

Kimberly A. Lowe, Ph.D.
Managing Scientist

Professional Profile

Dr. Kimberly A. Lowe is a Managing Scientist in Exponent's Health Sciences Center for Epidemiology, Biostatistics, and Computational Biology. She has more than 10 years of experience in the health sciences, with emphasis on studies related to cancer in the ovary, breast, endometrium, vagina, colorectum, head/neck, and brain. She has extensive experience managing datasets and providing statistical consultation. In addition, Dr. Lowe has designed and implemented surveys to measure public perception and analyzed survey data for health-related quality of life.

Prior to joining Exponent, Dr. Lowe was a Staff Scientist at the Fred Hutchinson Cancer Research Center (FHCRC) where she participated in the design, conduct, and analysis of studies to identify serum biomarkers for the early detection of women's cancers. She continues to participate in research at FHCRC as an affiliate, and is currently the lead statistician on a clinical trial for ovarian cancer symptoms.

Dr. Lowe obtained a Ph.D. in Epidemiology with a minor in Biostatistics from the University of Arizona. Her research was focused on genetic epidemiology and the influence of gene-environment interactions on precancerous lesions in the colon. Specifically, she evaluated how the relationship between obesity and genetic variation affects adenoma recurrence. She used recursive partition modeling to investigate if body mass index and waist circumference differentially interact with the *PPAR- γ* gene. She conducted simulations to demonstrate how the sample required to test candidate gene-drug interactions can be minimized in pharmacogenetic studies through selective recruitment of study participants.

Dr. Lowe also spent several years working as a Research Specialist for the Ecological Restoration Institute. She participated in a working group of ecologists, social scientists, and technical writers to disseminate research results to stakeholders and collaborators. She planned and led workshops in data analysis methods (both qualitative and quantitative) and authored training guides related to these and other topics.

Academic Credentials and Professional Honors

Ph.D., Epidemiology, University of Arizona, 2008
M.H.S., Environmental Health, Boise State University, 2002
B.S., Biology, Seattle Pacific University, 1998

Society for Clinical Trials Student Manuscript Contest Award Recipient (2006)
Bio5 Institute for Collaborative Research Biostatistics Internship Award Recipient (2005)

Peer-Reviewed Publications

Andersen MR, Sweet E, Lowe KA, Standish LJ, Drescher CW, Goff BA. Potentially dangerous Complementary and Alternative Medicines (CAM) Use by Ovarian Cancer Patients. *Journal of Gynecologic Surgery*, in press.

Christian JB, Maneesh J, Meadowcroft A, Borden S, Lowe KA. Prevalence, characteristics, and risk factors of elevated triglyceride levels in US children. *Clinical Pediatrics*, in press.

Christian JB, Bourgeois N, Lowe KA. Prevalence, clinical characteristics, and treatment patterns of low HDL-cholesterol in the U.S. Population. *Journal of Cardiovascular Medicine*, in press.

Christian JB, Bourgeois N, Snipes R, Lowe KA. Prevalence of severe (500 to 2,000 mg/dl) hypertriglyceridemia in United States adults. *Am J Cardiol* 2011 March; 107(6):891–897.

Alexander DD, Weed DL, Cushing CL, Lowe KA. Meta-analysis of prospective studies of red meat consumption and colorectal cancer. *Eur J Cancer Prev* 2011 Jul; 20(5):293–307.

Andersen MR, Goff BA, Lowe KA, Scholler N, Bergan L, Drescher CW, Paley P, Urban N. Use of a Symptom Index, CA125, and HE4 to predict ovarian cancer. *Gynecologic Oncology* 2010 Mar; 116(3):378–383.

Taras AR, Hendrickson NA, Lowe KA, Atwood M, Beatty JD. Recurrence rates of breast cancer patients with false-negative intraoperative evaluation of sentinel lymph nodes. *Am J Surg*. 2010 May; 199(5):625–628.

Precht L, Lowe KA, Atwood M, Beatty D. Neoadjuvant chemotherapy for breast cancer: Tumor markers as predictors of pathologic response, recurrence, and survival. *Am J Surg* 2009 May; 197(5):637–641.

Alexander DD, Morimoto LM, Mink PJ, Lowe KA. Summary and meta-analysis of prospective studies of animal fat intake and breast cancer. *Nutr Res Rev* 2010 Feb; 25:1–11.

Alexander DD, Miller AJ, Cushing CA, Lowe KA. Processed meat and colorectal cancer: A quantitative review of prospective epidemiologic studies. *Eur J Cancer Prev* 2010 Sept; 19(5):328–331.

Andersen MR, Goff BA, Lowe KA, Scholler N, Bergan L, Drescher CW, Paley P, Urban N. Use of a Symptoms Index, CA125, and HE4 to predict ovarian cancer. *Gynecol Oncol* 2010 Mar; 116(3):378–83.

Lowe KA, Andersen MR, Urban N, Paley P, Drescher C, Goff BA. Temporal stability of the Symptom Index among women at high-risk for ovarian cancer. *Gynecol Oncol* 2009 Aug; 114(2): 225-30.

Miller CP, Lowe KA, Valliant-Saunders K, Kaiser JF, Mattern D, Urban N, Henke M, Blau CA. Evaluating erythropoietin-associated tumor progression using archival tumors from a Phase III Clinical Trial. *Stem Cells* 2009 Sept; 27(9): 2353-61.

Shah C, Lowe KA, Paley P, Wallace E, Anderson G, McIntosh M, Andersen MR, Scholler N, Bergan L, Thorpe J, Urban N, Drescher C. Influence of ovarian cancer risk status on the diagnostic performance of the serum biomarkers mesothelin, HE4 and CA125. *Cancer Epidemiol Biomark Prev* 2008 May; 18(5):1365–1372.

Alexander DD, Cushing CA, Lowe KA, Sceurman D, Roberts MA. Meta-analysis of animal fat or animal protein intake and colorectal cancer. *Am J Clin Nutr* 2009 May; 89(5):1402–1409.

Shah C, Goff BA, Lowe KA, Peters WA, Li C. Prognostic factors for survival in women with vaginal cancer. *Obstetrics Gynecology* 2009 May; 18(5):1365–1372.

Taras AR, Hendrickson NA, Pugliese MS, Atwood M, Lowe KA, Beatty D. Intraoperative evaluation of sentinel lymph nodes in invasive carcinoma of the breast. *The American Journal of Surgery* 2009 May; 197(5):643–646.

Beatty D, Precht L, Lowe KA, Atwood M. Axillary-conserving surgery is facilitated by neoadjuvant chemotherapy of breast cancer. *The American Journal of Surgery* 2009 May; 197:637–642.

Lowe K, Shah C, Wallace E, Anderson G, Paley P, McIntosh M, Andersen R, Scholler N, Bergan L, Thorpe J, Urban N, Drescher C. Personal characteristics influence serum CA125, Mesothelin, and HE4 levels in healthy post-menopausal women at increased risk for ovarian cancer. *Cancer Epidemiol Biomark Prev* 2008; 17(9): 2480–2487.

Andersen MR, Goff B, Lowe K, Scholler N, Bergan L, Urban N. Combining a symptoms index with CA125 to improve detection of ovarian cancer. *Cancer* 2008; 113(3):484–489.

Scholler N, Lowe K, Bergan L, Kampani A, Ng V, Forrest R, Thorpe J, Gross J, Garvik B, Drapkin R, Anderson G, Urban N. Use of yeast-secreted in vivo biotinylated recombinant antibodies (biobodies) in bead-based ELISA. *Clinical Cancer Res* 2008; 14(9):2647–2655.

Ostergren DM, Abrams J, Lowe K. Fire in the forest: Public perceptions of ecological restoration in north-central Arizona. *Ecol Restoration* 2008; 26(1):51–60.

Thorpe JD, Duan X, Forrest R, Lowe K, Brown L, Segal E, Nelson B, Anderson G, McIntosh M, Urban N. Effects of blood collection conditions on ovarian cancer serum markers. *PLoS ONE* 2007; 12:e1281.

Urban N, Longton G, Pepe M, Crowe A, Drucker M, Lehman C, Peacock S, Lowe K, Zeliadt S, Gaul M. Computer-Assisted Mammography Feedback Program (CAMFP): An electronic tool for continuing medical education. *Academic Radiol* 2007; 14(9):1036–1042.

Jacobs B, Martinez M, Alberts D, Jiang R, Lowe K, Thompson P. Association between body size and colorectal adenoma recurrence. *Clin Gastroenterology Hep* 2007; 5(8):982–990.

Anderson M, Drescher C, Zheng Y, Bowen D, Wilson S, Young A, McIntosh M, Mahony B, Lowe K, Urban N. Changes in cancer worry associated with participation in ovarian cancer screening. *Psycho-Oncology* 2007; 16(9):814–820.

Ostergren D, Lowe K, Abrams J, Ruthner E. Public perceptions of forest management in north central Arizona: The paradox of demanding more involvement but allowing limits to legal action. *J Forestry* 2006; 104(7):375–382.

Invited Commentaries and Editorials

Lowe KA. Standard and novel biomarkers for ovarian cancer. *Clinical Laboratories International*. In press.

Technical Reports and Training Guides

Moote A, Lowe K. What to expect from collaboration in natural resource management: A research synthesis for practitioners. In: *ERI—Issues in Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2008.

Lowe K. Working Paper #16 – Snags and forest restoration. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2006.

Lowe K. Working Paper #15 – Effects of forest thinning treatments on fire behavior. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2006.

Lowe K. Working Paper #13 – Treating slash after restoration thinning. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2005.

Lowe K. Working Paper #12 – Restoring forest roads. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2005.

Lowe K. Working Paper #11 – Collaboration as a tool in forest restoration. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2005.

Lowe K. Working Paper #10 – The Stand Treatment Impacts of Forest Health (STIFH) Model. In: *ERI—Working Papers in Southwestern Ponderosa Pine Forest Restoration*. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2005.

Abrams J, Lowe K. Public perceptions of forest restoration in the southwest: A synthesis of selected surveys and literature. In: ERI—Issues in Forest Restoration. Published by the Ecological Restoration Institute, Flagstaff, AZ, 2005.

Derr T, Moote A, Savage M, Schumman M, Abrams J, McCarthy L, Lowe K. Monitoring Handbook 1: What is multiparty monitoring? Published by the Ecological Restoration Institute—Collaborative Forest Restoration Program, Flagstaff, AZ, 2005.

Derr T, Moote A, Savage M, Schumann M, Abrams J, McCarthy L, Lowe K. Monitoring Handbook 2: Developing a multiparty monitoring plan. Published by the Ecological Restoration Institute—Collaborative Forest Restoration Program, Flagstaff, AZ, 2005.

Derr T, Moote A, Savage M, Schumann M, Abrams J, McCarthy L, Lowe K. Monitoring Handbook 4: Monitoring ecological effects. Published by the Ecological Restoration Institute—Collaborative Forest Restoration Program, Flagstaff, AZ, 2005.

Derr T, Moote A, Savage M, Schumann M, Abrams J, McCarthy L, Lowe K. Monitoring Handbook 5: Monitoring social and economic effects of forest restoration. Published by the Ecological Restoration Institute—Collaborative Forest Restoration Program, Flagstaff, AZ, 2005.

Lowe K, Moote A, Derr T, Savage M, Ranger-Moore J, Abrams J. Monitoring Handbook 6: Analyzing and interpreting monitoring data. Published by the Ecological Restoration Institute—Collaborative Forest Restoration Program, Flagstaff, AZ, 2005.

Invited Presentations

Lowe KA. The Effects of regular exercise and yoga on health-related quality of live among ovarian cancer survivors. Presented at the Western Association of Gynecologic Oncologists Annual Meeting, Park City, UT, June 2011.

Lowe KA. Effects of personal characteristics on serum CA125, mesothelin, and HE4 levels in healthy post-menopausal women at high-risk for ovarian cancer. Presented at the 7th Biennial Ovarian Cancer Research Symposium, Seattle, WA, September 2008.

Lowe K, Ranger-Moore J, and Thompson P. Bringing pharmacogenetics into clinical trials: Implications for sample size. Presented at the 27th Annual Meeting of the Society for Clinical Trials, Orlando, FL, May 2006.

Lowe K, Abrams J. Quantitative and qualitative statistical analysis for monitoring data. Presented at the 2nd Annual Collaborative Forestry Restoration Program Workshop, Santa Fe, NM, February 2006.

Lowe K, Orton M, Romero R, Walen S. Practical uses of collaborative monitoring in environmental conflict resolution. Panel speaker. Presented at the 4th National Conference on Environmental Conflict Resolution, Tucson, AZ, April 2005.

Published Abstracts of Presentations

Mitchell M, Taylor A, Lowe KA, Langeberg W, Alexander D, Kelsh M, Body JJ. Prevalence of bone metastasis after breast, lung and prostate cancers: A systematic and quantitative review of the literature. International Society of Pharmacoepidemiology, Chicago, IL, 2011

Lowe KA, Andersen MR, Goff BA. Over-the-counter pain medications do not influence symptoms reporting in ovarian cancer screening. Society for Gynecologic Oncology, San Francisco, CA. 2010

Lowe KA, Andersen MR, Goff BA. Feasibility of prospectively using the ovarian cancer Symptom Index in a primary care setting. Society for Gynecologic Oncology, San Francisco, CA. 2010

Goff BA, Andersen MR, Lowe KA, Scholler N, Bergan L, Drescher C, Paley P, Urban N. Use of Symptom Index, CA125, and HE4 to predict ovarian cancer. Society for Gynecologic Oncology, San Francisco, CA. 2010

Lowe KA, Alexander DD, Morimoto LM. Meta-analysis of animal fat intake and breast cancer. Experimental Biology, New Orleans, LA, 2009

Alexander DD, Cushing CA, Lowe KA. Meta-analysis of animal fat intake and colorectal cancer. Experimental Biology, New Orleans, LA, 2009.

Shah C, Lowe K, Paley P, Wallace E, Anderson G, McIntosh M, Andersen R, Scholler N, Bergan L, Thorpe J, Urban N, Drescher C. The influence of ovarian cancer risk status on diagnostic performance of the biomarkers mesothelin, HE4 and CA125. Western Association of Gynecologic Oncologists 2008 Meeting, Sonoma, CA, 2008.

Urban N, Longton G, Crowe A, Drucker M, Lehman C, Peacock S, Lowe K, Zeliadt St. Gaul M. Computer-Assisted Mammography Feedback Program (CAMFP): An electronic tool for continuing medical education. Department of Defense Breast Cancer Research Program Era of Hope 2008 Meeting, Baltimore, MD, 2008.

Schummer M, Karlan B, Karlan S, Petteri S, Hanash S, Green A, Wallace E, Lowe K, Urban N. Molecular profiling of tissue transcripts from invasive breast cancers and normal controls from breast-reduction surgeries could yield novel breast markers. Department of Defense Breast Cancer Research Program Era of Hope 2008 Meeting, Baltimore, MD, 2008.

Forrest R, Scholler N, Lowe K, Bergan L, Kampani A, Thorpe J, Gross J, Garvik B, Urban N. HE4 Bead-based ELISA: Use of yeast-secreted in vivo biotinylated recombinant antibodies (biobodies). 4th Annual Realizing the Promise: Canary Foundation National EDI Stakeholders Symposium, Stanford, MA, 2008.

Miller CP, Henke M, Lowe K, Etzioni R, Valliant-Saunders K, Urban N, Blau CA. Predictive testing for Erythropoietin (Epo) induced tumor progression in patients with cancers of the head and neck. American Society of Clinical Oncology 44th Annual Meeting, Chicago, IL, 2008.

Beatty J, Precht L, Lowe K, Atwood M. Axillary conserving surgery is facilitated by neoadjuvant chemotherapy of breast cancer. American Society of Breast Surgeons 9th Annual Meeting, New York, NY, 2008.

Goff BA, Andersen MR, Lowe K, Scholler N, Bergan L, Drescher CW, Paley P, Urban N. Self-report of symptoms associated with ovarian cancer as an additional means of evaluating a woman's risk for ovarian cancer. Society of Gynecological Oncologists' 39th Annual Meeting on Women' Cancer, Tampa, FL, 2008.

Precht L, Lowe K, Atwood M, Beatty JD. Tumor markers (ER/PR/HER2) as predictors of the response to neoadjuvant chemotherapy in breast cancer. Pacific Coast Surgical Association 79th Annual Meeting, San Diego, CA, 2008.

Goff BA, Andersen MR, Lowe K, Scholler N, Bergan L, Drescher CW, Paley P, Urban N. Combining a symptoms index with CA125 to improve the detection of ovarian cancer. 15th Annual SPORE Investigator's Workshop, Baltimore, MA, 2006.

Scholler N, Lowe K, Bergan L, Kampani A, Gross JA, Garvik B, Urban N. Validation of in vivo-biotinylated yeast-secreted recombinant antibodies for use in diagnostic tests. BioMarker World Congress 2007, Philadelphia, PA, 2007.

Thorpe J, Forrest R, Scholler N, Nelson B, O'Briant K, Segal E, Lowe K, Brown L, Urban N. The effect of conditions of blood draw on serum markers Prolactin, MIF, and CA125. 3rd Annual Realizing the Promise: Canary Foundation National EDI Stakeholders Symposium, Stanford, CA, 2007.

Chongpison, Y, Lowe K, Going S, and Chen Z. Using body mass index as a proxy for total percent body fat. American Public Health Association Annual Meeting, Boston, MA, 2006.

Lowe K, Ranger-Moore J, Guerra S, and Thompson P. Data simulation methodologies for determining sample size requirements to test gene-drug interactions in genetically pre-screened populations. Joint Statistical Meeting, Seattle, WA, 2006.

Thompson P, Lowe K, Jacobs E, Jiang R, Klimecki W, Alberts D, Martinez M. Obesity, PPAR γ haplotypes, and colorectal adenoma recurrence. 14th Annual SPORE Investigator's Workshop, Baltimore, MA, 2006.

Lowe K, Guerra S, Jacobs B, Jiang R, Klimecki W, Alberts D, Martinez M, Thompson P. Interactions between PPAR γ and obesity on risk of recurrence for colorectal adenomatous polyps. Society for Epidemiological Research Annual Meeting, Seattle, WA, 2006.

Shapiro R, Pueschel J, Scheck A, Coons S, Lowe K, Green S. Understanding outcomes for oligodendroglial tumors (O), oligoastrocytoma (OA), and their anaplastic counterparts (OA, AOA). 58th Annual Meeting of the American Academy of Neurology, San Diego, CA, 2006.

Ashby L, Pueschel J, Scheck A, Coons S, Shapiro W, Lowe K, Green S. Prognostic factors for patients with newly diagnosed low grade oligodendroglial tumors: molecular genetics, histopathology, and neuroimaging. American Society for Clinical Oncology, Orlando, FL, 2005.

Keim P, Huynh L, Solomon D, van Ert M, Volger A, Wagner D, Harding (Lowe) K, Worsham P, Schupp J, Coker P, Hugh-Jones M. Single Nucleotide Repeats (SNRs) in *Bacillus anthracis* genome are highly mutable. 5th Annual International Conference on Anthrax, Nice, France, 2003.

van Ert M, Huynh L, Wagner D, Zinser G, Solomon D, Keys C, Farlow J, Harding (Lowe) K, Smith K, Coker P, Hugh-Jones M, Keim P. Evolutionary relationships in world-wide *Bacillus anthracis* isolates as determined by Multiple-Locus Variable Number of Tandem Repeats (VNTR) Analysis (MLVA). 5th Annual International Conference on Anthrax, Nice, France, 2003.

Prior Experience

Staff Scientist, Fred Hutchinson Cancer Research Center, 2006–2008
Research Specialist, Ecological Restoration Institute, 2002–2006

Peer Reviewer

- Journal of Women's Health
- Cancer Epidemiology, Biomarkers and Prevention
- British Journal of Cancer
- Cancer Research UK

Professional Affiliations

- Society for Epidemiologic Research
- International Society for Pharmacoepidemiology