, Gangnon RE, Dahlke AR, LoConte NK, Ward EC, Muganda CP, Warren Andersen S, Givens ML. Application of the Population Health Institute Model of Health for Identifying Cancer Catchment Area Priorities. *JCO Clin Cancer Inform.* Feb;10:e2500126, 2026.
2. Caswell-Jin JL, Sun LP, Munoz D, Lu Y, Li Y, Huang H, Hampton JM, Song J, Jayasekera J, Schechter C, Alagoz O, Stout NK, **Trentham-Dietz A**, Lee SJ, Huang X, Mandelblatt JS, Berry

- DA, Kurian AW, Plevritis SK. Analysis of Breast Cancer Mortality in the US-1975 to 2019. *JAMA*. Jan 16;331(3):233-241, 2024.
3. Goddard KAB, Feuer EJ, Mandelblatt JS, Meza R, Holford TR, Jeon J, Lansdorp-Vogelaar I, Gulati R, Stout NK, Howlader N, Knudsen AB, Miller D, Caswell-Jin JL, Schechter CB, Etzioni R, **Trentham-Dietz A**, Kurian AW, Plevritis SK, Hampton JM, Stein S, Sun LP, Umar A, Castle PE. Estimation of Cancer Deaths Averted From Prevention, Screening, and Treatment Efforts, 1975-2020. *JAMA Oncol*. Feb 1;11(2):162-167, 2025.
 4. **Trentham-Dietz A**, Chapman CH, Jayasekera J, Lowry KP, Heckman-Stoddard BM, Hampton JM, Caswell-Jin JL, Gangnon RE, Lu Y, Huang H, Stein S, Sun L, Gil Quessep EJ, Yang Y, Lu Y, Song J, Muñoz DF, Li Y, Kurian AW, Kerlikowske K, O'Meara ES, Sprague BL, Tosteson ANA, Feuer EJ, Berry D, Plevritis SK, Huang X, de Koning HJ, van Ravesteyn NT, Lee SJ, Alagoz O, Schechter CB, Stout NK, Miglioretti DL, Mandelblatt JS. Collaborative Modeling to Compare Different Breast Cancer Screening Strategies: A Decision Analysis for the US Preventive Services Task Force. *JAMA*. Jun 11;331(22):1947-1960, 2024.
 5. Knudsen AB, **Trentham-Dietz A**, Kim JJ, Mandelblatt JS, Meza R, Zauberg AG, Castle PE, Feuer EJ. Estimated US Cancer Deaths Prevented With Increased Use of Lung, Colorectal, Breast, and Cervical Cancer Screening. *JAMA Netw Open*. Nov 1;6(11):e2344698, 2023. Erratum in: *JAMA Netw Open*. Dec 1;6(12):e2351369, 2023.
 6. Lawler T, Warren Andersen S, **Trentham-Dietz A**, Sethi AK, Tevaarwerk AJ, Malecki KMC, Litzelman K, Pophali PA, Gangnon RE, Hampton JM, Kwekkeboom K, LoConte NK. Change in alcohol consumption during the Covid-19 pandemic and associations with mental health and financial hardship: results from a survey of Wisconsin patients with cancer. *J Cancer Surviv*. 2023 Nov 28. Epub ahead of print.
 7. **Trentham-Dietz A**, Corley DA, Del Vecchio NJ, Greenlee RT, Haas JS, Hubbard RA, Hughes AE, Kim JJ, Kobrin S, Li CI, Meza R, Neslund-Dudas CM, Tiro JA. Data gaps and opportunities for modeling cancer health equity. *J Natl Cancer Inst Monogr*. 62:246-254, 2023.
 8. Ko LK, Scarinci IC, Bouchard EG, Drake BF, Rodriguez EM, Chen MS, Kepka D, Kruse-Diehr AJ, Befort C, Shannon J, Farris PE, **Trentham-Dietz A**, Onega T. A Framework for Equitable Partnerships to Promote Cancer Prevention and Control in Rural Settings. *JNCI Cancer Spectr*. 2022 Mar 2;6(2):pkac017.
 9. Lowry KP, Geuzinge HA, Stout NK, Alagoz O, Hampton J, Kerlikowske K, de Koning HJ, Miglioretti DL, van Ravesteyn NT, Schechter C, Sprague BL, Tosteson ANA, **Trentham-Dietz A**, Weaver D, Yaffe MJ, Yeh JM, Couch FJ, Hu C, Kraft P, Polley EC, Mandelblatt JS, Kurian AW, Robson ME; Breast Working Group of the Cancer Intervention and Surveillance Modeling Network (CISNET), in collaboration with the Breast Cancer Surveillance Consortium (BCSC), and the Cancer Risk Estimates Related to Susceptibility (CARRIERS) Consortium. Breast Cancer Screening Strategies for Women With ATM, CHEK2, and PALB2 Pathogenic Variants: A Comparative Modeling Analysis. *JAMA Oncol*. 2022 Apr 1;8(4):587-596.
 10. **Trentham-Dietz A**, Bird JE, Gangnon RE, Lindberg SM, Madison T, Malecki KMC, Shull JD, Vredevelde C, Rolland B. Coordinating Centers as a Strategy for Accelerating Cancer Epidemiology Consortia: Best Practices. *Curr Epidemiol Rep*. 2022;9(1):1-9.

11. Alagoz O, Lowry KP, Kurian AW, Mandelblatt JS, Ergun MA, Huang H, Lee SJ, Schechter CB, Tosteson ANA, Miglioretti DL, **Trentham-Dietz A**, Nyante SJ, Kerlikowske K, Sprague BL, Stout NK. Impact of the COVID-19 Pandemic on Breast Cancer Mortality in the US: Estimates From Collaborative Simulation Modeling. *J Natl Cancer Inst.* 2 Nov; 113(11): 1484-1494, 2021.
12. Chapman CH, Schechter CB, Cadham CJ, **Trentham-Dietz A**, Gangnon RE, Jagsi R, Mandelblatt JS. Identifying Equitable Screening Mammography Strategies for Black Women in the United States Using Simulation Modeling. *Ann Intern Med.* Dec;174(12):1637-1646, 2021.
13. **Trentham-Dietz A**, Alagoz O, Chapman C, Huang X, Jayasekera J, van Ravestein NT, Lee SJ, Schechter CB, Yeh JM, Plevritis SK, Mandelblatt JS; Breast Working Group of the Cancer Intervention and Surveillance Modeling Network (CISNET). Reflecting on 20 years of breast cancer modeling in CISNET: Recommendations for future cancer systems modeling efforts. *PLoS Comput Biol.* 17 Jun; 17(6): e1009020, 2021.
14. **Trentham-Dietz A**, Chapman CH, Bird J, Gangnon RE. Recent Changes in the Patterns of Breast Cancer as a Proportion of All Deaths According to Race and Ethnicity. *Epidemiology.* 1 Nov; 32(6): 904-913, 2021.
15. Lowry KP, **Trentham-Dietz A**, Schechter CB, Alagoz O, Barlow WE, Burnside ES, Conant EF, Hampton JM, Huang H, Kerlikowske K, Lee SJ, Miglioretti DL, Sprague BL, Tosteson ANA, Yaffe M, Stout NK. Long-term outcomes and cost-effectiveness of breast cancer screening with digital breast tomosynthesis in the United States. *J Natl Cancer Inst* Jun 1; 112(6): 582-589, 2020.
16. Terry MB, Michels KB, Brody JG, Byrne C, Chen S, Jerry DJ, Malecki KMC, Martin MB, Miller RL, Neuhausen SL, Silk K, **Trentham-Dietz A** for the Breast Cancer and the Environment Research Program. Environmental exposures during windows of susceptibility for breast cancer: a framework for prevention research. *Breast Cancer Res* Aug 21(1): 96, 2019.
17. Alagoz O, Ergun MA, Cevik M, Sprague BL, Fryback DG, Gangnon RE, Hampton JM, Stout NK, **Trentham-Dietz A**. The University of Wisconsin Breast Cancer epidemiology simulation Model: An Update. *Med Decis Making* 38(Supple 1): 99s-111s, 2018.
18. Gangnon RE, Stout NK, Alagoz O, Hampton JM, Sprague BL, and **Trentham-Dietz A**. Contribution of Breast Cancer to overall Mortality for US Women. *Med Decis Making* 38(Supple 1): 24s-31s, 2018.
19. Jerry DJ, Shull JD, Hadsell DL, Rijnkels M, Dunphy KA, Schneider SS, Vandenberg LN, Majhi PD, Byrne C, **Trentham-Dietz A**. Genetic variation in sensitivity to estrogens and breast cancer risk. *Mamm Genome* 29(1-2): 24-37, 2018.
20. Jewett PI⁶, Gangnon RE, Elkin E, Hampton JM, Jacobs EA, Malecki K, LaGro J, Newcomb PA, **Trentham-Dietz A**. Geographic access to mammography facilities and frequency of mammography screening. *Ann Epidemiol.* Feb;28(2):65-71, 2018.
21. Shull J, Dennison K, Chack A, **Trentham-Dietz A**. Rat models of 17beta-estradiol-induced mammary cancer reveal novel insights into breast cancer etiology and prevention. *Physiol Genomics* 50(3): 215-234, 2018.

22. **Trentham-Dietz A**, Ergun MA, Alagoz O, Stout NK, Gangnon RE, Hampton JM, Dittus K, James TA, Vacek PM, Herschorn SD, Burnside ES, Tosteson ANA, Weaver DL, Sprague BL. Comparative effectiveness of incorporating a hypothetical DCIS prognostic marker into breast cancer screening. *Breast Cancer Res Treat* Feb; 168(1): 229-239, 2018.
23. Shiyanbola OO^G, Arao RF, Miglioretti DL, Sprague BL, Hampton JM, Stout NK, Kerlikowske K, Braithwaite D, Buist DSM, Egan KM, Newcomb PA, **Trentham-Dietz A**. Emerging Trends in Family History of Breast Cancer and Associated Risk. *Cancer Epidemiol Biomarkers Prev*. Dec;26(12):1753-1760, 2017.
24. Hart V, Sprague BL, Lakoski SG, Hampton JM, Newcomb PA, Gangnon RE, **Trentham-Dietz A**. Trends in health related quality of life following a diagnosis of ductal carcinoma in situ. *J Clin Oncology*. 34(12): 1323-9, 2016.
25. Khadanga S, Lakoski SG, Harv V, Sprague BL, Ba Y, Hampton JM, Higgins ST, Ades PA, Newcomb PA, **Trentham-Dietz A**. Partnership status and socioeconomic factors in relation to health behavior changes after a diagnosis of ductal carcinoma in situ. *Cancer Epidemiol Biomarkers Prev* 25(1):76-82, 2016. PMID: PMC4713311.
26. Shiyanbola OO^G, Sprague BL, Hampton JM, Dittus K, James TA, Herschorn S, Gangnon RE, Weaver DL, **Trentham-Dietz A**. Emerging trends in surgical and adjuvant radiation therapies among women diagnosed with ductal carcinoma in situ. *Cancer*. 2016 Sep 15;122(18):2810-8. PMID: PMC5014675.
27. **Trentham-Dietz A**, Kerlikowske K, Stout NK, Miglioretti DL, Schechter CB, Ergun MA, van den Broek JJ, Alagoz O, Sprague BL, van Ravesteyn NT, Near AM, Gangnon RE, Hampton JM, Chandler Y, de Koning HJ, Mandelblatt JS, Tosteson AN; Breast Cancer Surveillance Consortium and Cancer Intervention and Surveillance Modeling Network. Tailoring Breast Cancer Screening Intervals by Breast Density and Risk for Women Aged 50 Years or Older: Collaborative Modeling of Screening Outcomes. *Ann Intern Med*. 165(10): 700-712, 2016.
28. Gangnon RE, Sprague BL, Stout NK, Alagoz O, Weedon-Fekjaer H, Holford TR, **Trentham-Dietz A**. The contribution of mammography screening to breast cancer incidence trends in the United States: an updated age-period-cohort model. *Cancer Epidemiol Biomarkers Prev* 24(6): 905-12, 2015.
29. Sprague BL, Gangnon RE, Hampton JM, Egan KM, Titus LJ, Kerlikowske K, Remington PL, Newcomb PA, **Trentham-Dietz A**. Variation in breast cancer risk associations by method of detection: results from a series of case-control studies. *Am J Epidemiol* 181(12): 956-69, 2015. *Selected as an Article of the Year (1 of 10)*.
30. Munsell MF, Sprague BL, Berry DA, Chisholm G, **Trentham-Dietz A**. Body mass index and cancer risk according to postmenopausal estrogen-progestin use and hormone receptor status. *Epidemiologic Rev* 36(1): 114-36, 2014. (Highly cited paper, in the Web of Science Core Collection)
31. **Trentham-Dietz A**, Sprague BL, Hampton JM, Miglioretti DL, Nelson HD, Titus LJ, Egan KM, Remington PL, Newcomb PA. Modification of breast cancer risk according to age and menopausal status: A combined analysis of five population-based case-control studies.

Breast Cancer Res Treat 145(1): 165-75, 2014.

32. **Trentham-Dietz A**, Newcomb PA, Hampton JM. Breast cancer risk factors and second primary malignancies among women with breast cancer. *Breast Cancer Res Treat* 105(2): 195-207, 2007.
33. **Trentham-Dietz A**, Nichols NB, Newcomb PA, Hampton JM. Weight change and risk of endometrial cancer. *Int J Epidemiology* 35(1): 151-158, 2006.
34. **Trentham-Dietz A**, Newcomb PA, Storer BE, Remington PL. Risk factors for carcinoma *in situ* of the breast. *Cancer Epidemiol Biomarkers Prev* 9:697-703, 2000.
35. **Trentham-Dietz A**, Newcomb PA, Egan KM, Titus-Ernstoff L, Baron JA, Storer BE, Stampfer M, Willett WC. Weight change and risk of postmenopausal breast cancer (United States). *Cancer Causes Control* 11:533-542, 2000.
36. **Trentham-Dietz A**, Newcomb PA, Storer BE, Longnecker MP, Baron J, Greenberg ER, Willett WC. Body size and risk of breast cancer. *Am J Epidemiol* 145:1011-1019, 1997.
37. **Trentham-Dietz A**, Newcomb PA, Marcus PM, Storer BE. The association of body size and large bowel cancer risk in Wisconsin women. *Cancer Causes Control* 6:30-36, 1995.

INVITED RESEARCH PRESENTATIONS (Selected)

January 2023	<i>Collaborative Modeling of the Population Impact of Breast Cancer Screening: Who Benefits from Current Screening Policies?</i> Epidemiology Seminar, Fred Hutchinson Cancer Center, Seattle, WA.
February 2019	<i>Successes and Challenges to Population Modeling of Breast Cancer in the Cancer Intervention and Surveillance Modeling Network (CISNET)</i> , Workshop to Facilitate Cancer Systems Epidemiology Research, John Edward Porter Neuroscience Research Center, Bethesda, MD.
February 2019	<i>Global Study Concludes No Level of Alcohol is Safe: True for Breast Cancer?</i> Nutritional Sciences Seminar, Madison, WI.
October 2017	<i>Breast Density, Screening, and Prevention</i> . Community Education Event, University of Massachusetts, Amherst, MA.
October 2016	<i>Obesity and Breast Cancer Risk</i> . Speaker Forum, Wisconsin Breast Cancer Coalition. Milwaukee, WI.

PROFESSIONAL SERVICE (Selected)

2023-present	Editorial Board Member, <i>Preventive Oncology & Epidemiology</i>
2020,2024,2025	ad hoc Reviewer, Cancer Center Support Grants, NIH
2011-2015	Study section member, EPIC (Epidemiology of Cancer) Study Section, NIH
2009-present	Editorial Board Member, <i>Cancer Epidemiology Biomarkers & Prevention</i>
2007-2020	<i>ex officio</i> , Annual Meeting Program Planning Committee, American Society for Preventive Oncology