

December 2, 2024

CURRICULUM VITAE  
Bernard F. Cole

CITIZENSHIP: USA

ADDRESS:

Department of Mathematics and Statistics  
University of Vermont  
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EDUCATION:

1985	B.A.	Mathematics (cum laude)	Boston University
1986	M.A.	Mathematics	Boston University
1992	Ph.D.	Mathematics	Boston University

POSTDOCTORAL TRAINING:

1992–1993 Postdoctoral Research Fellow, Department of Biostatistics, Harvard School of Public Health and Dana-Farber Cancer Institute, Boston, MA.

ACADEMIC APPOINTMENTS:

1993–1997 Assistant Professor of Community Health (Research), Department of Community Health and Center for Statistical Sciences, Brown University, Providence, RI.

1997–2001 Assistant Professor of Community and Family Medicine (Biostatistics), Department of Community and Family Medicine, Dartmouth Medical School, Lebanon, NH.

2001–2007 Associate Professor of Community and Family Medicine (Biostatistics), Department of Community and Family Medicine, Dartmouth Medical School, Lebanon, NH.

2002–2007 Director of Biostatistics, Norris Cotton Cancer Center, Lebanon, NH.

2003–2005 Visiting Assistant Professor of Mathematics, Dartmouth College, Hanover, NH.

2005–2007 Adjunct Associate Professor of Mathematics, Dartmouth College, Hanover, NH.

2007 Professor of Community and Family Medicine (Biostatistics), Department of Community and Family Medicine, Dartmouth Medical School, Lebanon, NH.

2007–2015 Adjunct Professor of Community and Family Medicine, Department of Community and Family Medicine, Geisel Medical School, Dartmouth College, Lebanon, NH.

2015–2018 Adjunct Professor of Biomedical Data Science, Department of Biomedical Data Science, Geisel School of Medicine, Dartmouth College, Lebanon, NH.

- 2007– Professor, Department of Mathematics and Statistics, College of Engineering and Mathematical Sciences, University of Vermont, Burlington, VT.
- 2007–2009 Statistics Program Director, Department of Mathematics and Statistics, College of Engineering and Mathematical Sciences, University of Vermont, Burlington, VT.
- 2009–2013 Interim Dean, College of Engineering and Mathematical Sciences, University of Vermont, Burlington, VT.
- 2013–2020 Co-director, Cancer Control and Population Health Sciences Research Program, Larner College of Medicine, University of Vermont, Burlington, VT.
- 2019– Director, Vermont Space Grant Consortium and Vermont NASA EPSCoR, University of Vermont, Burlington, VT.
- 2024– Director, Vermont EPSCoR, University of Vermont, Burlington, VT.

OTHER APPOINTMENTS:

- 1983 Intern, Institute for High-Frequency Physics, Wachtberg, Germany.
- 1984 Statistical Programmer, McBer and Company, Boston, MA.
- 1984 Statistical Programmer, Center for Technology and Policy, Boston University, Boston, MA.
- 1984–1985 Statistical Programmer/Consultant, Joslin Diabetes Center, Boston, MA.
- 1985–1990 Statistical Programmer/Consultant, Office of Information Technology, Boston University, Boston, MA.
- 1990–1993 Statistician, Division of Biostatistics, Dana-Farber Cancer Institute, Boston, MA.
- 1993–1997 Statistician, Roger Williams Medical Center, Providence, RI.
- 1993–1997 Group Statistician, Brown University Oncology Group, Providence, RI.
- 2013–2017 Member of the Oncologic Drugs Advisory Committee (ODAC) of the US Food and Drug Administration.
- 2024– Chair, NASA EPSCoR Caucus.

ADMINISTRATIVE EXPERIENCE:

Director, Vermont EPSCoR (2024–)  
University of Vermont

- Function as managing Principal Investigator of National Science Foundation Research Infrastructure Improvement (RII) Track 1 award, “Harnessing the Data Revolution for Vermont: The Science of Online Corpora, Knowledge, and Stories (SOCKS)”
- Manage state-wide EPSCoR activities, including collaborative linkages to partner institutions and organizations
- Manage Vermont EPSCoR State Office

Director, Vermont Space Grant Consortium and Vermont NASA EPSCoR (2019–)  
College of Engineering and Mathematical Sciences, University of Vermont

- Represent Vermont as a member of the NASA Space Grant national network
- Manage state-wide Space Grant activities, including collaborative linkages to partner institutions
- Manage and coordinate research and training programs in accordance with NASA priorities
- Function as administrative principle investigator on research grants

Co-director of Cancer Control and Population Health Sciences Research Program (2013–2020)  
University of Vermont Cancer Center

- Support and mentor researchers
- Service on the cancer center leadership committee
- Strategic planning
- Service on search committees, grant-review committees, and conference organization committees
- Foster connections with external research organizations
- Establish and maintain research consortia
- Represent the cancer center externally
- Participate in fund-raising events
- Foster research collaboration
- Provide expertise regarding study design and analysis

Interim Dean (2009–2013)

College of Engineering and Mathematical Sciences, University of Vermont

- Management of academic programs in engineering, computer science, and mathematics and statistics (approximately 1,100 graduate and undergraduate students)
- Management of faculty and staff (approximately 85 faculty members and 20 staff members)
- Oversight of the college's annual general-fund budget (approximately \$13.1 million)
- Oversight of the college's grant-funded budget
- Strategic planning
- Promotion of excellence in teaching, scholarship and service
- Review and approval of guidelines for workloads
- Review and approval of reappointment/promotion/tenure actions
- Recruitment of faculty and staff
- Fundraising
- Assessment of academic programs
- Evaluation of department chairs
- Development and implementation of diversity initiatives
- Outreach to the local and regional community
- Developing/revising/enforcing college policy
- Articulate and enforce university policy
- Serve as liaison with central administration and other colleges

- Dispute resolution
- Management and allocation of resources and facilities
- Grant management
- Supervision of the Student Services Office
- Program accreditation (ABET accreditation for engineering undergraduate programs)
- Administration of the collective bargaining agreement between the university and United Academics
- Transparency in all appropriate areas of responsibility, especially regarding budgets and resources

Statistics Program Director (2007–2009)

University of Vermont

- Management of academic programs in statistics and biostatistics (graduate and undergraduate)
- Management of program faculty
- Promotion of excellence in teaching, scholarship and service
- Recruitment of faculty
- Self-evaluations of programs
- Teaching at the undergraduate and graduate levels

Director of Biostatistics (2002–2007)

Dartmouth College, Norris Cotton Cancer Center

Primary Areas of responsibility

- Management of biostatistics faculty
- Oversight of collaborative research
- Recruitment of faculty

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- 1992– American Statistical Association  
 1996–2013 American Society of Clinical Oncology

INVITED PRESENTATIONS:

1. July 1991, Boston University – “Cost-benefit analysis with competing risks models.”
2. February 1993, Harvard University – “Regression models for quality adjusted survival analysis.”
3. July 1993, Pfizer, Inc. – “Regression models for quality adjusted survival analysis.”
4. July 1993, Brown University – “Regression models for quality adjusted survival analysis.”
5. November 1993, University of Connecticut – “Empirical Bayes procedures for Markov dependent binary sequences with missing observations.”
6. November 1993, Brown University – “Empirical Bayes procedures for Markov dependent binary sequences with missing observations.”
7. December 1993, Schering-Plough, Inc. – “Comparing treatments using quality adjusted survival: the Q-TWiST method.”
8. March 1994, McGill University – “Empirical Bayes procedures for Markov dependent binary sequences with missing observations.”

9. June 1994, International Research Conference on Lifetime Data Models in Reliability and Survival Analysis, Harvard University – “Regression methods for quality adjusted survival analysis in clinical trials.”
10. August 1994, Joint Statistical Meetings, Toronto – “Cost-effectiveness analysis using quality-of-life-adjusted survival.”
11. January 1995, ASA Winter Conference, Raleigh, NC – “Cost-effectiveness analysis using quality-of-life-adjusted survival.”
12. May 1995, McMaster University – “Comparing treatments using quality adjusted survival: the Q-TWiST method.”
13. October 1995, Alpha Interferon Therapy: A Clinical and Pharmacoeconomic Perspective, Madrid, Spain – “A quality-of-life-adjusted survival analysis of interferon alfa-2b treatment for advanced follicular lymphoma.”
14. November 1995, National Melanoma Speakers Meeting, Boca Raton, Florida – “Interferon Alfa-2b adjuvant treatment for high-risk resected cutaneous melanoma: a quality-of-life-adjusted survival analysis.”
15. May 1996, Dana-Farber Cancer Institute, Boston, Massachusetts – “Recent statistical advancements in quality-adjusted survival analysis.”
16. June 1996, VI International Conference on Malignant Lymphoma Satellite Symposium: Immunotherapy of Non-Hodgkin's Lymphoma, Lugano, Switzerland – “Quality of life in low grade lymphoma, a Q-TWiST analysis of the GELF trial.”
17. September 1996, Perspectives in Melanoma 1996 Symposium, Pittsburgh, Pennsylvania – “A quality-of-life-adjusted analysis of adjuvant high dose interferon alfa-2b therapy.”
18. November 1996, RIBI ImmunoChem, Inc. – “Quality-of-life-adjusted survival analysis in clinical trials.”
19. January 1997, University of Pittsburgh – “Recent statistical advancements in quality-of-life-adjusted survival analysis.”
20. February 1997, Dartmouth Medical School – “Recent statistical advancements in quality-of-life-adjusted survival analysis.”
21. February 1997, Cornell University – “Quality-of-life-adjusted survival analysis in clinical trials.”
22. March 1997, Winter Oncology Conference, Banff, Canada – “Evaluation of trade-offs in the treatment of cancer: the Q-TWiST method.”
23. March 1997, Trends in Melanoma Management, Charleston, South Carolina – Evaluating trade-offs in clinical trials: the Q-TWiST method.”
24. March 1997, The Latest Word on Interferon Therapy, Miami, Florida – “Quality-adjusted survival analysis of interferon therapy for melanoma and non-Hodgkin's lymphoma.”
25. April 1997, John Wayne Cancer Institute, Santa Monica, California – “Evaluating trade-offs in clinical trials: the Q-TWiST method.”
26. November 1998, Northwestern University, Chicago, Illinois – “Utilities and quality of life of prostate cancer treatments.”
27. March 1999, Biometric Society, Eastern North American Region 1999 Spring Meeting, Atlanta, Georgia – “Quality-of-life adjusted survival in clinical trials—design and analysis considerations.”
28. May 1999, A Symposium on Longitudinal Studies of Quality of Life, Johns Hopkins University, Baltimore, Maryland – “Quality-of-life adjusted analysis.”

29. June 2000, Schering-Plough Workshop: Measurement and Analysis of Quality-of-Life Outcomes for Drug Development, Harvard School of Public Health, Boston, Massachusetts – “Quality-of-life-adjusted survival in clinical trials.”
30. September 2000, Early Breast Cancer Trialists’ Collaborative Group Fifth Main Meeting, Oxford University, Oxford, UK – “Overview analysis using Q-TWiST.”
31. October 2000, International Workshop on Statistical Design, Measurements and Analysis of Health Related Quality of Life, University of South Brittany “Quality-of-life-adjusted survival analysis in clinical trials.”
32. July 2001, Schering-Plough, Inc., Kenilworth, New Jersey – “Q-TWiST for advanced stage cancer.”
33. June 2004, International Society of Quality of Life Meetings, Boston, Massachusetts – “Q-TWiST Workshop.”
34. May 2005, American College of Radiology, Philadelphia, PA – “Quality-of-Life-Adjusted Survival Analysis: The Q-TWiST method.”
35. February 2006, Massachusetts General Hospital Institute for Technology Assessment – “Quality-of-Life-Adjusted Survival Analysis: The Q-TWiST method.”
36. April 2006, University of Chicago, Chicago, IL – “Statistical Challenges in Quality-of-Life Research.”
37. April 2006, University of Vermont, Burlington, VT – “Statistical Challenges in Quality-of-Life Research.”
38. March 2008, University of Vermont, Burlington, VT, Program for Research in Medical Outcomes – “Aspirin for the Chemoprevention of Colorectal Adenomas: Meta-Analysis of the Randomized Trials”
39. May 2008, University of Vermont, Burlington, VT, Vermont Cancer Center Grand Rounds – “A Randomized Trial of Folic Acid for the Prevention of Colorectal Adenomas”
40. April 2009, United States Food and Drug Administration, Silver Spring, MD – “Statistical Experiences in Randomized Clinical Trials”
41. April 2011, Kyoto Breast Cancer Consensus Conference, Kyoto, Japan – “Evaluating Treatment Trade-Offs: the Q-TWiST Method”
42. June 2013, Dartmouth College, Lebanon, NH – “Evaluation of Treatment-Effect Heterogeneity using Biomarkers Measured on a Continuous Scale: Subpopulation Treatment Effect Pattern Plot (STEPP)”
43. September 2014, US Food and Drug Administration, Silver Spring, MD – “Evaluation of Effectiveness Using Quality-Adjusted Survival”
44. October 2014, 17<sup>th</sup> Annual Breast Cancer Conference, Vermont Cancer Center, Burlington, VT – “Evaluating Safety and Efficacy of Novel Drug Therapies: The Journey from Early Testing to FDA Approval”
45. November 2014, Clinical & Translational Research Symposium: Molecular and Behavioral Cancer Epidemiology, University of Vermont Cancer Center, Burlington, VT – “Advancing Personalized Medicine: Ascertaining Treatment-Effect Heterogeneity Using Biomarkers”
46. October 2015, 2<sup>nd</sup> Bioequivalence Summit, Boston, MA – “Case Study: Regulatory Approval Process of Biosimilars”
47. February 2019, George Washington University, Washington, DC – “Evaluation of Treatment-Effect Heterogeneity using Biomarkers Measured on a Continuous Scale: Subpopulation Treatment Effect Pattern Plot (STEPP)”

48. September 2024, Bocconi University, Milan, Italy – “Racial/Ethnic Mortality Disparities Following Ovarian Cancer Diagnosis: Evaluation of 2009–2018 SEER Data”

#### OTHER PRESENTATIONS:

1. August 1991, Joint Statistical Meetings, Atlanta, GA – “Cost-benefit analysis with competing risks models.”
2. May 1992, Meeting of the Society for Clinical Trials, Philadelphia, PA – “Parametric approaches to quality adjusted survival analysis.”
3. March 1993, Biometric Society ENAR Meetings, Philadelphia, PA – “Logistic regression for Markov dependent Bernoulli trials with randomly missing observations.”
4. April 1994, Biometric Society ENAR Meetings, Cleveland, OH – “A quality-adjusted survival meta-analysis of adjuvant chemotherapy for premenopausal breast cancer.”
5. August 1994, Joint Statistical Meetings, Toronto – “Empirical Bayes procedures for Markov dependent binary sequences with missing observations.”
6. December 1995, The American Society of Hematology 37th Annual Meeting and Exposition, Seattle, WA – “Interferon alfa for the treatment of advanced follicular lymphoma: an analysis of quality-of-life-adjusted survival.”
7. March 1996, American Academy of Neurology 48th Annual Meeting, San Francisco, CA – “The meaning of a negative cerebrospinal fluid cytology.”
8. May 1996, American Society of Clinical Oncology Annual Meeting, Philadelphia, PA – “A quality-of-life-adjusted survival analysis of interferon alfa-2b adjuvant treatment for high-risk resected cutaneous melanoma: an Eastern Cooperative Oncology Group Study.”
9. May 1996, American Society of Clinical Oncology Annual Meeting, Philadelphia, PA – “Evaluation of quality-of-life adjusted survival in patients with malignant gliomas” (poster).
10. May 1998, American Society of Clinical Oncology Annual Meeting, Los Angeles, CA – “Quality-adjusted time without symptoms and toxicity (Q-TWiST) comparison of Melacine versus combination chemotherapy for patients with stage IV melanoma” (poster).
11. August 2002, Joint Statistical Meetings, New York – “A Multistate Markov Chain Model for Longitudinal Quality-of-Life Data Subject to Non-Ignorable Missingness.”
12. April 2005, American Association of Cancer Research, Anaheim, CA – “A Randomized Trial of Folic Acid to Prevent Colorectal Adenomas.”

#### UNDERGRADUATE TEACHING ROLES

- |      |  |
|------|--|
| 1999 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2001 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2002 | Introductory Statistics (Math 10) – Dartmouth College        |
| 2002 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2003 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2004 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2005 | Applied Linear Regression (Math 30) – Dartmouth College      |
| 2008 | Basic Statistical Methods (Stat 141) – University of Vermont |
| 2009 | Basic Statistical Methods (Stat 141) – University of Vermont |
| 2010 | Statistics for Engineers (Stat 143) – University of Vermont  |
| 2011 | Statistics for Engineers (Stat 143) – University of Vermont  |
| 2012 | Applied Probability (Stat 151) – University of Vermont       |

2014 Statistics for Engineers (Stat 143) – University of Vermont  
 2014 Statistics for Engineers (Stat 143) – University of Vermont  
 2015 Statistics for Engineers (Stat 143) – University of Vermont  
 2015 Statistics for Engineers (Stat 143) – University of Vermont  
 2016 Statistics for Engineers (Stat 143) – University of Vermont  
 2016 Applied Probability (Stat 151) – University of Vermont  
 2016 Statistics for Engineers (Stat 143) – University of Vermont  
 2017 Statistics for Engineers (Stat 143) – University of Vermont  
 2018 Applied Probability (Stat 151) – University of Vermont  
 2018 Statistics for Engineers (Stat 143) – University of Vermont  
 2021 Statistical Inference (Stat 241) – University of Vermont  
 2022 Applied Probability (Stat 151) – University of Vermont  
 2023 Statistical Inference (Stat 241) – University of Vermont  
 2023 Applied Probability (Stat 2510) – University of Vermont

#### GRADUATE TEACHING ROLES

1994 Introduction to Probability and Statistics in Biology and Medicine (BI/C213) – Brown University  
 1995 Graduate Seminar in Epidemiology – Brown University  
 1995 Introductory Biostatistics (BI/C015) – Brown University  
 1996 Longitudinal Data Analysis (BI/C291) – Brown University  
 1996 Analysis of Lifetime Data (BI/C291) – Brown University  
 1998 Biostatistics and Epidemiology – Dartmouth Medical School  
 1998 Quantitative Methods (ECS 291) – Dartmouth College  
 1999 Biostatistics and Epidemiology – Dartmouth Medical School  
 1999 CECS Doctoral Seminar – Dartmouth College  
 2000 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2001 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2002 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2003 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2004 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2004 Advanced Statistical Methods (ECS 245) – Dartmouth College  
 2005 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2005 Advanced Statistical Methods (ECS 245) – Dartmouth College  
 2006 Advanced Statistical Methods (ECS 245) – Dartmouth College  
 2006 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2007 Advanced Statistical Methods (ECS 245) – Dartmouth College  
 2007 Biostatistics and Epidemiology (Course Director) – Dartmouth Medical School  
 2007 Directed reading in Biostatistics – Dartmouth Medical School  
 2008 Linear Models (Stat 360) – University of Vermont  
 2008 Statistical Methods I (Stat 211) – University of Vermont  
 2009 Statistical Methods I (Stat 211) – University of Vermont  
 2009 Linear Models (Stat 360) – University of Vermont  
 2010 Consulting Practicum (Stat 385) – University of Vermont  
 2011 Survival Analysis and Logistic Regression (Stat 295) – University of Vermont  
 2012 Linear Models (Stat 360) – University of Vermont



2013 Linear Models (Stat 360) – University of Vermont  
2014 Statistical Methods I (Stat 211) – University of Vermont  
2014 Linear Models (Stat 360) – University of Vermont  
2015 Linear Models (Stat 360) – University of Vermont  
2015 Epidemiology and Biostatistics (ECS 140) – Geisel School of Medicine at Dartmouth  
2016 Probability Theory (Stat 251) – University of Vermont  
2017 Statistical Theory (Stat 261) – University of Vermont  
2017 Linear Models (Stat 360) – University of Vermont  
2017 Probability Theory (Stat 251) – University of Vermont  
2018 Statistical Theory (Stat 261) – University of Vermont  
2018 Probability Theory (Stat 251) – University of Vermont  
2019 Linear Models (Stat 360) – University of Vermont  
2019 Statistical Theory (Stat 261) – University of Vermont  
2019 Probability Theory (Stat 251) – University of Vermont  
2020 Statistical Theory (Stat 261) – University of Vermont  
2020 Probability Theory (Stat 251) – University of Vermont  
2021 Statistical Inference (Stat 241) – University of Vermont  
2021 Applied Time Series Analysis (Stat 253) – University of Vermont  
2022 Statistical Theory (Stat 261) – University of Vermont  
2024 Survival Analysis and Logistic Regression (Stat 5290)

JOURNAL EDITORSHIPS:

1. Statistical Editor, *Journal of the National Cancer Institute* (1997–2017)
2. Associate Editor, *Lifetime Data Analysis* (1998–)
3. *Journal of Bronchology & Interventional Pulmonology* (2018–)

DOCTORAL DISSERTATION COMMITTEES

Patrick Gillen (Brown University Department of Applied Mathematics, 1996)  
Matthew Hudson (Dartmouth College Center for Evaluative Clinical Sciences, 2003)  
Kristin Wallace (Dartmouth College Center for Evaluative Clinical Sciences, 2005)  
Karen Homa (Dartmouth College Center for Evaluative Clinical Sciences, 2006)  
Marie-Claire Rosenberg (Dartmouth College Center for Evaluative Clinical Sciences, 2008)  
Maria Veronica Vinattieri (Bocconi University, 2024)

OTHER PROFESSIONAL SERVICE:

1. Site-visit reviewer for a Program Project Grant application submitted to the National Cancer Institute (1999)
2. Member of the Data Monitoring Board for the VA Cooperative Study 402: “VA topical tretinoin chemoprevention trial” (1999–2004)
3. Clinical Oncology (CONC) Study Section for the National Institutes of Health (2000–2005)
4. SPORE Application Study Section for the National Institutes of Health (2001–2003)
5. Member of the Behavioral and Health Outcomes committee of the National Surgical Breast and Bowel Project (2003–2010)
6. Epidemiology of Cancer Study Section for the National Institutes of Health (2006–2011)

7. Member of the Data Monitoring Board for the VA Cooperative Study 551: “Rheumatoid arthritis: comparison of active therapies in patients with active disease despite methotrexate therapy (RACAT)” (2006–2012)
8. Site visitor for a Cancer Center Support Grant application submitted to the National Cancer Institute (2007)
9. Methodology and Measurement in the Behavioral and Social Sciences Study Section for the National Institutes of Health (2009–2010)
10. Scientific Models to Improve Health Study Section for the National Institutes of Health (2010)
11. Special Emphasis Panel/Scientific Review Group (Study Section; pediatric cancer) for the National Institutes of Health (2012)
12. Oncologic Drugs Advisory Committee, US Food and Drug Administration (2013–)
13. Special Emphasis Panel/Scientific Review Group (Study Section; Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects On Biomarkers of Prognosis and Survival) for the National Institutes of Health (February 2016)
14. Special Emphasis Panel/Scientific Review Group (Study Section; Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects On Biomarkers of Prognosis and Survival) for the National Institutes of Health (September 2016)

PUBLICATIONS (PEER-REVIEWED):

1. Gelber, R.D., Lenderking, W.R., Cotton, D.J., Cole, B.F., Fischl, M.A., Goldhirsch, A. and Testa, M.A. (1992). Quality-of-life evaluation in a clinical trial of zidovudine therapy in patients with mildly symptomatic HIV infection. *Annals of Internal Medicine* **116**, 961–966.
2. Gelber, R.D., Goldhirsch, A. and Cole, B.F. (1993). Evaluation of effectiveness: Q-TWiST. *Cancer Treatment Reviews* **19** (Supplement A), 73–84.
3. Cole, B.F., Gelber, R.D. and Goldhirsch, A. (1993). Cox regression models for quality adjusted survival analysis. *Statistics in Medicine* **12**, 975–987.
4. Gelber, R.D., Goldhirsch, A. and Cole, B.F. (1993). Parametric extrapolation of survival estimates with applications to quality of life evaluation of treatments. *Controlled Clinical Trials* **14**, 485–499.
5. Lenderking, W.R., Gelber, R.D., Cotton, D.J., Cole, B.F., Goldhirsch, A., Volberding, P.A. and Testa, M.A. (1994) for the AIDS Clinical Trials Group. Evaluation of the quality of life associated with zidovudine treatment in asymptomatic human immunodeficiency virus infection. *New England Journal of Medicine* **330**, 738–743.
6. Cole, B.F., Gelber, R.D. and Anderson, K.M. (1994). Parametric approaches to quality adjusted survival analysis. *Biometrics* **50**, 621–631.
7. Nord, K.D., Dore, D.D., Deeney, V.F., Armstrong, M.A., Cundy, P.J., Cole, B.F. and Ehrlich, M.G. (1995). Evaluation of treatment modalities for septic arthritis with histologic grading and analysis of levels of uronic acid, neutral protease and interleukin-1. *Journal of Bone and Joint Surgery* **77-A**, 258–265.
8. Schwartz, C.E., Cole, B.F., Vickrey, B. and Gelber, R.D. (1995). The Q-TWiST approach to assessing health-related quality of life in epilepsy. *Quality of Life Research* **4**, 135–141.
9. Cole, B.F., Gelber, R.D. and Goldhirsch, A. (1995). A quality-adjusted survival meta-analysis of adjuvant chemotherapy for premenopausal breast cancer. *Statistics in Medicine* **14**, 1771–1784.

10. Glantz, M.J., Hall, W.A., Cole, B.F., Chozick, B.S., Shannon, C.M., Wahlberg, L., Akerley, W., Marin, L. and Choy, H. (1995). Diagnosis, management, and survival of patients with leptomeningeal cancer based on cerebrospinal fluid-flow status. *Cancer* **75**, 2919–2931.
11. Gelber, R.D., Cole, B.F., Gelber, S. and Goldhirsch, A. (1995). Comparing treatments using quality-adjusted survival: the Q-TWiST method. *American Statistician* **49**, 161–169.
12. Gelber, R.D., Cole, B.F., Goldhirsch, A., Bonadonna, G., Howell, A., McArdle, C.S., Mouridsen, H.T., Rubens, R.D., Welvaart, K. (1995). Adjuvant chemotherapy for premenopausal breast cancer: a meta-analysis using quality-adjusted survival. *The Cancer Journal* **1**, 114–121.
13. Schwartz, C.E., Cole, B.F. and Gelber, R.D. (1995). Measuring patient-centered outcomes in neurologic disease: extending the Q-TWiST methodology. *Archives of Neurology* **52**, 754–762.
14. Cole, B.F., Lee, M.-L.T., Whitmore, G.A. and Zaslavsky, A.M. (1995). An empirical Bayes procedure for Markov dependent binary sequences with randomly missing observations. *Journal of the American Statistical Association* **90**, 1364–1372.
15. Choy, H., Yee, L. and Cole, B. (1995). Combined-modality therapy for advanced non-small cell lung cancer: paclitaxel and thoracic irradiation. *Seminars in Oncology*, **22**, 38–44.
16. Glantz, M.J., Choy, H., Kearns, C.M., Cole, B.F., Mills, P., Zuhowski, E.G., Saris, S., Rhodes, C.H., Stopa, E., and Egorin, M.J. (1996). Phase I study of weekly outpatient paclitaxel and concurrent cranial irradiation in adults with astrocytomas. *Journal of Clinical Oncology* **14**, 600–609.
17. Glantz, M.J., Cole, B.F., Friedberg, M.H., Lathi, E., Choy, H., Furie, K., Akerley, W., Wahlberg, L., Lekos, A. and Louis, S. (1996). A randomized, blinded, placebo-controlled trial of divalproex sodium prophylaxis in adults with newly diagnosed brain tumors. *Neurology* **46**, 985–991.
18. Gelber, R.D., Cole, B.F., Goldhirsch, A., Rose, C., Fisher, B., Osborne, C.K., Boccardo, F., Gray, R., Gordon, N.H., Bengtsson, N.-O. and Sevelde, P. (1996). Adjuvant chemotherapy plus tamoxifen compared with tamoxifen alone for postmenopausal breast cancer: a meta-analysis using quality-adjusted survival. *The Lancet* **347**, 1066–1071.
19. Gelber, R.D., Goldhirsch, A., Cole, B.F., Wieand, H.S., Schroeder, G., Krook, J.E. (1996). A quality-adjusted time without symptoms or toxicity (Q-TWiST) analysis of adjuvant radiation therapy and chemotherapy for resectable rectal cancer. *Journal of the National Cancer Institute* **88**, 1039–1045.
20. Safran, H., King, T., Choy, H., Gollerkeri, A., Kwakwa, H., Lopez, F., Cole, B., Myers, J., Tarpey, J., Rosmarin, A. (1996). p53 mutations do not predict response to paclitaxel/radiation for non-small cell lung cancer. *Cancer* **78**, 1203–1210.
21. Cole, B.F., Gelber, R.D., Kirkwood, J.M., Goldhirsch, A., Barylak, E. and Borden, E. (1996). A quality-of-life-adjusted survival analysis of interferon alfa-2b adjuvant treatment for high-risk resected cutaneous melanoma: an Eastern Cooperative Oncology Group Study (E1684). *Journal of Clinical Oncology* **14**, 2666–2673.
22. Clark, J., Sikov, W., Cummings, F., Browne, M., Akerley, W., Wanebo, H., Weitberg, A., Kennedy, T., Cole, B., Bigley, J., Beitz, J. and Darnowski, J. (1996). Phase II study of 5-fluorouracil leucovorin and azidothymidine in patients with metastatic colorectal cancer. *Journal of Cancer Research and Clinical Oncology* **122**, 554–558.

23. Glantz, M.J., Choy, H., Akerley, W., Kerns, C.M., Egorin, M.J., Rhodes, C.H. and Cole, B.F. (1996). Weekly paclitaxel with and without concurrent radiation therapy: toxicity, pharmacokinetics and response. *Seminars in Oncology* **23** (Supplement 4), 128–135.
24. White, R.E., Vezeridis, M.P., Konstadoulakis, M., Cole, B.F., Wanebo, H.J., and Bland, K.I. (1996). Therapeutic options and results for the management of minimally invasive breast cancer: influence of axillary dissection for treatment of T1a and T1b lesions. *Journal of the American College of Surgeons* **183**, 575–582
25. Kirkwood, J.M., Resnick, G.D. and Cole, B.F. (1997). Efficacy, safety, and risk-benefit analysis of adjuvant interferon alfa-2b in melanoma. *Seminars in Oncology* **24** (Supplement 4), 16–23.
26. Mustafa, I.A., Cole, B.F., Wanebo, H.J., Bland, K.I., and Chang, H.R. (1997). The impact of histopathology on nodal metastases in minimal breast cancer. *Archives of Surgery* **132**, 384–391.
27. Wanebo, H.J., Cole, B., Chung, M., Vezeridis, M., Schepps, B., Fulton, J. and Bland, K. (1997). Is surgical management compromised in elderly patients with breast cancer? *Annals of Surgery* **225**, 579–589.
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#### OTHER PUBLICATIONS:

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2. Gelber, R.D., Cole, B.F. and Goldhirsch, A. (1993). How to compare quality of life of breast cancer patients in clinical trials. In: Senn, H.J., Gelber, R.D., Goldhirsch, A. and Thürlimann, B., eds. *Adjuvant Therapy of Primary Breast Cancer. Recent Results in Cancer Research*, Vol. 127, pp. 221–233, Berlin: Springer-Verlag.
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GRANT SUPPORT (WITHIN LAST FIVE YEARS):

Title:	NNX15AP86H National Space Grant College and Fellowship Program (SPACE Grant) Training Grant 2015–2018
PI:	Bernard F. Cole
Program/agency:	NASA
Performance period:	07/06/2015–06/05/2021
Total budget:	\$2,675,800
Person months effort:	2.95
Title:	Northern New England Clinical Translational Research Network (subcontract from Maine Medical Center)
PI:	Clifford Rosen, Gary Stein
Program/agency:	NIH/ NIGMS
Performance period:	7/1/2017–6/30/2022
Total budget:	\$20,000,000
Person months effort:	1.56

Title: 80NSSC18M0031 Critical Gas Surface Interaction Problems for Atmospheric Entry  
 PI: Bernard F. Cole  
 Program/agency: NASA EPSCoR  
 Performance period: 11/20/2017–11/19/2021  
 Total budget: \$750,000  
 Person months effort: 0.42

Title: 405C94180 IPA Transfer: Statistical Support for the National Center for PTSD Research  
 PI: Bernard F. Cole  
 Program/agency: VA  
 Performance period: 6/1/2019–5/31/2020  
 Total budget: \$38,949  
 Person months effort: 0.48

Title: 80NSSC19M0143 Novel Quantum Materials as Laboratories for Fundamental Physics in Microgravity  
 PI: Bernard F. Cole  
 Program/agency: NASA EPSCoR  
 Performance period: 07/01/2019–06/30/2022  
 Total budget: \$750,000  
 Person months effort: 0.24

Title: 80NSSC19M0067 Vermont's Phase VI NASA EPSCoR Program, Core RID Project  
 PI: Bernard F. Cole  
 Program/agency: NASA EPSCoR Program/NASA  
 Performance period: 10/1/2019–9/30/2022  
 Total budget: \$125,000  
 Person months effort: 0.60

Title: 80NSSC20M0122 Space Grant Opportunities in NASA STEM – Vermont Space Grant Consortium  
 PI: Bernard F. Cole  
 Program/agency: NASA  
 Performance period: 06/06/2020–06/05/2025  
 Total budget: \$4,190,000  
 Person months effort: 4.92

Title: Impact of Simulated Microgravity on Potable Water Bacterial Biofilm Formation  
 PI: Bernard F. Cole  
 Program/agency: NASA EPSCoR  
 Performance period: 07/01/2020–06/30/2021  
 Total budget: \$100,000  
 Person months effort: 0.12

Title: 80NSSC20M0213 New Unified Framework for Scalable, Risk-Aware, and Resilient Estimation and Control of Satellite Swarms  
PI: Bernard F. Cole  
Program/agency: NASA EPSCoR  
Performance period: 12/01/2020–11/30/2024  
Total budget: \$750,000  
Person months effort: 0.15

Title: 80NSSC20M0145 Evaluation of the Automated Small Format Nucleic Acid Extraction System for Use in MicroGravity Environments and on the International Space Station  
PI: Bernard F. Cole  
Program/agency: NASA EPSCoR  
Performance period: 04/01/2021–03/31/2024  
Total budget: \$100,000  
Person months effort: 0.09

Title: 80NSSC21M0325 Diagnostics and Mitigation of Life Support System Biofilms Using Magnetic Nanoparticles  
PI: Bernard F. Cole  
Program/agency: NASA EPSCoR  
Performance location: Burlington, VT, USA  
Performance period: 12/1/2021–11/30/2025  
Total budget: \$750,000  
Person months effort: 0.15

Title: 80NSSC22M0038 The Vermont NASA EPSCoR Research Infrastructure Development Program  
PI: Bernard F. Cole  
Program/agency: NASA EPSCoR  
Performance location: Burlington, VT, USA  
Performance period: 10/1/2022–9/30/2027  
Total budget: \$1,000,000  
Person months effort: 1.44

Title: 80NSSC23M0071 Focused Elastodynamic Morphing for deployment of Metamaterial Spaceborne Antennas and Lattice Structures for Aerospace Applications  
PI: Bernard F. Cole  
Program/agency: NASA EPSCoR  
Performance location: Burlington, VT, USA  
Performance period: 9/1/2023–8/31/2026  
Total budget: \$750,000  
Person months effort: 0.15

Title: NSF OIA/RCC 2242829 Harnessing the Data Revolution for Vermont:  
The Science of Online Corpora, Knowledge, and Stories (SOCKS)  
PI: Bernard F. Cole  
Program/agency: NSF EPSCoR  
Performance location: Burlington, VT, USA  
Performance period: 6/1/2023–5/31/2028  
Total budget: \$20,000,000  
Person months effort: 3.00

Title: Space Grant Opportunities in NASA STEM FY 2025–2028: The  
Vermont Space Grant Consortium  
PI: Bernard F. Cole  
Program/agency: NASA  
Performance location: Burlington, VT, USA  
Performance period: 6/6/2025–6/5/2029  
Total budget: \$3,410,000  
Person months effort: 3.24