

**CURRICULUM VITAE**  
**Hazel B. Nichols, Ph.D.**

2104F McGavran-Greenberg Hall, Campus Box #7435  
135 Dauer Drive, Chapel Hill, NC 27599-7435  
Phone: (919) 966-7456  
Email: hazel.nichols@unc.edu

**EDUCATION**

2011	PhD	Epidemiology, Johns Hopkins University
2003	SM	Epidemiology, Harvard University
2000	BS	Evolutionary Biology and Ecology, Tulane University

**PROFESSIONAL EXPERIENCE**

2019-	Associate Professor with tenure, Department of Epidemiology, University of North Carolina Gillings School of Global Public Health
2014-2019	Assistant Professor, Department of Epidemiology, University of North Carolina Gillings School of Global Public Health
2018-	Division Head, Cancer Survivors' Health Division University of North Carolina Institute for Environmental Health Solutions
2014-	Member, Lineberger Comprehensive Cancer Center University of North Carolina at Chapel Hill
2011-2013	Research Fellow, Epidemiology Branch, National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health, Research Triangle Park, NC
2009-2010	Research Assistant, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
2009-2010	Research Assistant, RTI International, Research Triangle Park, NC
2009	Summer Fellow, Radiation Epidemiology Branch, Division of Cancer Epidemiology & Genetics, National Cancer Institute (NCI), National Institutes of Health, Bethesda, MD
2006-2007	Associate Researcher, Cancer Epidemiology Group, University of

Wisconsin Paul P. Carbone Comprehensive Cancer Center, Madison, WI

2003-2006 Assistant Researcher, Cancer Epidemiology Group, University of Wisconsin Paul P. Carbone Comprehensive Cancer Center, Madison, WI

2004-2005 Project Director, Survey Research Shared Service, University of Wisconsin Paul P. Carbone Comprehensive Cancer Center, Madison, WI

2000-2001 Research Associate, New England Centenarian Study, Beth Israel Deaconess Medical Center/Harvard Division on Aging, Boston, MA

## HONORS

2014 Early Career Investigator Award, HMO Research Network Annual Conference, Phoenix, AZ

2013 Electra Paskett Annual Scholarship Award to participate in the 37<sup>th</sup> Annual Meeting of the American Society of Preventive Oncology, Memphis, TN

2010 AACR Translational Research Scholars scholarship to participate in the 33<sup>rd</sup> Annual CTRC-AACR San Antonio Breast Cancer Symposium

2010 Doctoral Thesis Research Fund Award  
Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health

2010 Travel and registration award to participate in the New Investigators Workshop American Society of Preventive Oncology Annual Meeting, Bethesda, MD

2009-2011 Cancer Epidemiology, Prevention and Control Training Fellowship  
Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health

2009 Cancer Research Training Award  
National Cancer Institute, Division of Cancer Epidemiology and Genetics

2009 Carol Eliasberg Martin Scholarship in Cancer Prevention  
Johns Hopkins Bloomberg School of Public Health

2009 Travel and registration award to participate in the Student Dissertation Workshop Society for Epidemiologic Research Annual Meeting, Anaheim, CA

2008 Harvey M. Meyerhoff Fellowship in Cancer Prevention  
Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health

2007-2008 Mary B. Meyer Scholar, Department of Epidemiology  
Johns Hopkins Bloomberg School of Public Health

- 2006 Professional Development and Recognition Grant to participate in the Annual Meeting of the American Society of Preventive Oncology, University of Wisconsin, Madison
- 2004 Executive Education Grant to enroll in the School of Business course, “Project Management: Planning, Scheduling and Control”  
University of Wisconsin, Madison

## MEMBERSHIPS

American Association for Cancer Research, Associate Member 2010-2013  
 American College of Epidemiology, Associate Member 2009-2013  
 American Society of Clinical Oncology, Doctoral Scientist Membership 2015  
 American Society of Preventive Oncology, 2008-  
 Society for Epidemiologic Research, 2005-2017

## BIBLIOGRAPHY

*Original research papers* \* Denotes student work for which H. Nichols was the primary mentor  
 † Denotes authors who contributed equally as first or last authors

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2. Schoemaker MJ†, **Nichols HB**†, Wright LB, Brook MN, Jones ME, O’Brien K, Adami H, Baglietto L, Bernstein, L, Bertrand KA, Boutron-Ruault M, Chen Y, Connor AE, Dossus L, Eliassen HA, Giles GG, Gram IT, Hankinson SE, R, Key TJ, Kirsh VA, Kitahara CM, Larsson SC, Linet M, Ma H, Milne RL, Kotaro Ozasa K, Palmer JR, Riboli E, Rohan TE, Sacerdote C, Sadakane A, Sund M, Tamimi RM, Trichopoulou A, Ursin G, Visvanathan K, Weiderpass E, Willett WC, Wolk A, -Jacquotte A, Sandler DP†, Swerdlow AJ†. Adult weight change and premenopausal breast cancer risk: a prospective pooled analysis of data from 628 463 women. *Int J Cancer*. 2020. *In press*.
3. Anderson C, **Nichols HB**. Trends in late mortality among adolescent and young adult cancer survivors. *J Natl Cancer Inst*. 2019. *In press*.
4. Zhang D\*, **Nichols HB**, Troester M, Cai J, Bensen J, Sandler DP. Tea consumption and breast cancer risk in a cohort of women with family history of breast cancer. *Int J Cancer* 2019. *In press*.

5. Anderson C\*, Baggett CD, Rao C, Moy L, Kushi LH, Chao C, **Nichols HB**. Validity of state cancer registry treatment information for adolescent and young adult women. *Cancer Epidemiology*. 2019. *In press*.
6. Anderson C\*, Kaddas H, Ou J, Ramsay J, Trogdon J, Kirchhoff A†, Nichols HB†. Hospitalization after adolescent and young adult (AYA) cancer: A population-based study in Utah. *Cancer Epidemiol Biomarkers Prev*. 2019. *In press*.
7. Gast KC, Carthcart-Rake EJ, Norman A, Eshraghi L, Obidegwu N, **Nichols HB**, Rosenberg S, Su HI, Stewart E, Couch F, Vachon C, Ruddy KJ. Regimen-specific rates of chemotherapy-related amenorrhea in breast cancer survivors. *JNCI Cancer Spectrum*. 2019. *In press*.
8. Kresovich JK, Harmon QE, Xu Z, Nichols HB, Sandler DP, Taylor JA. Reproduction, DNA methylation and biological age. *Hum Reprod*. 2019 *In press*.
9. Anderson C\*, Smitherman AB, Meernik C, Edwards T, Deal A, Cannizzaro N, Baggett CD, Chao C, **Nichols HB**. Patient-provider discussions about clinical trial participation and reasons for nonparticipation among adolescent and young adult women with cancer. *J Adolesc Young Adult Oncol*. 2019 Sep 23. PMID: 31545129
10. Cuthbertson C, Tan X, Heiss G, Kucharska-Newton A, **Nichols HB**, Kubota Y, Evenson K. Associations of leisure-time physical activity and television viewing with life expectancy free of nonfatal cardiovascular disease: The ARIC Study. *J Am Heart Assoc*. 2019 Sep 17; 8(18):e012657. PMID: 31495291
11. Anderson C\*, Lund JL, Weaver MA, Wood WA, Olshan AF, **Nichols HB**. Disparities in mortality from noncancer causes among adolescents and young adults with cancer. *Cancer Epidemiol Biomarkers Prev*. 2019 Sep; 28(9):1417-1426. PMID: 31209147
12. Niehoff NM, Gammon MD, Keil AP, **Nichols HB**, Engel LS, Sandler DP, White AJ. Airborne mammary carcinogens and breast cancer risk in the Sister Study. *Environment International*. 2019 Sep; 130:104897. PMID: 312265564
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14. Hawkins Bressler L, Mersereau J, Anderson C, Rodriguez J, Hodgson E, Weinberg C, Sandler DP, **Nichols HB**. Fertility-related experiences after breast cancer diagnosis in the NIEHS Sister and Two Sister Studies. *Cancer*. 2019 Aug 1;125(15):2675-2683 PMID: 31012960
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Key TJ, Krogh V, **Nichols HB**, Sandler DP, Schoemaker MJ, Sluss PM, Sund M, Swerdlow AJ, Visvanathan K, Zeleniuch-Jacquotte A, Liu M. Breast cancer risk prediction in women aged 35-50 years: Impact of including sex hormone concentrations in the Gail model. *Breast Cancer Res.* 2019 Mar 19;21(1):42. doi: 10.1186/s13058-019-1126-z. PMID: 30890167

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the AMBER Consortium. *Cancer Epidemiol Biomarkers Prev.* 2017 Dec;26(12):1722-1729. PMID: 28903991 PMCID: PMC5903207

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53. Anderson C<sup>†\*</sup>, Islam J<sup>†\*</sup>, Hodgson ME, Sabatino SA, Rodriguez JL, Lee CN, Sandler DP, **Nichols HB**. Long-term satisfaction and body image after contralateral prophylactic mastectomy. *Annals of Surgical Oncology*. 2017 Jun;24(6):1499-1506. PMID: 28058563
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82. Trentham-Dietz A, **Nichols HB**, Hampton JM, Newcomb PA. Weight change and risk of endometrial cancer. *Int J Epidemiol*. 2006 Feb; 35(1):151-8.

83. Trentham-Dietz A, **Nichols HB**, Remington PL, Yanke L, Hampton JM, Newcomb PA, Love RR. Correlates of age at menarche among 6<sup>th</sup> grade students in Wisconsin. *WMJ*. 2005; 104(7):65-69.
84. **Nichols HB**, Trentham-Dietz A, Hampton J, Newcomb PA. Oral contraceptive use, reproductive factors and colorectal cancer risk: Findings from Wisconsin. *Cancer Epidemiol Biomarkers Prev*. 2005 May; 14(5):1212-1218.
85. **Nichols HB**, Trentham-Dietz A, Love R, Hampton J, Anh PTH, Allred DC, Mohsin SK, Newcomb PA. Differences in breast cancer risk factors by tumor marker subtypes among premenopausal Vietnamese and Chinese women. *Cancer Epidemiol Biomarkers Prev*. 2005 Jan; 14(1):41-47.
86. **Nichols HB**, Harlow BL. Childhood abuse and risk of smoking onset. *J Epidemiol Community Health*. 2004 May; 58(5):402-406.
87. Evert J, Lawler E, **Bogan H**, Perls T. Morbidity profiles of centenarians: Survivors, delayers, and escapers. *J Gerontol A Biol Sci Med Sci*. 2003; 58: M232-M237.
88. Perls T, Wilmoth J, Levenson R, Drinkwater M, **Bogan H**, Joyce E, Brewster S, Kunkel L, Puca A. Life-long sustained mortality advantage of siblings of centenarians. *Proc Natl Acad Sci USA*. 2002 Jun 11; 99(12):8442-7.

*Other publications*

89. **Nichols HB**<sup>†</sup>, Schoemaker MJ<sup>†</sup>, Wright LB, McGowan C\*, Brook MN, McClain KM\*, Jones ME, Adami H, Agnoli C, Baglietto L, Bernstein L, Bertrand KA, Blot WJ, Boutron-Ruault M, Butler L, Chen Y, Doody MM, Dossus L, Eliassen AH, Giles GG, Gram IT, Hankinson SE, Hoffman-Bolton J, Kaaks R, Key TJ, Kirsh V, Kitahara CM, Koh W, Larsson SC, Lund E, Ma H, Merritt MA, Milne RL, Carmen Navarro C, Overvad O, Ozasa K, Palmer JR, Peeters PH, Riboli E, Rohan TE, Sadakane A, Sund M, Tamimi RM, Trichopoulos A, Vatten L, Visvanathan K, Weiderpass E, Willett WC, Wolk A, Zeleniuch-Jacquotte A, Zheng W, Sandler DP, Swerdlow AJ. The Premenopausal Breast Cancer Collaboration: A pooling project of studies participating in the National Cancer Institute Cohort Consortium. *Cancer Epidemiol Biomarkers Prev*. 2017 Sep;26(9):1360-1369. PMID: 28600297 PMCID: PMC5581673
90. Bradshaw PT, **Nichols HB**, Caan BJ. Re: Weight Gain After Breast Cancer Diagnosis and All-Cause Mortality: Systematic Review and Meta-Analysis. *J Natl Cancer Inst*. 2016 Mar 1; 108(4). PMID: 26933008 PMCID: PMC6281042
91. Buist DSM, Field TS, Banegas MP, Clancy HA, Doria-Rose P, Epstein MM, Greenlee RT, McDonald S, **Nichols HB**, Pawloski P, Kushi, L. Training in the conduct of population-based multi-site and multi-disciplinary studies: the Cancer Research

Network's Scholars program. J Cancer Educ. 2015 Oct 22. PMID: 26490950  
PMCID: PMC4902776

92. Ochs-Balcom HM, Phillips LS, **Nichols HB**, Martinez E, Thompson B, Ojeifo J, Rebbeck TR. Building a funded research program in cancer health disparities: Considerations for young investigators. Cancer Epidemiol Biomarkers Prev. 2015 May. 24(5):882-5. PMID: 25873369 PMCID: PMC4418019
93. **Nichols HB**, Sprague BL, Buist DSM, Erwin DO, Leach CR, Patrick H. Careers in cancer prevention: What you may not see from inside your academic department- A report from the American Society of Preventive Oncology's Junior Members Interest Group. Cancer Epidemiol Biomarkers Prev. 2012 Aug. 21(8):1393-5

*Manuscripts in revision*

Roberson ML, **Nichols HB**, Olshan AO, Troester MA, Robinson WR. Premenopausal gynecologic surgery and survival among black and white women with breast cancer.

Black KZ, Eng E, Schaal JC, Johnson L, **Nichols HB**, Ellis KR, Rowley DL. The other side of through: Young breast cancer survivors' spectrum of sexual and reproductive health needs from diagnosis to survivorship.

Wang T, Bradshaw PT, Moorman PG, Nyante SJ, **Nichols HB**, Shantakumar S, Parada H, Khankari NK, Terry MB, Teitelbaum SL, Neugut AI, Gammon MD. Menopausal hormone therapy use and long-term all-cause and cause-specific mortality in the Long Island Breast Cancer Study Project.

*Submitted manuscripts*

Chollet-Hinton L, Lund JL, Olshan AF, **Nichols HB**, Anders CK, Troester MA. Increased distant stage breast cancer among young women over time: etiology or technology?

Niehoff NM, Gammon MD, Keil AP, **Nichols HB**, Engel LS, Taylor JA, White AJ, Sandler DP. Hazardous air pollutants and telomere length in the Sister Study.

Cuthbertson C, **Nichols HB**, Tan X, Kuscharska-Newton A, Heiss G, Joshi CE, Platz EA, Evenson KR. Associations of leisure-time physical activity and television viewing with life expectancy at age 50 free of cancer: The ARIC Study.

Clendenen TV<sup>†</sup>, Ge W<sup>†</sup>, Koenig KL, Afanasyeva Y, Agnoli C, Bertone-Johnson E, Brinton LA, Darvishian F, Dorgan JF, Eliassen AH, Falk RT, Hallmans G, Hankinson SE, Hoffman-Bolton J, Key TJ, Krogh V, **Nichols HB**, Sandler DP, Schoemaker MJ, Sluss PM, Sund M, Swerdlow AJ, Visvanathan K, Liu M<sup>†</sup>,

Zeleniuch-Jacquotte A<sup>†</sup>. Correlates of circulating anti-Müllerian hormone concentration in premenopausal women.

Wogu AF, Zhao S, **Nichols HB**, Cai J. Proportional subdistribution hazards model for competing risks in case-cohort studies.

**Nichols HB**, Graff M, Bensen JT, Lunette KL, O'Brien KM, Troester MA, Williams LA, Young K, Hong C, Yao S, Haiman CA, Ruiz-Narváez EA, Ambrosone CB, Palmer JR, Olshan AF. Genetic variants in anti-Müllerian hormone-related genes and breast cancer risk: Results from the AMBER consortium.

Benefield HC, Reeder-Hayes KE, **Nichols HB**, Calhoun BC, Love MI, Kirk EL, Geradts J, Hoadley KA, Cole SR, Earp HS, Olshan AF, Carey LA, Perou CM, Troester MA. Outcomes of hormone-receptor positive, HER2-negative breast cancers by race and tumor biological features.

Wogu A, Zhao S, **Nichols HB**, Cai J. Proportional Subdistribution Hazards Model for Competing Risks in Case-Cohort Studies.

*Invited talks*

Cancer and parenthood. National Cancer Institute Cancer Prevention Fellowship Program's Cancer Prevention and Control Colloquia Series. Rockville, MD, Feb 4, 2020

Breast cancer risk after childbirth. Annual Conference of the Foundation for Reproductive Medicine. New York, NY, Nov 22, 2019

Cancer at reproductive ages. Obstetrics & Gynecology Grand Rounds, University of Utah, Salt Lake City, UT, May 30, 2019

Breast cancer in reproductive age women. Memorial Sloan Kettering Cancer Center, New York, NY, May 23, 2019

Childbirth after adolescent and young adult cancer in North Carolina. Pediatrics Grand Rounds. University of Minnesota, Minneapolis, MN, February 27, 2019

Recent childbirth and breast cancer risk. The Center for Human Reproduction, New York, NY. February 5, 2019.

Fertility after cancer in a population-based study. Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, May 8, 2018.

Reproductive health after Adolescent and Young Adult (AYA) Cancer. Columbia University, New York, NY, April 20, 2018.

Cancer and pregnancy. North Carolina State University. Raleigh, NC, February 7, 2017.

Breast cancer and women's reproductive health. National Institute of Environmental Health Sciences. Research Triangle Park, NC, June 22, 2015.

Breast cancer and the reproductive lifespan. Obstetrics & Gynecology Grand Rounds, University of North Carolina Chapel Hill, NC, February 18, 2015.

Breast cancer prevention among high risk women. University of Wisconsin-Madison, February 17, 2014.

Cancer risk reduction strategies and long term health. University of North Carolina Chapel Hill, NC, February 13, 2013.

Premenopausal hormonal exposures and breast cancer. National Institute of Child Health & Human Development, Rockville, MD, March 5, 2012.

Bilateral oophorectomy, estrogen therapy and postmenopausal breast cancer. National Institute of Environmental Health Sciences, Research Triangle Park, NC, April 27, 2011.

Gynecologic surgery, estrogen therapy, and postmenopausal breast cancer. Morgan State University, Baltimore, MD, February 9, 2011.

*Oral presentations from submitted abstracts*

Meernik C\*, Sandler DP, Peipins LA, Hodgson ME, Wheeler SB, Weinberg CR, **Nichols HB**. Employment disruption after breast cancer diagnosis and financial burden in the Sister and Two Sister Studies. Annual meeting of the American Society of Preventive Oncology, March 2020.

Anderson C, **Nichols HB**. Trends in late mortality among adolescent and young adult cancer survivors. Annual meeting of the American Society of Preventive Oncology, March 2020.

Luke B, Brown MB, Wantman E, Meyer RE, Foresteri N, Watkins S, Yazdy M, Browne M, Fisher S, Canfield MA, Ethen M, **Nichols HB**, Oehninger S, Doody K. Risk of birth defects by method of conception: A U.S. study in four states. Annual meeting of the American Society for Reproductive Medicine; Denver, CO; 2018 Oct.

Anderson C\*, Smitherman AB, **Nichols HB**. Mortality disparities after adolescent and young adult cancer. Annual Meeting of the American Society of Preventive Oncology. New York, NY 2018 Cancer Epidemiol Biomarkers Prev.

**Nichols HB**, Anderson C, Black KZ, Engel S, Mersereau J. Birth rates after adolescent and young adult cancer in North Carolina, 2000-2014. Nichols HB, Anderson C,

Black KZ, Engel S, Mersereau J. Annual Meeting of the American Society of Preventive Oncology. Seattle, WA 2017 Cancer Epidemiol Biomarkers Prev.

Anderson C\*, Engel S, Black KZ, Mersereau J, **Nichols HB**. Birth outcomes after AYA cancer diagnosis. Global AYA Cancer Congress. Edinburgh, Scotland; 2016 Dec.

White AJ, D'Aloisio AA, **Nichols HB**, DeRoo LA, Sandler DP. Active smoking and environmental tobacco smoke exposure during potential windows of susceptibility in relation to breast cancer. Annual Meeting of the American Society of Preventive Oncology. Memphis, TN; 2016 Cancer Epidemiol Biomarkers Prev.

**Nichols HB**, Baird DD, Stanczyk FZ, Steiner AZ, Troester MA, Whitworth KW, Sandler DP. Anti-Müllerian hormone concentrations in premenopausal women and breast cancer risk. Annual Meeting of the Society for Epidemiologic Research. Denver, CO; 2015 Jun 17.

**Nichols HB**, Bowles EA, Tran D, Buist DS. Trends in estrogen receptor testing and tamoxifen initiation after ductal carcinoma *in situ* (DCIS) during 1996-2011. Annual Meeting of the HMO Research Network. Long Beach, CA; 2015 Mar 13.

**Nichols HB**, DeRoo L, Scharf D, Sandler DP. Discontinuation of tamoxifen for primary prevention of breast cancer in the Sister Study observational cohort. Annual Meeting of the HMO Research Network. Phoenix, AZ; 2014 Apr 1.

**Nichols HB**, Sandler DP, DeRoo L, Xu Z, Taylor J. Hormonal risk factors for breast cancer and DNA methylation. Annual Meeting of the American Society of Preventive Oncology. Memphis, TN; 2013 March 11. Abstract published in: Cancer Epidemiol Biomarkers Prev. 22(3): 471-2.

**Nichols HB**, DeRoo LA, Sandler DP. Characteristics associated with tamoxifen use for chemoprevention after age 50: Results from the Sister Study. Annual Meeting of the Society for Epidemiologic Research. Minneapolis, MN 2012 June 28. Abstract published in: Am J Epidemiol. 175(11):S45.

**Nichols HB**, Visvanathan K, Newcomb PA, Hampton JM, Egan KM, Titus-Ernstoff L, Trentham-Dietz A. Bilateral oophorectomy and ductal carcinoma *in situ*. Annual Meeting of the American Society of Preventive Oncology. Las Vegas, NV; 2011 March 8.

**Nichols HB**, Trentham-Dietz A, Egan KM, Titus-Ernstoff L, Holmes MD, Bersch AJ, Holick CN, Hampton JM, Stampfer MJ, Willett WC, Newcomb PA. Body mass index before and after breast cancer diagnosis: Associations with all-cause, breast cancer, and cardiovascular disease mortality. Best of Cancer Epidemiology, Biomarkers and Prevention (CEBP) session of the Annual Meeting of the American Society of Preventive Oncology. Las Vegas, NV; 2011 March 7.



**Nichols HB**, Trentham-Dietz A, Hampton J, Titus-Ernstoff L, Egan K, Newcomb P. From menarche to menopause: Trends among US women born 1908-1976. Annual Meeting of the Society for Epidemiologic Research. Salt Lake City, UT; 2004 June. Abstract published in: *Am J Epidemiol.* 159(11): S75.

*Poster presentations*

Meernik C, Kirchhoff A, Anderson C, Edward TP, Deal A, Baggett C, Kushi L, Chao C, **Nichols HB**. Disruption of employment due to cancer leads to adverse financial outcomes for female young adult cancer survivors. Preliminary analysis presented at the Annual meeting of the Society of Epidemiologic Research, Minneapolis, MN; June 2019; Subsequent analysis presented at the American Public Health Association Annual Meeting; 2019 Nov 2-6; Philadelphia, PA.

Anderson C\*, Baggett C, Radhakrishnan S, Rao C, Kushi L, Chao C, **Nichols HB**. Validity of state cancer registry treatment information for adolescent and young adult women. North American Association of Central Cancer Registries (NAACCR)-International Association of Cancer Registries (IACR) conference, Vancouver, British Columbia, Canada; June 8-13, 2019

Hsu C, Lund JL, **Nichols HB**. Polypharmacy risk among five-year cancer survivors. American Society of Clinical Oncology Annual Meeting, Chicago, IL; May 31-June 4, 2019.

Anderson C\*, **Nichols HB**, House M, Sandler DP. Risk versus benefit of chemoprevention among raloxifene and tamoxifen users with a family history of breast cancer. Annual Meeting of the American Society of Preventive Oncology. Tampa, FL; 2019 Mar.

Luke B, Brown MB, Wantman E, Meyer RE, Foresteri N, Watkins S, Yazdy M, Browne M, Fisher S, Canfield MA, Ethen M, **Nichols HB**, Oehninger S, Doody K. Risk of cancer in children with birth defects and effect of IVF contraception. Annual meeting of the American Society for Reproductive Medicine; Denver, CO; 2018 Oct.

Luke B, Brown MB, Wantman E, Meyer RE, Foresteri N, Watkins S, Yazdy M, Browne M, Fisher S, Canfield A, Ethen M, **Nichols HB**, Oehninger S, Doody K. Risk of blastogenesis birth defects in IVF, non-IVF ART, and fertile births. Annual meeting of the American Society for Reproductive Medicine; Denver, CO; 2018 Oct.

Niehoff NM, **Nichols HB**, Zhao S, White AJ, Sandler DP. Impact of family history risk score on associations between breast cancer and physical activity in adulthood. Annual Meeting of the American Society of Preventive Oncology. New York, NY; 2018 Mar.

**Nichols HB**, Graff M, Bensen J, O'Brien KM, Troester M, Williams LA, Young K, Hong C, Yao S, Haiman C, Lunetta K, Ruiz-Narváez EA, Palmer J, Ambrosone C, Olshan A. Genetic variants in anti-Müllerian hormone-related genes and breast cancer risk: Results from the AMBER consortium. Annual Meeting of the Society for Epidemiologic Research. Seattle, WA; 2017 June.

C Anderson\*, AB Smitherman, SM Engel, **HB Nichols**. Preterm birth among survivors of adolescent and young adult cancers compared to the general population: An evaluation of effect modification. Annual Meeting of the Society for Epidemiologic Research. Seattle, WA; 2017 June.

Rodriguez JL, Peipins L, Weinberg C, Hawkins NA, DeRoo L, **Nichols HB**, Hodgson E, White M, Sandler DP. Factors associated with utilization of genetic counseling and *BRCA 1/2* testing among women with a family history of breast cancer: Results from the Sister Study. Annual Meeting of the American Public Health Associations. Atlanta, GA; 2017

White AJ, Weinberg CR, Park Y, D'Aloisio AA, Vogtman E, Halverson S, **Nichols HB**, Sandler DP. Sleep characteristics and breast cancer risk in a prospective cohort. Annual Meeting of the American Society of Preventive Oncology. Seattle, WA; 2017 Mar.

Smitherman AB, Mohabir D, Wilkins TM, Blatt J, **Nichols HB**, Dusetzina S. Early post-therapy prescription drug usage among survivors of childhood cancers. Cancer Survivorship Symposium: Advancing Care and Research. San Diego, CA; 2017 Jan.

Smitherman A\*, Anderson C, Benson JT, Lux L, **Nichols HB**. Comorbidity burden among AYAs in the University of North Carolina Cancer Survivorship Cohort. Global Adolescent and Young Adult Cancer Congress. Edinburgh, Scotland; 2016 Dec.

Landi SN\*, Doll KM, Bensen JT, Hendrix L, Anders CK, Wu JM, **Nichols HB**. Urogenital and Sexual Side Effects of Endocrine Therapy among Women with a Breast Cancer Diagnosis. 8<sup>th</sup> Biennial Cancer Survivorship Research Conference; Washington, DC; 2016 June.

Park YM, White AJ, **Nichols HB**, Sandler DP. The association between metabolic health and the risk of breast cancer differs by menopausal status at diagnosis. Epidemiology Congress of the Americas. Miami, FL; 2016 June.

Black KZ, **Nichols HB**, Rowley DL. Risk of preterm and low birthweight delivery after diagnosis among young breast cancer survivors. Epidemiology Congress of the Americas. Miami, FL; 2016 June.

Black KZ, **Nichols HB**, Rowley DL. The prevalence of adverse birth outcomes among premenopausal breast cancer survivors Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research. Miami, FL; 2016 June

**Nichols HB**, Stürmer T, Roh JM, Lee JX, Visvanathan K, Anderson C, Lee VS, Kushi LH. Breast cancer chemoprevention in an integrated healthcare setting. Annual Meeting of the American Society of Preventive Oncology. Columbus, OH; 2016 March.

**Nichols HB**, Anderson C, White AJ, Milne GL, Sandler DP. Oxidative stress and premenopausal breast cancer. Annual Meeting of the American Society of Preventive Oncology. Columbus, OH; 2016 March.

**Nichols HB**, Schoemaker M, Sandler D, Swerdlow A. Premenopausal Breast Cancer Collaborative Group. Annual Meeting of the NCI Cohort Consortium. Bethesda, MD; 2015 November.

**Nichols HB**, Visvanathan K, Lee VS, Roh JM, Lee JX, Stürmer T, Kushi LH Validation of endocrine therapy indication to identify breast cancer chemoprevention: A feasibility study. International Conference on Pharmacoepidemiology & Therapeutic Risk Management (ICPE). Boston, MA; 2015 August.

**Nichols HB**, Rodriguez J, Hawkins N, Sabatino S, Lee C, Sandler DP. Mastectomy and reconstruction after breast cancer diagnosis among women with a family history of breast cancer. Biennial Cancer Survivorship Research Conference. Atlanta, GA; 2014 June.

**Nichols HB**, DeRoo LA, Kissling GE, Baird DD, Sandler DP. Does tubal ligation alter ovarian function and impact breast cancer risk? Annual Meeting of the American Society of Preventive Oncology. Washington, DC; 2012 March.

**Nichols HB**, Trentham-Dietz A, Newcomb P, Egan K, Titus-Ernstoff L, Hampton J, Visvanathan K. Prediagnosis hysterectomy and estrogen therapy in relation to mortality after breast cancer. Annual CTSC-AACR San Antonio Breast Cancer Symposium. San Antonio, TX; 2010 December. Abstract published in: Cancer Res. 70(24 Suppl.):278s.

**Nichols HB**, Trentham-Dietz A, Newcomb P, Titus-Ernstoff L, Egan K, Hampton J, Remington P, Visvanathan K. Breast cancer risk according to estrogen use after complete hysterectomy. Annual Meeting of the Society for Epidemiologic Research. Anaheim, CA; 2010 June. Abstract published in: Am J Epidemiol. 171:S23.

**Nichols HB**, Trentham-Dietz A, Newcomb P, Titus-Ernstoff L, Egan K, Hampton J, Remington P, Visvanathan K. Breast cancer risk according to estrogen use after complete hysterectomy. Johns Hopkins University School of Medicine and Sidney

Kimmel Comprehensive Cancer Center Fellow Research Day. Baltimore, MD; 2010 May. Awarded Honorable Mention for Clinical/Translational Research.

**Nichols HB**, Visvanathan K, Newcomb PA, Hampton JM, Egan KM, Titus-Ernstoff L, Trentham-Dietz A. Bilateral oophorectomy and breast cancer: Confounding by non-malignant indications for surgery? Annual Meeting of the American Association for Cancer Research. Washington, DC; 2010 April.

**Nichols HB**, Berrington de Gonzalez A, Rosenberg P, Lacey JV, Anderson WF. Temporal trends in contralateral breast cancer among U.S. women, 1973-2006. Annual Meeting of the American Society of Preventive Oncology. Bethesda, MD; 2010 March.

**Nichols HB**, Berrington de Gonzalez A, Lacey J, Rosenberg P, Anderson W. Contralateral breast cancer in the Surveillance, Epidemiology and End Results database, 1973-2006. National Institutes of Health Summer Research Program Poster Day. Bethesda, MD; 2009 August.

Sprague BL, Trentham-Dietz A, Newcomb PA, **Nichols HB**, Hampton JM. Health-related behaviors before and after a diagnosis of breast carcinoma *in situ*. Annual Meeting of the American Society of Preventive Oncology. Tampa, FL; 2009 March.

**Nichols HB**, Trentham-Dietz A, Newcomb PA, Titus-Ernstoff L, Holick C, Egan K. Post-diagnosis weight change, body mass index, and breast cancer survival. Annual Frontiers in Cancer Prevention Research Meeting of the American Association for Cancer Research. Philadelphia, PA; 2007 December.

Shadman M, Newcomb PA, Wernli K, Hampton JM, **Nichols HB**, Trentham-Dietz A. Statins, NSAIDs and Colorectal Cancer Risk in Women Annual Frontiers in Cancer Prevention Research Meeting of the American Association for Cancer Research. Philadelphia, PA; 2007 December.

**Nichols HB**, Trentham-Dietz A, Egan KM, Titus-Ernstoff L, Hampton JM, Newcomb PA. Oral contraceptive use and risk of breast carcinoma *in situ*. Annual Meeting of the American Society of Preventive Oncology. Houston, TX; 2007 March.

Kirchhoff AC, Newcomb PA, Trentham-Dietz A, Hampton JM, **Nichols HB**. Family history and colorectal cancer survival in women. Annual Meeting of the American Society of Preventive Oncology. Houston, TX; 2007 March.

**Nichols HB**, Trentham-Dietz A, Hampton JM, Newcomb PA. Birth order, maternal age and breast cancer risk among breastfed women. Annual Meeting of the Society for Epidemiologic Research. Seattle, WA; 2006 June. Abstract published in: Am J Epidemiol. 163(11): S100.

**Nichols HB**, Trentham-Dietz A, Egan K, Hampton JM, Newcomb PA. First-degree family history of cancer in relation to ovarian cancer risk. 29<sup>th</sup> Annual Meeting of the American Society of Preventive Oncology. San Francisco, CA; 2005 March.

**Nichols HB**, Trentham-Dietz A, Hampton J, Newcomb P. Oral contraceptive use, reproductive factors, and colorectal cancer risk: Findings from Wisconsin. 28<sup>th</sup> Annual Meeting of the American Society of Preventive Oncology. Bethesda, MD; 2004 March.

**Bogan H**, Vlahos K, Terry D, Perls T. Age-related disease prevalence is low among centenarians. Annual Meeting of the Gerontological Society of America. Chicago; 2001 November.

Trentham-Dietz A, Newcomb PA, **Nichols HB**, Hampton JM. Risk of second breast cancer according to hormone therapy use among women with carcinoma *in situ* of the breast. Annual Meeting of the American Society of Preventive Oncology. Bethesda, MD; 2008 March.

Terry D, McCormick M, **Bogan H**, Perls T. Familial traits of longevity in children of centenarians: Preliminary findings. Annual Meeting of the American Geriatrics Society. Chicago; 2001 May.

## TEACHING RECORD

### *Courses*

2019- Co-Instructor, Advanced Cancer Epidemiology (EPID775)  
Department of Epidemiology, University of North Carolina Gillings School of Public Health

2015- Lead Instructor, Cancer Epidemiology: Survivorship and Outcomes (EPID771)  
Department of Epidemiology, University of North Carolina Gillings School of Public Health

### *Short courses*

2016 Lead Instructor, Cancer Epidemiology (No course number)  
27<sup>th</sup> International Summer School of Epidemiology  
Institute of Epidemiology and Medical Biometry, Ulm University, Germany

### *Guest lecturer*

2020 Advanced Reproductive Epidemiology (EPID 853), Department of Epidemiology  
University of North Carolina Gillings School of Global Public Health  
Title: "Vital records linkage studies"

- 2016-2019 Design of Clinical Research Studies (EPID 804), Department of Epidemiology  
University of North Carolina Gillings School of Global Public Health  
Title: “Case-control studies”
- 2015 Grand Rounds, Department of Obstetrics & Gynecology,  
University of North Carolina School of Medicine  
Title: “Breast cancer and the reproductive lifespan”
- 2014-2016 Cancer Pathobiology (PATH 725), Department of Pathology & Laboratory  
Medicine, University of North Carolina School of Medicine  
Title: “Cancer Epidemiology”
- 2014-2017 Cancer Epidemiology and Pathogenesis (EPID 770), Department of Epidemiology  
University of North Carolina Gillings School of Global Public Health  
Title: “Cancer Screening”
- 2011 Clinical Aspects of Reproductive Health, Department of Population, Family, and  
Reproductive Health, Johns Hopkins University  
Title: “Epidemiology of Endometrial and Ovarian Cancers”
- 2010 Clinical Aspects of Reproductive Health, Department of Population, Family, and  
Reproductive Health, Johns Hopkins University  
Title: “Breast Cancer Epidemiology”

*Advising/Mentoring*

*Summer student*

Nicole M. Niehoff; Summer Internship Co-Mentor, NIEHS (Cornell undergraduate) 2013

*Epidemiology Master's students*

Andrew Smitherman, MD; MSCR Advisor, 2017

Victoria Fitz, MD; MSCR Advisor, 2020

*Master's Committee*

Patricia Casbas Hernandez (Epidemiology) 2014

Mya Roberson (Epidemiology) 2018

*Epidemiology PhD students*

Carolyn Eberle; PhD Advisor, UNC 2017-

Clare Meernik; PhD Advisor, UNC 2018-

Jihye Park; PhD Advisor, UNC 2018-

Nidia Rodriguez-Ormaza; PhD Advisor, UNC 2018-

Marina Sweeney; PhD Advisor, UNC 2019-

Rina Yarosh; PhD Advisor, UNC 2019-

*Doctoral Dissertation Chair*

Dongyu Zhang (Epidemiology) 2015-2018

Chelsea Anderson (Epidemiology) 2015-

*Doctoral Dissertation co-Chair*

Lindsay Williams (Epidemiology) 2016-2017

*Doctoral Dissertation Committee Member*

Xuezheng (Amy) Sun (Epidemiology) 2015

Kyla Taylor (Epidemiology) 2014-2016

Kristen Zene Black (Maternal and Child Health) 2014-2016

Lynn Suzanne Chollet Hinton (Epidemiology) 2015-2016

Carmen Cuthbertson (Epidemiology) 2017-2019

Nicole M. Niehoff (Epidemiology) 2017-2019

Tengteng Wang (Epidemiology) 2017-2019

Halei Benefield (Epidemiology) 2018-2019

Sanah Vohra (Epidemiology) 2019-

Adane Wogu (Biostatistics) 2019-2020

Gieira Jones (Epidemiology) 2019-

Mya Roberson (Epidemiology) 2019-

Jack Murphy (Epidemiology) 2020-

## **GRANTS**

*Submitted*

NIH R01CA256886 (Nichols)

9/1/2020-8/31/2025

“Increasing social connectedness after cancer to promote resilience”

This research proposes to test remote delivery of a kindness-based intervention to enhance physical and psychological resilience after a childhood, adolescent or young adult hematologic cancer diagnosis.

Role: MPI with Fredrickson; Contact PI

Mary Kay Foundation (Nichols)

7/1/2020-6/30/2021

“Pregnancy complications and premenopausal breast cancer risk,” 10% effort, total cost \$99,999

The goal of the research is to study pregnancy complications and related conditions in relation to breast cancer risk within the Premenopausal Breast Cancer Collaborative Group.

Role: PI

Gabrielle’s Angel Foundation for Cancer Research (Nichols)

7/1/2020-6/30/2023

“A kindness-based intervention to enhance physical and psychological resilience in childhood, adolescent, and young adult hematologic cancer survivors,” total costs \$74,993

This research will study whether a kindness-based intervention can improve social well-being in adolescent and young adult blood cancer survivors; and whether social well-being has benefits for inflammation- and immune-related gene expression. Increasing social well-being using online

tools may improve both mental and physical health after cancer.

Role: PI

*Active*

NIH R01 CA211093 (Nichols) 8/5/2019-6/30/2023

“In vitro fertilization outcomes after cancer,” 25% effort, total direct costs \$1,554,085  
Evidence of the success of fertility preservation procedures is critical for informed decision-making before and after cancer treatment. The proposed research addresses the small numbers; heterogeneous cancer groupings; and failure to separate IVF initiated before versus after cancer treatment that are prevalent in existing studies. Our study will enhance a critical component of guideline-concordant cancer care by investigating the success of fertility preservation.

Role: MPI with Luke at Michigan State; Contact PI

NIH R01 CA204258 (Nichols) 7/1/2017-6/30/2022

“Clinical pregnancy outcomes in adolescent and young adult female cancer survivors,” 30% effort, total direct costs \$1,993,319

This project investigates pregnancy outcomes among female AYA survivors of lymphoma, breast, melanoma, thyroid, and gynecologic cancers living in the U.S. compared to women without a cancer diagnosis and among survivors.

Role: PI

NIH R01 HD084377 (Luke) 7/1/2017-5/31/2021

“Assisted reproduction and child health: Risk of birth defects, mortality, and effect on grade school performance,” 5% effort

The purpose of this study is to evaluate the risk of mortality, birth defects, and effect on grade school performance among children conceived through IVF and ART, their siblings, and non-IVF controls. This study will be based on births from 2004-18, and will include an estimated 163,000 IVF children, 41,000 IVF siblings, and 1,250,000 non-IVF control children.

Role: co-I

St. Baldrick’s Foundation Scholar Award 523803 (Nichols) 7/1/2017-6/30/2020

“Reproductive Health after Adolescent and Young Adult Cancer,” 33% effort, total costs \$150,000

The purpose of this study is to investigate the use of fertility preservation after an adolescent or young adult cancer diagnosis in North Carolina.

Role: PI

UNC IEHS (Rager) 4/1/2019-3/31/2020

“Endocrine disrupting chemicals in the household environment: Implications for breast cancer survivors”

This study aims to characterize known and unknown chemicals in house dust that may impact breast cancer risk and survivorship through disruption of the endocrine system.

Role: Early-career faculty mentor, co-I

*Completed Research Support*



UNC Lineberger Comprehensive Cancer Center Innovation Award 7/1/2017-6/30/2019  
“Reproductive Outcomes among Adolescent and Young Adult (AYA) Cancer survivors,” total costs \$100,590

The purpose of this study is to develop an online survey for women diagnosed with cancer as adolescents or young adults to query reproductive experiences and other salient concerns.

Role: PI

UNC Center for Women’s Health Research Pilot Grant (Nichols) 11/1/2018-5/31/2019  
“Mitochondrial DNA copy number as a measure of biologic aging in women with and without a breast cancer diagnosis,” total costs \$8,724

The proposed pilot work will provide preliminary data for an investigation of long-term changes in biomarkers of aging after breast cancer treatment in the Sister Study cohort.

Role: PI

02-2014-080 (Nichols) 1/1/2015-12/31/2017  
Avon Foundation

“Pregnancy Associated Breast Cancer: A pooled analysis of 18 prospective cohorts,” total direct costs \$194,308

The goal of the research is to study pregnancy and breast cancer with pooled data from participating cohorts within the NCI Cohort Consortium.

Role: PI

KL2 TR001109 (Buse) 5/1/2014-4/30/2017

NC TraCS: North Carolina Translational & Clinical Sciences Institute

Project title: “Endocrine therapy for prevention of invasive breast cancer among high risk women”

Selected to participate in the University of North Carolina CTSA KL2 career development program for junior investigators to develop and conduct interdisciplinary translational research.

Role: KL2 Scholar, 75% FTE

Junior Faculty Development Award (Nichols) 1/1/2016-12/31/2016

Office of the Provost, University of North Carolina at Chapel Hill

“Fertility rates, contraceptive practices and birth outcomes among female adolescent and young adult cancer survivors in North Carolina,” total costs \$7,500

Role: PI

CRN 14013 (Nichols) 8/1/2014-7/31/2015

Cancer Research Network Pilot Grant

“Identifying a cohort of women who use breast cancer chemoprevention,” total costs \$65,188

This pilot research will be conducted at Kaiser Permanente Northern California to validate breast cancer chemoprevention use among 500 members, examine risk-benefit profiles, and collect preliminary data on medication adherence and discontinuation.

Role: PI

UNC LCCC Developmental Award (Nichols) 8/1/2014-7/31/2015

“Pilot study of breast cancer chemoprevention use and adherence in a large integrated healthcare setting,” total costs \$49,784

The goals of this research are to assess the feasibility of identifying breast cancer chemoprevention users from a large integrated healthcare plan, to calculate a risk-benefit index using data from electronic medical record abstraction, and to collect preliminary information on medication adherence and discontinuation.

Role: PI

U24 CA171524 (Kushi)

4/1/2013-5/31/2015

CRN4: Cancer Research Resources & Collaboration in Integrated Health Care Systems

Project title: “Breast cancer prevention among premenopausal and high risk women”

The CRN enhances the ability for investigators to conduct impactful, relevant cancer research in integrated health care systems and includes the CRN Scholars Program, a mentored two-year program that provides training and support for junior investigators to develop independent research using CRN resources to conduct population-based multi-site and multi-disciplinary studies.

Role: CRN Scholar, 20% FTE

AVON 02-2012-085 (Nichols)

1/1/2013-12/31/2014

“Reproductive hormones, central adiposity, and oxidative stress in premenopausal women,” total costs \$200,000

The goals of the research are to investigate the differential roles of anti-Müllerian hormone (AMH), adiposity, and oxidative stress as risk factors for breast cancer to advance understanding of etiologic heterogeneity between pre- and post-menopausal breast cancer.

Role: PI

Epidemiology Branch, NIEHS (Nichols)

1/1/2013-12/31/2013

“Reproductive hormones, central adiposity, and oxidative stress in premenopausal women,” total costs \$70,510

Role: PI

T32 CA009314 (Platz)

7/1/2009-5/31/2011

Cancer Epidemiology, Prevention and Control Training Fellowship, Johns Hopkins University

The T32 National Research Service Award Institutional Training Grant supports training at the pre- and post-doctoral levels in the etiology and prevention of cancer, the genetic epidemiology of cancer, and cancer control.

Role: Predoctoral Student

## **PROFESSIONAL SERVICE**

*University of North Carolina (UNC)*

UNC Tenure-track Epidemiology Search Committee, 2019-2020

UNC Center for Environmental Health Solutions Search Committee, 2018

NC Women’s Health Report Card Advisory Board member, 2017, 2020

UNC Lineberger Comprehensive Cancer Center Protocol Review Committee, 2016-2018

UNC Tenure-track Ophthalmic Epidemiology Search Committee, 2016  
UNC Department of Epidemiology Admissions Committee, 2015-2018  
UNC Department of Epidemiology MPH Graduate Studies Committee, 2018-

*NIH Grant Review*

Temporary Member, Special Emphasis Panel for RFA HD-20-021, “Fertility and Fertility Preservation for Patients with Diseases that Previously Precluded Reproduction”:  
ZHD1 DSR-M (50): Study section, April 15 teleconference, 2020

Temporary Member, Special Emphasis Panel for RFA CA-19-033, “Improving outcomes for pediatric, adolescent and young adult cancer survivors (U01 Clinical Trial Required)”:  
June 7 teleconference, 2019

Temporary Member, Cancer, Heart, and Sleep Epidemiology Study Section B (CHSB): October 25-26, Washington, DC 2018

Temporary Member, Special Emphasis Panel for NCI Clinical and Translational R21 & Omnibus R03 applications:

ZCA1 TCRB-Q (M2): Study section, April 11 teleconference, 2019

ZCA1 SRB-5 (J1): Study section, October 12-13, Bethesda, MD 2017

ZCA1 SRB-P (01): Study section, June 5, Bethesda, MD 2017

ZCA1 SRB-5 (M1): Study section, March 2-3, Bethesda, MD 2017

*St. Baldrick's Foundation Grant Review*

Fellow applications, 2018, 2019

*Cancer Research Trust New Zealand Grant Review, 2019*

*Department of Defense Breast Cancer Research Program Grant Review*

Breakthrough Award Levels 1 and 2 (BCRP-BTA12-2) Epidemiology-2 (EPI-2) peer review panel, 2019

*NCI Cohort Consortium*

Steering Committee Member, 2019-2021; Annual Meeting Subcommittee, 2019; Working Group subcommittee, 2020

*American Society of Preventive Oncology*

Executive Committee Member, 2016-2019

Early Career Special Interest Group (SIG) Chair, 2016-2018

Program Committee Co-Chair, 2019; Cancer Survivorship and Caregiver Health Concurrent Contributed Session Chair, 2019; Early Career SIG Vice-Chair, 2015; Program Committee Member, Junior Members SIG Session Chair, 2013; Junior Members SIG Session Co-Chair, 2012

*Society for Epidemiologic Research*

Cancer Survivorship Concurrent Contributed Session Chair, 2018

*Journal peer review activities*

American Journal of Epidemiology  
American Journal of Public Health  
Archives of Medical and Health Sciences  
BMC Cancer  
BMC International Health and Human Rights  
Breast Cancer Research  
Breast Cancer Research and Treatment  
British Journal of Cancer  
Cancer  
Cancer Causes Control  
Cancer Epidemiology Biomarkers & Prevention  
Circulation  
Contraception  
Epidemiology  
European Journal of Obstetrics & Gynecology and Reproductive Biology  
Gynecologic Oncology  
International Journal of Cancer  
International Journal of Epidemiology  
JNCI Cancer Spectrum  
Journal of Cancer Survivorship  
Journal of Clinical Oncology  
Journal of Perinatal Medicine  
Journal of the American Medical Association  
Journal of the National Cancer Institute  
Journal of Women's Health  
Maturitas  
New England Journal of Medicine  
North Carolina Medical Journal  
Preventive Medicine  
The Breast