

Charles S. Davis, Ph.D.

4860 Barlows Landing Cove, San Diego, CA 92130
 Telephone: (858) 794-0690; Mobile: (858) 345-7250
 E-mail: chuck@csdbiostat.com

Employment

1/09-	President	CSD Biostatistics, Inc. San Diego, CA
11/05-	Biostatistical Consultant	CSD Biostatistics, San Diego, CA
8/01-11/05	Vice President, Biometrics (4/04-12/05) Sr. Director, Biometrics (8/01-3/04)	Elan Pharmaceuticals, San Diego, CA
7/87-8/01	Professor (1996-2001) Associate Professor (1991-1996) Assistant Professor (1987-1991)	Department of Biostatistics, The University of Iowa, Iowa City, IA
4/94-8/01	Director, Biostatistics Core	Holden Comprehensive Cancer Center, The University of Iowa
7/84-9/85	Manager, Statistics	Miles Laboratories, Elkhart, IN
6/81-7/84	Sr. Statistician	American Critical Care, McGaw Park, IL
7/77-6/81	Statistician	Mayo Clinic, Rochester, MN

Education

1987	Ph.D., Biostatistics	University of Michigan, Ann Arbor, MI
1977	M.S., Statistics	McMaster University, Hamilton, Ontario
1974	B.A., Mathematics	Houghton College, Houghton, NY

Professional Service to Statistical Organizations

2001-2005	Associate Editor, <i>The American Statistician</i>
2004	American Statistical Association Council of Chapters Traveling Course Instructor
1999-2001	Chair Elect, Chair, Past Chair: ASA Biometrics Section
1997-1999	Council of Sections Representative: ASA Biopharmaceutical Section
1997-1999	Member, ASA Council of Sections Fiscal Oversight Committee
1995-1997	Guest Lecturer, Committee of Presidents of Statistical Societies Visiting Lecturer Program
1994-1998	Associate Editor, <i>Controlled Clinical Trials</i>
1994-1996	Executive Committee Member, ASA Biopharmaceutical Section
1994	Reviewer, Student Awards Competition, ASA Biopharmaceutical Section

- 1994 Session Chair, Mixed Model Analyses of Longitudinal Data, Joint Statistical Meetings
- 1994 Organizer and Chair, Invited Paper Session, Methods for Handling Dropouts in Comparative Efficacy Trials, Biometric Society (ENAR) Annual Meeting
- 1993-1995 Regional Advisory Board Member, Biometric Society (ENAR)
- 1992 Session Chair, Clinical Trials, 16th International Biometrics Conference
- 1992 Session Chair, Robust Computational Procedures, Joint Statistical Meetings
- 1992 Session Chair, Longitudinal Data Analysis, Biometric Society (ENAR) Annual Meeting
- 1990 Organizer and Chair, Invited Paper Session, Analysis of Repeated Polytomous Data, Joint Statistical Meetings
- 1983 Program Committee Member, Midwest Biopharmaceutical Statistics Workshop
- 1982 Publicity Chairman, Midwest Biopharmaceutical Statistics Workshop

Professional Service to Other Organizations

- 2009- Member, Independent Data Monitoring Committee for a multicenter, randomized, phase 3 clinical trial in subjects with early idiopathic pulmonary fibrosis
- 2008- Chairman, Independent Data Monitoring Committee for a multicenter, randomized phase 2 trial of an investigational treatment for neovascular, age-related macular degeneration
- 2008- Member, Independent Data Monitoring Committee for an international, multicenter, randomized phase 2 trial of anti-platelet therapy after drug-eluting stent implantation
- 2008- Member, Independent Data Monitoring Committee for an international, multicenter, randomized phase 3 trial of an investigational treatment for advanced, non-small cell lung cancer
- 2007- Chairman, Independent Data Monitoring Committee for a phase 1 clinical trial of an investigational treatment for critical limb ischemia
- 2007- Member, Independent Data Monitoring Committee for a multicenter, phase 2 clinical trial of a CMV immunotherapeutic vaccine in donors and recipients undergoing hematopoietic cell transplant
- 2007- Member, Independent Data Monitoring Committee for a multicenter, randomized phase 2 clinical trial of an investigational treatment for liver disease associated with HCV infection
- 2007 Member, Independent Data Monitoring Committee for a multicenter, randomized phase 2 clinical trial of an investigational treatment for Alzheimer's disease
- 2006- Member, Independent Data Monitoring Committee for a multicenter, phase 3 clinical trial of an investigational treatment for chronic, stable angina pectoris
- 2006-2009 Chairman, Independent Data Monitoring Committee for an international, multicenter, randomized phase 3 clinical trial of an investigational treatment for idiopathic pulmonary fibrosis
- 2006-2008 Member, Independent Data Monitoring Committee for a multicenter, phase 3 clinical trial of a treatment for anemia in patients with chronic kidney disease

- 2006-2007 Member, Independent Data Monitoring Committee for an international, multicenter, phase 2 clinical trial of an investigational treatment for rheumatoid arthritis
- 1995-2001 Board of Consultants, *The Journal of Urology*
- 1995-1997 Member, American Board of Radiology Clinical Radiation Oncology Written Examination Task Force
- 1995-2001 Protocol Review Committee, University of Iowa Cancer Center
- 1997-2001 Institutional Review Board (IRB-01), University of Iowa

Awards

- 2004 Elected as a Fellow of the American Statistical Association
- 2004 American Statistical Association Council of Chapters Traveling Course Instructor
- 2000 Excellence in Continuing Education Award, American Statistical Association
- 1996 Vere D. Wenger Travel Award, Shanghai Institute of Planned Parenthood Research Conference
- 1992 Lewis D. Holloway Award for Research in Health Science Education
- 1990 Winner, Statistics in Medicine 10th Anniversary Paper Competition
- 1989 Outstanding Presentation Award, U.S. Bureau of the Census 5th Annual Research Conference
- 1989 National Science Foundation Travel Award, 47th Session of the International Statistical Institute

Statistical Consulting Prior to December, 2005 (Government and Industry)

- 2001 SCIREX, Bloomington, IL
- 2000-2001 Titan Pharmaceuticals, South San Francisco, CA
- 2000 Purdue Pharma L.P., Stamford, CT
- 1999-2001 Elan Pharmaceuticals, South San Francisco, CA
- 1999-2001 Coley Pharmaceutical Group, Wellesley, MA
- 1997-1998 Mediolanum Farmaceutica, Milan, Italy
- 1997-1998 Pharmanex, Simi Valley, CA
- 1995-1997 Somerset Pharmaceuticals, Tampa, FL
- 1995 Cephalon Corporation West Chester, PA
- 1995 Parke/Davis Pharmaceuticals, Ann Arbor, MI
- 1993-1999 Athena Neurosciences, South San Francisco, CA
- 1992 Parke/Davis Pharmaceuticals, Ann Arbor, MI
- 1991 Hoechst-Roussel Pharmaceuticals, Somerville, NJ
- 1990-1992 U.S. General Accounting Office, Washington, DC
- 1990 Microbial Genetics, West Des Moines, IA
- 1987 Cytel Software, Cambridge, MA

Research Interests

Categorical data analysis, methodology for the analysis of repeated measurements, clinical trials

Publications

Books:

1. Stokes ME, Davis CS and Koch GG. Categorical Data Analysis using the SAS System. Cary NC: SAS Institute, 1995.
2. Stokes ME, Davis CS and Koch GG. Categorical Data Analysis using the SAS System (Second edition). Cary NC: SAS Institute, 2000.
3. Davis CS. Statistical Methods for the Analysis of Repeated Measurements. New York: Springer-Verlag, 2002.

Book Chapters:

1. Davis CS. Distribution-free methods for the analysis of repeated measure designs. Encyclopedia of Biostatistics (P. Armitage and T. Colton, editors). Chichester, UK: John Wiley and Sons, 1998, pp. 1196-1204.
2. Davis CS. Matched pairs with categorical data. Encyclopedia of Biostatistics (P. Armitage and T. Colton, editors). Chichester, UK: John Wiley and Sons, 1998, pp. 2437-2441.
3. Davis CS. The analysis of longitudinal studies having non-normal responses. Statistical Analysis of Medical Data: New Developments (B. Everitt and G. Dunn, editors). London: Edward Arnold Publishers, 1998, pp. 145-173.
4. Zwerling C, Sprince NL, Davis CS, Wallace RB, Whitten PS and Heeringa SG. Occupational injuries among workers with disabilities. Employment, Disability, and the Americans with Disabilities Act (P.O. Blanck, editor). Evanston, IL: Northwestern University Press, 2000, pp. 315-328.

Peer-Reviewed Journal Articles:

1. Davis CS and Stephens MA. The covariance matrix of normal order statistics. Communications in Statistics: Simulation and Computation 6:75-81, 1977.
2. Davis CS and Stephens MA. Algorithm AS 128: Approximating the covariance matrix of normal order statistics. Applied Statistics 27:206-212, 1978.
3. Krishan I, Nobrega FT, Smoldt RK and Davis CS. Economic and manpower issues in the control of hypertension in rural populations. American Journal of Rural Health 6:27-32, 1980.
4. Krishan I, Nobrega FT, Davis CS, Smoldt RK and Harris AM. Impact of population-based cardiovascular disease prevention programs on ambulatory care demand in rural populations. Journal of the South Carolina Medical Association 76:33-37, 1980.
5. Taylor WF, Fontana RS, Uhlenhopp MA and Davis CS. Some results of screening for early lung cancer. Cancer 47:1114-1120, 1981.
6. Williams DE, Pairolero PC, Davis CS, Bernatz PE, Payne WS, Taylor WF, Uhlenhopp MA and Fontana RS. Survival of patients surgically treated for stage I lung cancer. Journal of Thoracic and Cardiovascular Surgery 82:70-76, 1981.
7. Krishan I, Davis CS, Nobrega FT and Smoldt RK. The Mayo three-community hypertension control program. IV. Five-year outcomes of intervention in entire communities. Mayo Clinic Proceedings 56:3-10, 1981.
8. Christianson JB, Krishan I, Nobrega FT, Davis CS, Smoldt RK and Harris AM. The Mayo three-community hypertension control program. V. The cost-effectiveness of intervention. Mayo Clinic Proceedings 56:11-16, 1981.

9. Nobrega FT, Krishan I, Smoldt RK, Davis CS, Abbott JA, Mohler EG and McClure W. Hospital use in a fee-for-service system. Journal of the American Medical Association 247:806-810, 1982.
10. Malagelada JR, Davis CS, O'Fallon WM and Go VLW. Laboratory diagnosis of gastrinoma. I. A prospective evaluation of gastric analysis and fasting serum gastrin levels. Mayo Clinic Proceedings 57:211-218, 1982.
11. Davis CS and Stephens MA. Algorithm AS 192: Approximate percentage points using Pearson curves. Applied Statistics 32:322-327, 1983.
12. Sum CY, Yacobi A, Kartzinel R, Stampfli H, Davis CS and Lai C. Kinetics of esmolol, an ultra-short-acting beta blocker, and of its major metabolite. Clinical Pharmacology and Therapeutics 34:427-434, 1983.
13. Davis CS and Wei LJ. Nonparametric methods for analyzing incomplete nondecreasing repeated measurements. Biometrics 44:1005-1018, 1988.
14. Landis JR, Miller ME, Davis CS and Koch GG. Some general methods for the analysis of categorical data in longitudinal studies. Statistics in Medicine 7:109-137, 1988.
15. Harlan WR, Landis JR, Flegal KM, Davis CS and Miller ME. Secular trends in body mass in the United States: 1960 to 1980. American Journal of Epidemiology 128:1065-1074, 1988.
16. Davis CS. Two-sample post-stratified or subgroup analysis with restricted randomization rules. Communication in Statistics: Theory and Methods 18:367-378, 1989.
17. Davis CS and Stephens MA. Empirical distribution function goodness-of-fit tests. Applied Statistics 38:535-543, 1989.
18. Lutz CT, Jensen DA, Schiffenbauer J, Didier DK, Schwartz BD and Davis CS. Multiple mechanisms produce diversity of HLA-C alleles. Human Immunology 28:27-31, 1990.
19. Wolraich ML, Lindgren S, Stromquist A, Milich R, Davis CS and Watson D. Stimulant medication use by primary care physicians in the treatment of attention deficit hyperactivity disorder. Pediatrics 86:95-101, 1990.
20. Davis CS. A one degree of freedom nominal association model for testing independence in two-way contingency tables. Statistics in Medicine 10:1555-1563, 1991.
21. Davis CS. Semi-parametric and non-parametric methods for the analysis of repeated measurements, with applications to clinical trials. Statistics in Medicine 10:1959-1980, 1991.
22. Davis CS. Statistical analysis of stratified 2x2 tables. Infection Control and Hospital Epidemiology 12:173-178, 1991.
23. Chrischilles EA, Butler CD, Davis CS and Wallace RB. A model of lifetime osteoporosis impact. Archives of Internal Medicine 151:2026-2032, 1991.
24. Davis CS and Jones MP. Maximum likelihood estimation for the multinomial distribution. Teaching Statistics 14:9-11, 1992.
25. Davis KL, Thal LJ, Gamzu E, Davis CS et al. Tacrine in patients with Alzheimer's disease: a double-blind, placebo-controlled multicenter study. New England Journal of Medicine 327:1253-1259, 1992.
26. Davis CS. An improved approximation to the distribution of Pearson's chi-square. Statistica Sinica 3:189-196, 1993.
27. Davis CS. A computer program for regression analysis of repeated measures using generalized estimating equations. Computer Methods and Programs in Biomedicine 40:15-31, 1993.

28. Davis CS. The computer generation of multinomial random variates. Computational Statistics and Data Analysis 16:205-217, 1993.
29. Park T and Davis CS. A test of the missing data mechanism for repeated categorical data. Biometrics 49:631-638, 1993.
30. Miller ME, Davis CS and Landis JR. The analysis of longitudinal polytomous data: generalized estimating equations and connections with weighted least squares. Biometrics 49:1033-1044, 1993.
31. Arndt S, Davis CS, Miller DD and Andreasen NC. Effect of antipsychotic withdrawal on extrapyramidal symptoms: statistical methods for analyzing single sample repeated measures data. Neuropsychopharmacology 8:67-75, 1993.
32. Ross JG, Hussey DH, Mayr NA and Davis CS. Acute and late radiation reactions in patients with collagen vascular diseases. Cancer 71:3744-3752, 1993.
33. Davis CS. A computer program for nonparametric analysis of incomplete repeated measures from two samples. Computer Methods and Programs in Biomedicine 42:39-52, 1994.
34. Hillis SL and Davis CS. A simple justification of the iterative fitting procedure for generalized linear models. American Statistician 48:288-289, 1994.
35. Knapp MJ, Knopman DS, Solomon PR, Pendlebury WW, Davis CS and Gracon SI. A 30-week randomized controlled trial of high-dose Tacrine in patients with Alzheimer's disease. Journal of the American Medical Association 271:985-991, 1994.
36. Knapp MJ, Gracon SI, Davis CS, Solomon PR, Pendlebury WW and Knopman DS. Efficacy and safety of high-dose Tacrine: a 30-week evaluation. Alzheimer Disease and Associated Disorders 8:522-531, 1994.
37. Knopman DS, Knapp MJ, Gracon SI and Davis CS. The Clinician Interview-Based Impression (CIBI): a clinician's global change rating scale in Alzheimer's disease. Neurology 44:2315-2321, 1994.
38. Lataste X, Emre M, Davis CS and Groves L. Comparative profile of tizanidine in the management of spasticity. Neurology 44(Suppl 9):553-559, 1994.
39. Schwartz DA, VanFossen DS, Davis CS, Helmers RA, Dayton CS, Burmeister LF and Hunninghake GW. Determinants of progression in idiopathic pulmonary fibrosis. American Journal of Respiratory and Critical Care Medicine 149:444-449, 1994.
40. Schwartz DA, Davis CS, Merchant JA, Bunn WB, Galvin JR, VanFossen DS, Dayton CS and Hunninghake GW. Longitudinal changes in lung function among asbestos-exposed workers. American Journal of Respiratory and Critical Care Medicine 150:1243-1249, 1994.
41. Davis CS and Chung Y. Randomization model methods for evaluating treatment efficacy in multicenter clinical trials. Biometrics 51:1163-1174, 1995.
42. Dayton CS, Schwartz DA, Sprince NL, Yagla SJ, Davis CS, Koehnke RK, Furst DE and Hunninghake GW. Low-dose methotrexate may cause air trapping in patients with rheumatoid arthritis. American Journal of Respiratory and Critical Care Medicine 151:1189-1193, 1995.
43. Mayr NA, Wen BC, Benda JA, Sorosky JI, Davis CS, Fuller RW and Hussey DH. Postoperative radiation therapy in clinical stage I endometrial cancer: corpus, cervical and lower uterine segment involvement - patterns of failure. Radiology 196:323-328, 1995.

44. Rangel-Frausto MS, Pittet D, Costigan M, Hwang T, Davis CS and Wenzel RP. The natural history of the systemic inflammatory response syndrome (SIRS): a prospective study. Journal of the American Medical Association 273:117-123, 1995.
45. Zwerling C, Sprince NL, Wallace RB, Davis CS, Whitten PS and Heeringa SG. Effect of recall period on the reporting of occupational injuries among older workers in the Health and Retirement Study. American Journal of Industrial Medicine 28:583-590, 1995.
46. Zwerling C, Sprince NL, Wallace RB, Davis CS, Whitten PS and Heeringa SG. Occupational injuries among agricultural workers 51 to 61 years old: a national study. Journal of Agricultural Safety and Health 1:273-281, 1995.
47. Davis CS. Statistical issues in the design and analysis of clinical trials in Alzheimer's disease. Drug Information Journal 30:339-350, 1996.
48. Davis CS. Non-parametric methods for comparing multiple treatment groups to a control group, based on incomplete non-decreasing repeated measurements. Statistics in Medicine 15:2509-2521, 1996.
49. Davis CS and Hall DB. A computer program for regression analysis of ordered categorical repeated measurements. Computer Methods and Programs in Biomedicine 51:153-169, 1996.
50. Anderson B, Connor JP, Andrews JI, Davis CS, Buller RE, Sorosky JI and Benda JA. Obesity and prognosis in endometrial cancer. Amer J Obst Gyn 174:1171-1178, 1996.
51. Mayr NA, Magnotta VA, Ehrhardt JC, Wheeler JA, Sorosky JI, Wen BC, Davis CS, Pelsang RE, Anderson B, Doornbos JF, Hussey DH and Yuh WTC. Usefulness of tumor volumetry by magnetic resonance imaging in assessing response to radiation therapy in carcinoma of the uterine cervix. International Journal of Radiation Oncology and Biological Physics 35:915-924, 1996.
52. Mayr NA, Yuh WTC, Magnotta VA, Ehrhardt JC, Wheeler JA, Sorosky JI, Davis CS, Wen B-C, Martin DD, Pelsang RE, Buller RE, Oberley LW, Mellenberg DE and Hussey DH. Tumor perfusion studies using fast magnetic resonance imaging technique in advanced cervical cancer: a new noninvasive predictive assay. International Journal of Radiation Oncology and Biological Physics 36:623-633, 1996.
53. Popendorf W, Miller ER, Sprince NL, Selim MS, Thorne PS, Davis CS and Jones ML. The utility of preliminary surveys to detect the cause of acute metalworking fluid hazards. American Journal of Industrial Medicine 30:744-749, 1996.
54. Zwerling C, Sprince NL, Wallace RB, Davis CS, Whitten PS and Heeringa SG. Risk factors for occupational injuries among older workers: an analysis of the Health and Retirement Study. American Journal of Public Health 86:1306-1309, 1996.
55. Zwerling C, Sprince NL, Wallace RB, Davis CS, Whitten PS and Heeringa SG. Alcohol and occupational injuries among older workers. Accident Analysis and Prevention 28:371-376, 1996.
56. Chrischilles EA, Sorofman B, Ziegrowsky MB and Davis CS. The Iowa on-line prospective drug utilization review (OPDUR) demonstration project: study design, system design, and conceptual models. Journal of Research in Pharmaceutical Economics 8:171-191, 1997.
57. Doebbeling BN, Edmond MB, Davis CS, Woodin JR and Zeitler RR. Influenza vaccination of health care workers: evaluation of factors that are important in acceptance. Preventive Medicine 26:68-77, 1997.

58. Dreicer R, Karwal MW, Midence G, Davis CS and Nettleman M. The role of radionuclide angiocardiology in the treatment of patients receiving doxorubicin-based chemotherapy: a reassessment. American Journal of Clinical Oncology 20:132-137, 1997.
59. Dreicer R, Kemp JD, Stegink LD, Cardillo T, Davis CS, Forest PK and See WA. A phase II trial of deferoxamine in patients with hormone-refractory metastatic prostate cancer. Cancer Investigation 15:311-317, 1997.
60. Heckman KD, Weiner GJ, Davis CS, Strauss RG, Jones MP and Burns CP. Randomized study of prophylactic platelet transfusion threshold during induction therapy for acute leukemia: 10,000/ μ l vs. 20,000/ μ l. Journal of Clinical Oncology 15:1143-1149, 1997.
61. Pittet D, Davis CS, Li N and Wenzel RP. Identifying the hospitalized patient at risk for nosocomial bloodstream infection: a population-based study. Proceeding of the Association of American Physicians 109:58-67, 1997.
62. Zwerling C, Whitten PS, Davis CS and Sprince NL. Occupational injuries among workers with disabilities: an analysis of the National Health Interview Survey, 1985-1994. Journal of the American Medical Association 278:2163-2166, 1997.
63. Chung Y and Davis CS. An evaluation of the Mantel-Fleiss validity criterion for the Mantel-Haenszel statistic. Korean Communications in Statistics 5:265-275, 1998.
64. Groves L, Shellenberger MK and Davis CS. Tizanidine treatment of spasticity: a meta-analysis of controlled, double-blind, comparative studies with baclofen and diazepam. Advances in Therapy 15:241-251 1998.
65. Leber PD and Davis CS. Threats to the validity of clinical trials employing enrichment strategies for sample selection. Controlled Clinical Trials 19:178-187, 1998.
66. Park T, Davis CS and Li N. Alternative GEE estimation procedures for discrete longitudinal data. Computational Statistics and Data Analysis 28:243-256, 1998.
67. Vartak S, McCaw R, Davis CS, Robbins MEC and Spector A. γ -Linolenic acid (GLA) is cytotoxic to 36B10 malignant rat astrocytoma cells but not to "normal" rat astrocytes. British Journal of Cancer 77:1612-1620, 1998.
68. Zwerling C, Sprince NL, Davis CS, Whitten PS, Wallace RB and Heeringa SG. Occupational injuries among older workers with disabilities: a prospective cohort study of the Health and Retirement Survey, 1992-1994. American Journal of Public Health 88:1691-1695, 1998.
69. Zwerling C, Whitten PS, Davis CS and Sprince NL. Occupational injuries among older workers with visual, auditory, and other impairments: a validation study. Journal of Occupational and Environmental Medicine 40:720-723, 1998.
70. Rubenstein LM and Davis CS. Estimation of the average correlation coefficient for stratified bivariate data. Statistics in Medicine 18:567-580, 1999.
71. Ghoneim MM, Block RI, Sarasin DS, Davis CS and Marchman JN. Tape-recorded hypnosis instructions as adjuvant in the care of patients scheduled for third molar surgery. Anesthesia and Analgesia 90:64-68, 2000.
72. Levy SM, Warren JJ, Davis CS, Kirchner HL, Kanellis MJ and Wefel JS. Patterns of fluoride intake from birth to 36 months. Journal of Public Health Dentistry 61:70-77, 2001.
73. Robbins MEC, O'Malley Y, Zhao W, Davis CS and Bonsib SM. The role of the tubulointerstitium in radiation-induced renal fibrosis. Radiation Research 155:481-489, 2001.

74. Park T, Park JK and Davis CS. Effects of covariance model assumptions on hypothesis tests for repeated measurements: analysis of ovarian hormone data and pituitary-pterygomaxillary distance data. Statistics in Medicine 20:2441-2453, 2001.
75. Buller RE, Shahin, MS, Geisler JP, Zogg M, DeYoung BR and Davis CS. Failure of BRCA1 dysfunction to alter ovarian cancer survival. Clinical Cancer Research 8:1196-1202, 2002.
76. Cooper BC, Sood, AK, Davis CS, Ritchie JM, Sorosky JI, Anderson B and Buller RE. Preoperative CA 125 levels: an independent prognostic factor for epithelial ovarian cancer. Obstetrics and Gynecology 100:59-64, 2002.
77. Goodheart MJ, Vasef MA, Sood AK, Davis CS and Buller RE. Ovarian cancer p53 mutation is associated with tumor microvessel density. Gynecologic Oncology 86:85-90, 2002.
78. Hawk C, Long CR, Reiter R, Davis CS, Cambron JA, Evans R. Issues in planning a placebo-controlled trial of manual methods: results of a pilot study. Journal of Alternative and Complementary Medicine 8:21-32, 2002.
79. Robbins MEC, Zhao W, Davis CS and Bonsib SM. Radiation-induced kidney injury: a role for chronic oxidative stress? Micron 33:133-141, 2002.
80. Weydert CJD, Smith BB, Xu L, Kregel KC, Ritchie JM, Davis CS, and Oberley LW. Inhibition of oral cancer cell growth by adenovirus MNSOD plus BCNU treatment. Cancer Research 34:316-329, 2002.
81. Zwerling C, Whitten PS, Sprince NL, Davis CS, Wallace RB, Blanck PD and Heeringa SG. Workforce participation by persons with disabilities: The National Health Interview Survey Disability Supplement, 1994 to 1995. Journal of Occupational and Environmental Medicine 44:358-364, 2002.
82. Zwerling C, Whitten PS, Sprince NL, Davis CS, Wallace RB, Blanck PD and Heeringa SG. Workplace accommodations for people with disabilities: National Health Interview Survey Disability Supplement, 1994-1995. Journal of Occupational and Environmental Medicine 45:517-525, 2003.
83. Wang W, Davis CS and Soong S. Comparison of predictive values of two diagnostic tests from the same sample of subjects using weighted least squares. Statistics in Medicine 25:2215-2229, 2006.

Other Publications:

1. Davis CS. A SAS macro for EDF goodness-of-fit tests. Proc 6th Annual SAS User's Group International Conference Cary, North Carolina: SAS Institute, 135-141, 1981.
2. Davis CS. Reprint file management using SAS. Proc 6th Annual SAS User's Group International Conference Cary, North Carolina: SAS Institute, 578-583, 1981.
3. Davis CS. A SAS macro for calculating the quadratic discriminant function. Proc 6th Annual SAS User's Group International Conference Cary, North Carolina: SAS Institute, 531-536, 1981.
4. Davis CS. Categorical data analysis using the FUNCAT procedure. Proceeding of the 7th Annual SAS User's Group International Conference. Cary, North Carolina: SAS Institute, 718-723, 1982.
5. Landis JR, Lepkowski JM, Davis CS and Miller ME. Cumulative logit models for weighted data from complex sample surveys. Proceedings of the ASA Social Statistics Section. Washington, D.C.: American Statistical Association, 165-170, 1987.

6. Davis CS. Detection of influential observations in logistic regression using the SAS system. Proceedings of the 13th Annual SAS User's Group International Conference. Cary, North Carolina: SAS Institute, 964-969, 1988.
7. Davis CS. Estimation of row and column scores in the linear-by-linear association model for two-way ordinal contingency tables. Proceedings of the 13th Annual SAS User's Group International Conference. Cary, North Carolina: SAS Institute, 946-951, 1988.
8. Davis CS, Miller ME and Landis JR. Strategies for modeling secular trends from repeated cross-sectional surveys. Proceedings of the 5th Annual Census Bureau Research Conference. Washington, District of Columbia: Bureau of the Census, 381-394, 1989.
9. Davis CS. Analysis of incomplete categorical repeated measures. Proceedings of the 17th Annual SAS User's Group International Conference. Cary, North Carolina: SAS Institute, 1374-1379, 1992.
10. Davis CS. Multinomial random variate generation: methods, comparisons, and recommendations. Proceedings of the ASA Statistical Computing Section. Washington, D.C.: American Statistical Association, 79-84, 1992.
11. Davis CS. Analysis of incomplete categorical repeated measures. Proceedings of MWSUG. Fox Point, WI: Midwest SAS User's Group, 197-202, 1993.
12. Rubenstein LM and Davis CS. The effect of missing data on inference in the analysis of repeated categorical responses from an older population. Proceedings of ASA Biopharmaceutical Section, 168-172, 1998.

Invited Lectures and Short Courses

- 1977 Finding significance points of unknown distributions, Simon Fraser University, Burnaby, BC
- 1981 Categorical data analysis using the SAS FUNCAT procedure, Cornell University, Ithaca NY
- 1987 Nonparametric methods for analyzing incomplete nondecreasing repeated measurements, Pacific Northwest Statistics Group, Vancouver, British Columbia
- 1988 Semi-parametric methods for the analysis of repeated measurements with applications to clinical trials, Society for Clinical Trials 9th Annual Meeting, San Diego, CA
- 1988 The analysis of categorical data, with applications to preclinical and clinical studies (two-day short course), Sterling Research Group, Great Valley, PA
- 1988 Statistical software for analyzing repeated measurements, American Public Health Association Annual Meeting, Boston, MA
- 1988 Categorical data analysis (three-day short course), SAS Institute, Cary, NC
- 1989 A practical approach to categorical data analysis using the SAS CATMOD procedure (one-day short course), Toronto Area Biostatistics Association, Toronto, Ontario
- 1989 Categorical data analysis (three-day short course), DOFASCO Inc., Hamilton, Ontario
- 1989 Categorical data analysis (three-day short course), Procter and Gamble, Inc., Cincinnati, OH
- 1990 Categorical data analysis (three-day short course), 3M Corporation, St Paul, MN
- 1990 Categorical data analysis (three-day short course), SAS Institute, Nashville, TN
- 1990 Categorical data analysis (three-day short course), SAS Institute, Chicago, IL
- 1990 Biostatistics. Chinese University Development Project Course (one-week short course jointly taught with Professor LJ Wei, Harvard U.), Fudan University, Shanghai, China
- 1990 Analysis of categorical repeated measures, Shanghai Medical University, Shanghai,

- China
- 1990 Categorical data analysis (three-day short course), RJR/Nabisco, Winston-Salem, NC
 - 1990 Preliminary results from the tacrine clinical trial, NIA/Parke Davis Cognex Post-Study Investigators' Meeting, Laguna Niguel, CA
 - 1990 Categorical data analysis (three-day short course), Warner Lambert/Parke Davis Co., Ann Arbor, MI
 - 1991 Categorical data analysis (three-day short course), National Center for Health Statistics, Hyattsville, MD
 - 1991 Categorical data analysis (three-day short course), Centers for Disease Control, Atlanta, GA
 - 1991 Issues in the analysis of clinical trial data from psychotropic/dementia studies, Hoechst-Roussel Pharmaceuticals, Somerville, NJ
 - 1991 Statistical issues in efficacy trials of psychotropic agents, 47th Annual Deming Conference on Applied Statistics, Atlantic City, NJ
 - 1992 Categorical data analysis (three-day short course), Centers for Disease Control, Atlanta, GA
 - 1992 Randomization model methods for evaluating treatment efficacy in multicenter clinical trials, Division of Statistics, Northern Illinois University, DeKalb, IL
 - 1993 Analysis of incomplete categorical repeated measures, Midwest SAS User's Group Fourth Annual Conference, Indianapolis, IN
 - 1994 Randomization model methods for evaluating treatment efficacy in multicenter clinical trials, Department of Biostatistics, Harvard University School of Public Health, Boston, MA
 - 1994 Analysis of repeated measurements (one-day short course), Northeastern Illinois Chapter of the American Statistical Association, Chicago, IL
 - 1994 Statistical issues in multicenter, parallel group long-term studies, Conference on Therapeutics of Alzheimer's Disease, Garden City, NY
 - 1994 Randomization model methods for evaluating treatment efficacy in multicenter clinical trials, Department of Preventive and Family Medicine, University of California San Diego, La Jolla, CA
 - 1995 A biostatistician's involvement in the search for a treatment for Alzheimer's disease, Xavier University of Louisiana, New Orleans, LA
 - 1996 A biostatistician's involvement in the search for a treatment for Alzheimer's disease, Sigma Chi Lecture, University of South Dakota, Vermillion, South Dakota
 - 1996 A biostatistician's involvement in the search for a treatment for Alzheimer's disease, Emporia State University, Emporia, KS
 - 1996 Methods for modeling categorical repeated measurements, Drug Information Association 32nd Annual Meeting, San Diego, CA
 - 1996 Longitudinal data analysis (one-day short course), South Korean Biometric Society, Seoul, South Korea
 - 1996 Statistical issues in clinical trials, Preventive Medicine Society Regional Meeting, Taegu, South Korea
 - 1996 Statistical analysis of data from complex sample surveys, Kwangju Social Research Center, Kwangju, South Korea
 - 1996 Analysis of repeated measurements (one-day short course), Chonnam National University, Kwangju, South Korea

- 1996 A biostatistician's involvement in the search for a treatment for Alzheimer's disease, Korean Statistical Society Southwest Regional Meeting, Kwangju, South Korea
- 1996 Methods for analyzing categorical repeated measurements, Chonnam National University, Kwangju, South Korea
- 1996 Design and analysis of clinical trials (two-day short course), Shanghai Institute of Planned Parenthood Research, Shanghai, China
- 1997 Analysis of incomplete categorical repeated measurements (half-day short course), Wyeth-Ayerst Pharmaceuticals, Radnor, PA
- 1997 Statistical methods for modeling categorical response variables (one-day short course), University of Kansas, Lawrence, KS
- 1997 Statistical methods for the analysis of ordered categorical data (half-day short course), University of Kansas Medical Center, Kansas City, KS
- 1998 Statistical problems encountered in Alzheimer's disease clinical trials, Dept. of Epidemiology and Preventive Medicine, University of California, Davis, CA
- 1998 Generalized estimating equations: application to a clinical trial, Biometric Society (ENAR) Annual Meeting, Pittsburgh, PA
- 1998 Design and analysis of clinical trials (one-day short course), Shanghai Medical University, Shanghai, China
- 1998 Categorical data analysis (one-day short course), Shanghai Medical University, Shanghai, China
- 1998 Statistical methods for modeling categorical response variables (two-day short course), Sanofi Research, Malvern, PA
- 1998 Analysis of repeated measurements using generalized estimating equations (half-day short course), Midwest Research Institute, Kansas City, MO
- 1998 Analysis of repeated measurements (one-day short course), Association of General Clinical Research Center Statisticians, Dallas, TX
- 1998 Generalized linear models, American Statistical Association Annual Meeting, Dallas, TX
- 1998 The analysis of repeated measurements: methods, extensions, comparisons, and recommendations, MD Anderson Cancer Center Houston, TX
- 1998 Methods for modeling categorical repeated measurements, 5th Annual Biopharmaceutical Applied Statistics Symposium, Hilton Head Island, SC
- 1998 Analysis of repeated measurements (one-day short course), 5th Annual Biopharmaceutical Applied Statistics Symposium, Hilton Head Island, SC
- 1999 The use of repeated measurements in clinical trials, Palmer Center for Chiropractic Research, Davenport, IA
- 1999 Methods for modeling categorical repeated measurements with application to clinical trials, Drug Information Association Workshop on Global Statistical Challenges and Strategies in the Pharmaceutical Industry, Hilton Head Island, SC
- 1999 Analysis of repeated measurements using the GEE method (two-hour short course), Biometric Society (ENAR) Spring Meeting, Atlanta, GA
- 1999 The analysis of repeated measurements: methods, extensions, comparisons, and recommendations, Department of Statistics, University of Missouri, Columbia, MO
- 1999 Issues in the design and analysis of clinical trials employing enrichment strategies for sample selection, Midwest Biopharmaceutical Statistics Workshop, Muncie, IN
- 1999 Introduction to the analysis of repeated measurements (half-day short course), Joint Statistical Meetings, Baltimore, MD

- 2000 Effects of covariance model assumptions on the analysis of repeated measurements using mixed linear models, Department of Preventive and Family Medicine, University of California San Diego, La Jolla, CA
- 2000 Introduction to the analysis of repeated measurements using mixed linear models (half-day short course), Midwest Biopharmaceutical Statistics Workshop, Muncie, IN
- 2000 Adjustment for baseline variables in the analysis of clinical trials, TAP Pharmaceuticals, Deerfield, IL
- 2000 Methods for modeling categorical repeated measurements with application to clinical trials (half-day short course), TAP Pharmaceuticals, Deerfield, IL
- 2000 Analysis of repeated measurements using mixed linear models and generalized estimating equations (one-day short course), SCIREX Corporation, Bloomingdale, IL
- 2000 Statistical methods for the analysis of ordered categorical data (half-day short course), Joint Statistical Meetings, Indianapolis, IN
- 2000 Effects of covariance model assumptions on the analysis of repeated measurements using mixed linear models, Merck Research Laboratories, Rahway, NJ
- 2000 Challenges facing statisticians and the statistical profession, Keynote Address, First Annual Biostatistics Conference, Purdue Pharma, Stamford, CT
- 2000 Analysis of repeated measurements (two-day short course), Purdue Pharma, Stamford, CT
- 2001 Statistical and practical issues in sample size estimation, Arizona Cancer Center, University of Arizona, Tucson, AZ
- 2001 Statistical methods for the analysis of ordered categorical data (half-day short course), Joint Statistical Meetings, Atlanta, GA
- 2002 Effects of covariance model assumptions on the analysis of repeated measurements using linear mixed models, Department of Biostatistics and Epidemiology, Cleveland Clinic Foundation, Cleveland, OH
- 2002 Statistical methods for the analysis of ordered categorical data (one-day short course), Northeastern Illinois Chapter of the American Statistical Association, Chicago, IL
- 2002 Statistical methods for the analysis of ordered categorical data (half-day short course), Joint Statistical Meetings, New York, NY
- 2002 Statistical and practical issues in sample size estimation, Department of Preventive and Family Medicine, University of California San Diego, La Jolla, CA
- 2002 Statistical methods for the analysis of ordered categorical data (three-hour tutorial), 58th Annual Deming Conference on Applied Statistics, Atlantic City, NJ
- 2002 Statistical methods for the analysis of repeated measurements (two-day short course), 58th Annual Deming Conference on Applied Statistics, Atlantic City, NJ
- 2003 Statistical methods for the analysis of repeated measurements (one-day short course), 22nd Annual Workshop in Applied Statistics, Southern California Chapter of the American Statistical Association, Long Beach, CA
- 2003 Statistical methods for the analysis of ordered categorical data (half-day short course), Joint Statistical Meetings, San Francisco, CA
- 2004 Statistics in the pharmaceutical industry: Opportunities for “higher order” involvement, San Diego Chapter of the American Statistical Association
- 2004 Statistical methods for the analysis of repeated measurements (one-day short course), Kansas/Western Missouri Chapter of the American Statistical Association, Kansas City, MO

- 2004 Statistical methods for the analysis of repeated measurements (one-day short course), Mid-Missouri Chapter of the American Statistical Association, Columbia, MO
- 2004 Statistics in the pharmaceutical industry: Opportunities for “higher order” involvement, Department of Epidemiology and Biostatistics, Case Western Reserve University, Cleveland, OH
- 2005 Starting (and succeeding) as an independent statistical consultant, American Statistical Association Statistical Consulting Section Roundtable Conference Call
- 2005 Categorical data analysis (one-day short course), Joint Statistical Meetings, Minneapolis, MN
- 2005 Clinical development 101: Lessons from other companies’ mistakes, Association of Clinical Research Professionals, San Diego, CA
- 2006 Pitfalls of exploratory and subgroup analyses: A tale of two companies, InterMune, Inc., Brisbane, CA
- 2006 Clinical development 101: Lessons from other companies’ mistakes. Phenomix Corporation, San Diego, CA
- 2006 Statistical methods for the analysis of categorical data (one-day short course), Medtronic, Inc., Minneapolis, MN
- 2006 Statistical methods for the analysis of repeated measurements (one-day short course), Medtronic, Inc., Minneapolis, MN
- 2007 Clinical development 101: Lessons from the mistakes of others, Department of Biostatistics, University of Iowa, Iowa City, IA
- 2007 Pitfalls of exploratory and subgroup analyses: A tale of two companies, Division of Epidemiology, University of California, Irvine, CA
- 2007 Noninferiority trials, Proteolix Corporation, South San Francisco, CA
- 2007 Categorical data analysis (half-day short course), Joint Statistical Meetings, Salt Lake City, UT
- 2008 Clinical development 101: Learning from the mistakes of others, Graduate Colloquium Invited Speaker, Northern Illinois University, Dekalb, IL
- 2008 Methodological and practical issues in the analysis of repeated measurements using linear mixed models, Graduate Colloquium Invited Speaker, Northern Illinois University, Dekalb, IL
- 2008 Data Safety Monitoring Boards (Panel Discussion), Joint Meeting of the Association of Clinical Research Professionals and the Southern California Pharmaceutical Medicine Group, San Diego, CA
- 2008 Adaptive clinical trial designs: Change you can believe in? Southern California Pharmaceutical Medicine Group, San Diego, CA

Service to Review Panels

- 1989 NIA/FDA Interim Analysis Subcommittee for the multi-center study of Tacrine in Alzheimer’s disease
- 1990 NCI Site visit team, Cancer Center Support Grant, Ohio State University Comprehensive Cancer Center
- 1996 External Review Committee, Alzheimer’s Disease Cooperative Study
- 1996 NIH Review Committee, “A Double-Blind, Placebo-Controlled Study of Selegiline and α -Tocopherol in Alzheimer’s Disease”
- 1996 Promotion Review Committee, Department of Family and Community Medicine,

- University of Arizona
- 1997 External Reviewer, Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services
 - 1997 Special Reviewer, NIH Epidemiology and Disease Control Study Section (EDC-2)
 - 1997 Promotion Review Committee, Department of Biostatistics, Columbia University School of Public Health
 - 1998 Special Emphasis Panel, National Institute of Dental Research
 - 1998 Scientific Reviewer, NIH Office of Alternative Medicine
 - 1998 Scientific Reviewer, NIH Oral Biology and Medicine Study Section (OBM-2)
 - 1998 Special Emphasis Panel, National Institute on Aging
 - 1999 Scientific Reviewer, NIH Oral Biology and Medicine Study Section (OBM-2)
 - 1999 Promotion Review Committee, Department of Public Health Sciences, Wake Forest University School of Medicine, Winston-Salem, NC
 - 2000-01 Data Monitoring Committee, “Inguinal Hernia Management: Watchful Waiting vs. Operation,” (American College of Surgeons)
 - 2001 Data Monitoring Committee, “An Open-Label Study of the Safety, Tolerability and Effectiveness of Repeated Courses of Intravenous Antegren in Subjects with Active Crohn’s Disease” (Elan Pharmaceuticals)
 - 2001 External Safety Advisory Board, Elan Pharmaceuticals
 - 2001 Scientific Reviewer, National Center for Complementary and Alternative Medicine
 - 2001 Data Monitoring Committee, “Phase I Study of Adenovirus/PSA Vaccine in Men with Metastatic Prostate Cancer” (National Cancer Institute)
 - 2006-09 Chairman, Data Monitoring Committee for an international, multicenter, phase 3 clinical trial of an investigational treatment for idiopathic pulmonary fibrosis
 - 2006-07 Data Monitoring Committee for an international, multicenter, phase 2 clinical trial of an investigational treatment for rheumatoid arthritis
 - 2006-08 Data Monitoring Committee for a multicenter, phase 3 clinical trial of a treatment for anemia in patients with chronic kidney disease
 - 2006- Data Monitoring Committee for a multicenter, phase 3 clinical trial of an investigational treatment for chronic, stable angina pectoris
 - 2007 Data Monitoring Committee for a multicenter, phase 2 clinical trial of an investigational treatment for Alzheimer’s disease
 - 2007- Chairman, Independent Data Monitoring Committee for a phase 1 clinical trial of an investigational treatment for critical limb ischemia
 - 2007- Data Monitoring Committee for a multicenter, phase 2 clinical trial of a CMV immunotherapeutic vaccine in donors and recipients undergoing hematopoietic cell transplant
 - 2007- Data Monitoring Committee for a multicenter, randomized, phase 2 clinical trial of an investigational treatment for liver disease associated with HCV infection
 - 2008- Data Monitoring Committee for an international, multicenter, randomized phase 3 trial of anti-platelet therapy after drug-eluding stent implantation
 - 2008- Data Monitoring Committee for an international, multicenter, randomized phase 3 trial of an investigational treatment for advanced, non-small cell lung cancer
 - 2008- Chairman, Independent Data Monitoring Committee for a multicenter, randomized phase 2 trial of an investigational treatment for neovascular, age-related macular degeneration

- 2009- Member, Independent Data Monitoring Committee for a multicenter, randomized phase 3 clinical trial in subjects with early idiopathic pulmonary fibrosis

Refereeing for Statistical and Medical Journals

- 1987 *Applied Statistics*
- 1988 *Archives of General Psychiatry*
Statistics and Probability Letters
- 1989 *American Journal of Public Health*
Archives of General Psychiatry
Canadian Journal of Statistics
Communications in Statistics
Statistica Sinica
- 1990 *American Journal of Epidemiology*
Communications in Statistics
Infection Control and Hospital Epidemiology
Statistica Sinica
- 1991 *Archives of General Psychiatry*
Biometrics
Communications in Statistics
- 1992 *Biometrics*
Communications in Statistics
Journal of Orthopaedic and Sports Physical Therapy
Statistics in Medicine
Statistica Sinica
- 1993 *American Journal of Epidemiology*
Applied Statistics
Biometrics
Canadian Journal of Statistics
Controlled Clinical Trials
Journal of the American Statistical Association
Journal of Orthopaedic and Sports Phys. Therapy
Statistica Sinica
- 1994 *The American Statistician*
Applied Statistics
Biometrics
Journal of the American Statistical Association
Journal of Educational and Behavioral Statistics
Statistics and Probability Letters
- 1995 *American Journal of Public Health*
Statistics in Medicine
The Journal of Urology
- 1996 *American Journal of Epidemiology*
Biometrics
International Statistical Review
Journal of Multivariate Analysis
Psychosomatic Medicine

- Survey Methodology*
The Journal of Urology
- 1997 *American Journal of Public Health*
Biometrics
International Statistical Review
Journal of Computational and Graphical Statistics
Journal of Statistical Planning and Inference
The Journal of Urology
Social Science Research
- 1998 *American Journal of Public Health*
The American Statistician
Biometrics
International Statistical Review
Journal of the American Statistical Association
Journal of Biopharmaceutical Statistics
Journal of Statistical Computation and Simulation
Psychosomatic Medicine
Social Science Research
Statistics in Medicine
The Journal of Urology
- 1999 *Annals of Otolaryngology, Rhinology and Laryngology*
Biometrics
Communications in Statistics
Journal of Biopharmaceutical Statistics
Psychosomatic Medicine
Statistics in Medicine
The Journal of Urology
- 2000 *The American Statistician*
Annals of Otolaryngology, Rhinology and Laryngology
Statistics in Medicine
The Journal of Urology
- 2001 *The American Statistician*
Annals of Otolaryngology, Rhinology and Laryngology
The Journal of Urology
- 2002 *The American Statistician*
Journal of Biopharmaceutical Statistics
Statistics in Medicine
- 2003 *Biostatistics*
Journal of Biopharmaceutical Statistics
The American Statistician
- 2004 *Statistics in Medicine*
Journal of Biopharmaceutical Statistics
- 2007 *Biometrics*
Statistics in Medicine
- 2008 *Statistics in Medicine*
- 2009 *The American Statistician*