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Education

6/84 - 2/89 Johns Hopkins School of Hygiene and Public Health
 PhD - Dept. of Epidemiology, 1989.
 Dissertation: "Evidence and Clinical Trials"
 MHS - Dept. of Biostatistics, 1986.
1976-78, 79-81 New York University School of Medicine, MD, 1981.
1978-79 Courant Institute: Graduate work in mathematical biology.
1972-76 Harvard College AB, 1976. Majored in Applied Mathematics and
 Biochemistry.

Professional experience

2/96 - **Associate Professor**, Johns Hopkins School of Medicine, Dept. of
 Oncology, Division of Biostatistics (Joint appointments in Epidemiology,
 Biostatistics and Pediatrics)
11/90 - 1/96 **Assistant Professor**, Johns Hopkins School of Medicine, Dept. of
 Oncology, Division of Biostatistics (Joint appointments in Epidemiology
 and Biostatistics)
11/88 - 10/90 **Instructor**, Johns Hopkins School of Medicine, Dept. of Oncology,
 Division of Biostatistics (Joint appointment in Epidemiology)
 • Director, Neuroblastoma Screening Project
 • Group Statistician, Lung Cancer Study Group
7/81- 6/84 **Resident in Pediatrics**, St. Louis Children's Hospital,
 Washington University.
6/80 - 1/81 **Research Associate**, National Academy of Sciences,
 Committee on Risk and Decision Making, Washington, DC.
Summer 1977, 79 **Biomathematician**, National Institutes of Health, Laboratory for
 Applied Studies

**Institute/Center
Affiliations**

On faculty of:
Johns Hopkins Center for Clinical Trials (1991-)
Johns Hopkins Graduate Training Program in Clinical Investigation (1994-)
Johns Hopkins Institute for the History and Philosophy of Science (1995-)
Johns Hopkins Bioethics Institute (1998 -)
Associate Director, Baltimore Cochrane Center (1994-98)
Co-Director, Johns Hopkins Evidence-Based Practice Center (1997-)

Committees

Johns Hopkins University

- JHU Dept. of Medicine Protocol Review Committee for the General Clinical Research Center (1991-2000).
- JHU Dept. of Pediatrics Protocol Review Committee for the Pediatric Clinical Research Unit (1992-).
- JHU Oncology Center Clinical Research Committee (1990-91)
- Oltipraz Cancer Chemorevention Trial in China, Data and Safety Monitoring Committee, Kathy Helzlsouer, PI, JHU (6/95 - present).
- Vitamin A Trial to reduce vertical transmission of AIDS, Richard Semba, PI, Data and Safety Monitoring Committee, JHU, (6/95 - 2000).
- Committee for Advanced Methods in Epidemiology (Chair), Department of Epidemiology, (1998 -2000)
- Curriculum Committee (Chair), Dept. of Epidemiology, (2002-)
- Curriculum and Academic Standards Committee, Graduate Training Program in Clinical Investigation (1996 -)
- Committee on Academic Standards, Johns Hopkins School of Public Health, (2003-)

National

- NIH Special Review Committee for program project in Clinical, Molecular and Epidemiologic Aspects of Herpes Infection, Bethesda, MD, 2/91.
- NIH Technology Assessment Panel on Voluntary Methods for Weight Loss and Control, Bethesda, MD, 3/92.
- NIH Human Growth Hormone ad hoc Protocol Review Committee, Bethesda, MD, 10/92.
- NIH Human Growth Hormone Trial Data Monitoring and Safety Committee, Bethesda, MD, 10/93 – 7/02.
- NIH Special Review Committee for Transfer of Biostatistical Methods to Cancer Epidemiology, Bethesda, MD, 2/93
- Institute of Medicine, National Academy of Sciences, Committee on the Health Effects of Agent Orange in Veterans, Bethesda, MD, 4/97 - 12/99.
- Institute of Medicine, National Academy of Sciences, Committee on the Link Between Agent Orange and Diabetes in Veterans, Bethesda, MD, 1/00-6/00
- Centers for Disease Control, Writing committee of Surgeon General's 2001 Report, Active Smoking and Health, 1/2000- 2002.
- Medical Advisory Panel of the National Blue Cross/Blue Shield Association Technology Assessment Program (representative of the American Academy of Pediatrics), 2001- .
- Institute of Medicine, National Academy of Sciences, Immunization Safety Review Committee, Bethesda, MD, 2001- .
- MD Anderson Cancer Center, External Advisory Board, 2001 - .
- Centers for Disease Control, Writing committee of Surgeon General's 2002

Report, Passive Smoking and Health, 4/2001- .

Centers for Medicaid and Medicare Services, Medicare Coverage Advisory Committee, 2003-

Center for Genetics and Public Policy, Washington DC, Panel on Health Outcomes of Children Born Using Assisted Reproductive Technologies (Chair), 2003-

Consultancies

Centers for Medicare and Medicaid Services, Coverage Analysis Group.

- Verteporfin therapy in age-related macular degeneration, 2002
- Implantable defibrillators in heart failure patients, 11/2002-2/2003

Presidential Advisory Committee on Human Radiation Experiments

Investigator on nationwide survey of attitudes of patients toward clinical research, Washington, DC, 11/94 - 8/95.

Health Technology Assessment Committee of the Minnesota

Health Care Commission, 1994. Consulted through Hayes, Inc. on assessment of PSA screening and Electronic fetal monitoring.

Office of Technology Assessment, Divisions of Oceans and Environment,

US Congress, 1992. Consulted on ICRP exposure standards for internal alpha-emitters.

Editorial Activities

Editor-in-chief, *Clinical Trials: Journal of the Society for Clinical Trials*, 2003-
Associate Editor (Statistics), *Annals of Internal Medicine* (1987 -)
Associate Editor, *Journal of General Internal Medicine* (1999 - 2001)

Reviewer for Controlled Clinical Trials, Statistics in Medicine, Journal of Clinical Oncology, Journal of the National Cancer Institute, American Journal of Epidemiology, American Journal of Public Health, JAMA, Lancet, British Medical Journal.

Positions / Awards

Myrto Lefkopoulou Distinguished Lecturer, Harvard Dept. of Biostatistics, 2000.

□□□, National Public Health Honor Society, 1989

National Research Service Award (NCI), 1984 - 88

President, St. Louis Physicians for Social Responsibility, 1982-84

U.S. Public Health Service Scholarship, 1978-81

Harvard Dean's List, 1974-6

Harvard National Scholar, 1972

Board Status

Board Certified in Pediatrics, 1986

Licensure

Licensed in Missouri, 1981 -1984.

Licensed in Maryland, 1984 - 1999.

Clinical Activities

Pediatric Staff, Sinai Hospital (1984-1991)

Pediatric Staff, Union Memorial Hospital (1984 -1989)

Pediatric Preceptor, JHH, Harriet Lane Clinic (9/84-6/85)

Children and Youth Clinic Physician (part-time), JHH (8/85-6/86)

Professional Societies

Society for Clinical Trials
• Chair, Student Scholarship Committee, 1999-2003
• Board of Directors, 2001 -
Institute of Mathematical Statistics
American Statistical Association
Society for Epidemiological Research

Publications

- 1.) Perlman JM, **Goodman SN**, Kreusser KL, Volpe JJ: "Reduction in Intraventricular Hemorrhage by Elimination of Fluctuating Cerebral Blood-Flow Velocity in Preterm Infants with Respiratory Distress Syndrome", *N Eng J Med*, 312:1353-7, 1985.
- 2.) **Goodman SN** and Royall R: "Evidence and Scientific Research" (with editorial comment by C. Poole), *American Journal of Public Health*, 78:1568-74, 1988. (reprinted in *Boletín de la Oficina Sanitaria Panamerica*, 115: 235-249,1993)
- 3.) **Goodman SN**: "Meta-analysis and Evidence" (with commentary by D. Zucker and S. Yusuf), *Controlled Clinical Trials*, 10:188-204, 435, 1989.
- 4.) Gore SD, Kastan MB, **Goodman SN** and Civin CI: "Detection of Minimal Residual T-Cell Acute Lymphoblastic Leukemia by Flow Cytometry", *Jl Immun Meth* 132:275-28, 1990.
- 5.) **Goodman SN**: "Have You Ever Meta-analysis You Didn't Like?", *Annals of Internal Medicine* 114:244-6, 1991. (Reprinted in *Current Contents*, 10/10/91)
- 6.) Hare JM, Baughman KL, Kass DA, **Goodman SN**, and Ladenson PW: "Clinical Utility of Plasma Atrial Natriuretic Factor Assay in Patients with Dilated Cardiomyopathy, Myocarditis and Cardiac Transplantation", *Am J Cardiology* 67: 391-7, 1991.
- 7.) Tersmette AC, **Goodman SN**, Offerhaus GJA, Tersmette KWF, Giardiello FM, Vandembroucke JP, Tytgat GNJ: "Multivariate analysis of the risk of stomach cancer after ulcer surgery in an Amsterdam cohort of post-gastrectomy patients", *Am J Epidemiology*, 134:14-21., 1991.
- 8.) **Goodman SN**: "Neuroblastoma Screening Data : An Epidemiologic Analysis", *Am J Dis Child*, 145:1415-22, 1991.
- 9.) **Goodman SN**: "A Comment on P-values, Replication and Evidence", *Statistics in Medicine*, 11:875-879, 1992.
- 10.) NIH Technology Assessment Conference Panel. Methods for Voluntary Weight Loss and Control: Technology Assessment Conference statement. *Ann Intern Med*, 116:942-49, 1992.
- 11.) **Goodman SN**: "P-values, Hypothesis Tests and Likelihood: Implications for Epidemiology of a Neglected Historical Debate" (with commentary by W. Bellhouse and response) , *Am J Epidemiology*, 137:485-96, 1993. (reprinted in *Boletín de la Oficina Sanitaria Panamerica*, 1995). Reply to letter of S. Greenland 139:117-118, 1994.
- 12.) Westra WH, Offerhaus GJA, **Goodman SN**, Slebos RJC, Polak M, Baas IO, Rodenhuis S, Hruban RH. Overexpression of the p53 Tumor Suppressor Gene Product in Primary Lung Adenocarcinomas is Associated with Cigarette Smoking. *Am J Surgical Pathology*, 17:213-20, 1993.

- 13.) Westra WH, Slebos RJC, Offerhaus GJA, **Goodman SN**, Evers SG, Rodenhuis S, Hruban RH: "K-Ras oncogene activation in lung adenocarcinomas from ex-smokers: evidence that K-Ras mutations are an early and irreversible event in the development of adenocarcinoma of the lung", *Cancer*, 72:432-438,1993.
- 14.) Hruban RH, van Mansfeld ADM, Offerhaus GJA, vanWeering DHJ, Allison DC, **Goodman SN**, Kensler TW, Bose KK, Cameron JL, Bos JL: "K-Ras oncogene activation in adenocarcinoma of the human pancreas", *Am J of Pathology*, 143:545-554, 1993.
- 15.) Bass EB, Powe NR, **Goodman SN**, Graziano SL, Griffiths RI, Kickler TS, Wingard JR: "Efficacy of intravenous immune globulin in preventing complications of bone marrow transplantation: a meta-analysis", *Bone Marrow Transplantation*, 12:273-282, 1993.
- 16.) Griffiths RI, Bass EB, Powe NR, Anderson GF, **Goodman SN**, Wingard JR: "Factors Influencing Third Party Payer Costs for Allogeneic Bone Marrow Transplantation.", *Bone Marrow Transplantation*, 12:43-48, 1993.
- 17.) DiGiuseppe JA, Hruban RH, **Goodman SN**, Allison DC, Cameron JL, Offerhaus JA: "Overexpression of the P53 Tumor Suppressor Protein in Pancreatic Adenocarcinoma", *Am J Clin Pathol*, 101:684-688, 1994.
- 18.) Gaudin PB, Rayburn BK, Hutchins GM, Kasper EK, Baughman KL, **Goodman SN**, Lecks LE, Baumgartner WA, Hruban RH: "Peritransplant Injury to the Myocardium is Associated with the Development of Accelerated Arteriosclerosis in Heart Transplant Recipients", *Am J of Surgical Pathology*, 18:338-46, 1994.
- 19.) **Goodman SN**, Berlin JA: "The Use of Predicted Confidence Intervals When Planning Experiments and the Misuse of Power When Interpreting Results", *Annals of Internal Medicine*, 121:200-206, 1994.
- 20.) Sugarman J, Kass N, Faden R, **Goodman SN**: "Catalysts for conversations about advance directives: The influence of physician and patient characteristics." *Jl of Law, Medicine and Ethics*, 22:29-35, 1994.
- 21.) Kass N, Sugarman J, **Goodman SN**, Faden R: "The Influence of HIV serostatus on physicians' clinical decisions," *AIDS and Public Policy Jl*, 9:93-99, 1994.
- 22.) **Goodman SN**, Berlin JA, Fletcher SW, Fletcher RH: "Effect of peer review and editing on the quality of manuscripts published in *Annals of Internal Medicine*", *Annals of Internal Medicine*, 121:11-21, 1994.
- 23.) Altman DG, **Goodman SN**: "Transfer of Technology from Statistical Journals to the Biomedical Literature: Past Trends and Future Predictions." *JAMA*, 272:29-32, 1994.
- 24.) Justice AC, Fletcher SW, Fletcher RH, Berlin JA, **Goodman SN**: "Do Journal Readers and Reviewers Agree on Manuscript Quality?", *JAMA*, 272:117-119, 1994.
- 25.) Dieterich M, **Goodman SN**, Rojas-Corona R, et al. "Multivariate Analysis of Prognostic Features in Malignant Pleural Effusions of Breast Cancer Patients." *Acta Cytologica*. 38(6):945-52, Nov-Dec 1994

- 26.) Brennan J, Boyle J, Koch W, **Goodman SN**, et al. "Association Between Cigarette Smoking and Mutation of the p53 Gene in Head and Neck Squamous Carcinoma." *N Eng J Med*, 332:712-7, 1995.
- 27.) Brennan J, Mao L, Hruban R, Boyle J, Eby Y, Koch W, **Goodman SN**, Sidransky D. "Molecular Assessment of Histopathologic Staging." *N Eng J Med*, 332:429-35, 1995.
- 28.) Mulder J-WR, Baas I, Polak MM, **Goodman SN**, Offerhaus GJA. "Evaluation of p53 protein expression as a marker for long-term prognosis in colorectal carcinoma." *Br J Cancer*, 71:1257-1262, 1995.
- 29.) **Goodman SN**, Zahurak M, Piantadosi S: "Practical Modifications of the Continual Reassessment Method for Phase I Trials," *Statistics in Medicine*, 14:1149-1162, 1995
- 30.) **Goodman, SN**. Commentary on "Confounding and Effect-Modification". *Am J Epidemiology*, 141:1111-1112, 1995.
- 31.) Yeo CJ, Cameron JL, Lillemoe KD, Sitzmann JV, Hruban RH, **Goodman SN**, Dooley WC, Coleman J, Pitt HA: "Pancreaticoduodenectomy for Cancer of the Head of the Pancreas: 201 Patients." *Annals of Surgery*, 221:721-733, 1995.
- 32.) Bedi A, Miller C, Hanson J, **Goodman SN**, et al. Association of BK virus with failure of prophylaxis against hemorrhagic cystitis following bone marrow transplantation. *Journal of Clinical Oncology* 13:1103-9, 1995.
- 33.) Rosales FJ, Kjolhede C, **Goodman SN**: "Efficacy of a Single Oral Dose of 200,000 I.U. of Oil-soluble Vitamin A in Measles-associated Morbidity". *Am J Epidemiol.* 143: 413-422, 1996.
- 34.) Silva S, Clark L, **Goodman SN**, Plotnick L. Can caretakers of children with IDDM accurately measure small insulin doses and dose changes? *Diabetes Care* 19:56-9, 1996.
- 35.) Giardiello FM, Gurbuz AK, Bayless TM, **Goodman SN**, Yardley JH. "Colorectal Cancer in Ulcerative Colitis: Survival in Patients With and Without Colorectal Cancer Symptoms." *Inflammatory Bowel Diseases*, 2:6-10, 1996.
- 36.) Day JD, DeGiuseppe JA, Yeo C, Lai-Goldman M, Anderson SM, **Goodman SN**, Kern SE, Hruban RH: "Immunohistochemical evaluation of the HER-2/neu expression in Pancreatic Adenocarcinoma and Pancreatic Intraepithelial Neoplasms," *Human Pathology*, 27:119-24, 1996.
- 37.) Helman AW, Hartert TV, Ray SC, Emile EG, Kowalski TE, Pompili VJ, Sisson SD, Tidmore WC, vom Eigen KA, **Goodman SN**, Lietman PS, Petty BG, Flexner C: "Oral Antibiotic Treatment Of Right-Sided Staphylococcal Endocarditis In Injection Drug Users: Prospective Randomized Comparion With Parenteral Therapy." *Am J Med*, 101:68-76, 1996.
- 38.) Furuta K, Zahurak M, Yang X-L, Rosad, C, **Goodman SN**, August JT, Hamilton SR. "Relationship between CD44 Expression and Cell Proliferation in Epithelium and Stroma of Colorectal Neoplasms." *Am J Path*, 149:1147-1155, 1996.
- 39.) Koch WM, Brennan JA, Zahurak M, **Goodman SN**, Westra WH, Schwab D, Yoo GH, Lee DJ, Forastiere AA, and Sidransky D: "p53 Mutation and Locoregional Treatment Failure in Head and Neck Squamous cell carcinoma," *JNCI*. 88:1580-6, 1996.

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- 40.) Rozenblum E, Schutte M, Goggins M, Hahn SA, Panzer S, Zahurak M, **Goodman SN**, Sohn TA, Hruban RH, Yeo CJ, Kern SE. Tumor-suppressive pathways in pancreatic carcinoma. *Cancer Research*. 57(9):1731-4, 1997.
 - 41.) Furuta K, Zahurak M, **Goodman SN**, Hamilton SR, and August JT, "CD44 Expression in the Stromal Matrix of Colorectal Cancer: Association with Prognosis" *Clinical Cancer Research*, 4:21-29, 1998.
 - 42.) **Goodman SN**: "Multiple Comparisons, Explained." *Am J Epidemiology*, 147(9):807-12; discussion 815, 1998.
 - 43.) Sugarman J, Kass NE, **Goodman SN**, Parentesis P, Fernandes P, Faden RR: "What Patients Say about Medical Research: A National Study," *IRB*, 20(4):1998.
 - 44.) **Goodman SN**, Altman DG, George S: "Statistical Reviewing in Medical Journals: Caveat Lector?" *Journal of General Internal Medicine*, 13:753-756, 1998.
 - 45.) Noga SJ, Seber A, Davis JM, Berenson RJ, Vogelsang GB, Braine HG, Hess AD, Marcellus D, Miller CA, Sharkis SJ, **Goodman SN**, Santos GW, Jones RJ. CD34 augmentation improves allogeneic T cell-depleted bone marrow engraftment. *J Hematother* 7:151-7, 1998
 - 46.) Hatch C and **Goodman SN**: "The Perceived Value of Providing Peer Reviewers With Abstracts and Preprints of Related Published and Unpublished Papers" *JAMA* 280:273-274, 1998.
 - 47.) **Goodman SN**. Towards Evidence-based Medical Statistics, I: The P-value fallacy. *Ann. Intern Med.* 130:995-1004, 1999.
 - 48.) **Goodman SN**. Towards Evidence-based Medical Statistics, II: The Bayes Factor. *Ann Intern Med.* 130:1005-1013, 1999
 - 49.) **Goodman SN**. Probability at the bedside: the knowing of chances or the chances of knowing? [editorial]. *Ann Intern Med.* 130(7):604-6, 1999.
 - 50.) Rashid A, Zahurak M, **Goodman SN**, Hamilton SR. Genetic epidemiology of mutated K-ras proto-oncogene, altered suppressor genes, and microsatellite instability in colorectal adenomas. *Gut*. 44(6):826-33, 1999.
 - 51.) Keller JJ, Offerhaus GJ, Polak M, **Goodman SN**, Zahurak ML, Hyland LM, Hamilton SR, Giardiello FM. Rectal epithelial apoptosis in familial adenomatous polyposis patients treated with sulindac. *Gut*. ;45(6):822-828, 1999.
 - 52.) Hibi K, Westra WH, Borges M, **Goodman S**, Sidransky D, Jen J. PGP9.5 as a candidate tumor marker for non-small-cell lung cancer. *Am J Pathol* . 155(3):711-5, 2000.
 - 53.) Segal JB, McNamara RL, Miller MR, Kim N, **Goodman SN**, Powe NR, Robinson KA, Bass EB. Prevention of thromboembolism in atrial fibrillation A meta-analysis of trials of anticoagulants and antiplatelet drugs *J Gen Intern Med.* 15:56-67, 2000.
 - 54.) Crawford TO, Mandir AS, Lefton-Greif MA, **Goodman SN**, Goodman BK, Sengul H Lederman HM. Quantitative Neurologic Assessment Of Ataxia-Telangiectasia: Predictable Disease Trajectory Despite Variation In Phenotype. *Neurology*, 54:1505-1509, 2000.

- 55.) Lehmann HP, **Goodman SN**. Bayesian communication: a clinically significant paradigm for electronic publication. *J Am Med Inform Assoc*. 7(3):254-66, 2000.
- 56.) Carey LA, Kim NW, **Goodman S**, Marks J, Henderson G, Umbricht CB, Dome JS, Dooley W, Amshey SR, Sukumar S. Telomerase activity and prognosis in primary breast cancers. *J Clin Oncol*. 17(10):3075-81, 1999.
- 57.) Dees EC, O'Reilly S, **Goodman SN**, Sartorius S, Levine MA, Jones RJ, Grochow LB, Donehower RC, Fetting JH. A prospective pharmacologic evaluation of age-related toxicity of adjuvant chemotherapy in women with breast cancer. In press, *Cancer Investigation*. 2000.
- 58.) Segal JB, McNamara RL, Miller MR, Kim N, **Goodman SN**, Powe NR, Robinson K, Yu D, Bass EB. The evidence regarding the drugs used for ventricular rate control. *J Fam Pract*. 49(1):47-59, 2000.
- 59.) Blaisdell CJ, **Goodman SN**, Clark K, Casella J, Loughlin G. Pulse Oximetry is a Poor Predictor of Hypoxemia in Stable Children with Sickle Cell Disease. *Arch Pediatr Adolesc Med*, 154:900-3, 2000
- 60.) Miller M, McNamara R, Segal J, Kim N, Robinson K, **Goodman SN**, Powe N, Bass E. Efficacy Of Agents Of Pharmacological Conversion Of Atrial Fibrillation And Maintenance of sinus Rhythm: A Meta-analysis of Clinical Trials. *The Journal of Family Practice*, 49:1033-1046, 2000.
- 61.) Flinn IW, **Goodman SN**, Post L, Jamison J, Miller CB, Gore S, Diehl L, Willis C, Ambinder RF, Byr JC. A dose-finding study of liposomal daunorubicin with CVP (COP-X) in advanced NHL. *Ann Oncol.*, 11:691-5, 2000.
- 62.) Esteller M, Garcia-Foncillas J, Andion E, **Goodman SN**, Hidalgo OF, Vanaclocha V, Baylin SB, Herman JG. Inactivation of the DNA-Repair Gene MGMT and the Clinical Response of Gliomas to Alkylating Agents. *N Engl J Med*. 343(19):1350-1354, 2000.
- 63.) Hahn HA, Armstrong DK, Chen TL, Grochow L, Passos-Coelho J, **Goodman SN**, Davidson NE, Kennedy MJ. Novobiocin in combination with high-dose chemotherapy for the treatment of advanced breast cancer: a phase 2 study. *Biol Blood Marrow Transplant*. 6:335-43, 2000.
- 64.) Giardiello FN, Brensinger JD, Tersmette AC, **Goodman SN**, Johnson KA, Booker SV, Petersen GM, Booker SV, Cruz-Correa M, Offerhaus GJA. Very High Risk of Cancer in Familial Peutz-Jeghers Syndrome. *Gastroenterology*, 119:1447-1453, 2000.
- 65.) Cummings K, Lee S, West E, Fein S, Cid-Ruzafa J, Aoki Y, Sulkowsky M, **Goodman SN**. Interferon and Ribavirin vs. Interferon Alone in the Treatment of Chronic Hepatitis C: A Meta-analysis of Randomized Clinical Trials *JAMA*, 285:193-199, 2001.
- 66.) Picco MF, **Goodman SN**, Reed J, Bayless TM. Methodologic pitfalls in the determination of genetic anticipation: the case of Crohn disease. *Ann Intern Med* 134(12):1124-9, 2001.
- 67.) Shih IM, Zhou W, **Goodman SN**, Lengauer C, Kinzler KW, Vogelstein B. Evidence that genetic instability occurs at an early stage of colorectal tumorigenesis. *Cancer Res*, 6:818-22, 2001.
- 68.) Zhou W, Galizia G, **Goodman SN**, Romans KE, Kinzler KW, Vogelstein B, Choti MA, Montgomery EA. Counting alleles reveals a connection between chromosome 18q loss and vascular invasion. *Nat Biotechnol*, 19:78-81, 2001.

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- 69.) **Goodman SN.** Of P-values and Bayes: A Modest Proposal. *Epidemiology*, 12:295-297, 2001.
- 70.) Hruban RH, Adsay NV, Albores-Saavedra J, Compton C, Garrett E, **Goodman SN**, Kern SE, Klimstra DS, Kloppel G, Longnecker DS, Luttges J, Offerhaus GJA. Pancreatic intraepithelial neoplasia (PanIN): A New nomenclature and classification system for pancreatic duct lesions. *Am J Surg Pathol*, 25:579-586, 2001.
- 71.) Guallar E, **Goodman SN.** Statins and cancer: a case of meta-uncertainty. [Editorial] *Am J Med* 110:738-40, 2001.
- 72.) Dong SM, Traverso G, Johnson C, Geng L, Favis R, Boynton K, Hibi K, **Goodman SN**, D'Allesio M, Paty P, Hamilton SR, Sidransky D, Barany F, Levin B, Shuber A, Kinzler KW, Vogelstein B, Jen J. Detecting colorectal cancer in stool with the use of multiple genetic targets. *J Natl Cancer Inst*, 93(11):858-65, 2001.
- 73.) Zhou W, **Goodman SN**, Galizia G, Lieto E, Ferraraccio F, Pignatelli C, Purdie CA, Piris J, Morris R, Harrison DJ, Paty PB, Culliford A, Romans KE, Montgomery EA, Choti MA, Kinzler KW, Vogelstein B. Counting alleles to predict recurrence of early-stage colorectal cancers. *Lancet* 359(9302):219-25, 2002.
- 74.) Segal JB, McNamara RL, Miller MR, Powe NR, **Goodman SN**, Robinson KA, Bass EB. Anticoagulants or antiplatelet therapy for non-rheumatic atrial fibrillation and flutter. *Cochrane Database Syst Rev* 2001;1.
- 75.) Iannone R, Luznik L, Engstrom LW, Tennessee SL, Askin FB, Casella JF, Kickler TS, **Goodman SN**, Hawkins AL, Griffin CA, Noffsinger L, Fuchs EJ. Effects of mixed hematopoietic chimerism in a mouse model of bone marrow transplantation for sickle cell anemia. *Blood* 2001;97(12):3960-5.
- 76.) Brem RF, Schoonjans JM, **Goodman SN**, Nolten A, Askin FB, Gatewood OM. Nonpalpable breast cancer: percutaneous diagnosis with 11- and 8-gauge stereotactic vacuum-assisted biopsy devices. *Radiology* 2001;219(3):793-6.
- 77.) Friedmann AM, Sengul H, Lehmann H, Schwartz C, **Goodman S.** Do basic laboratory tests or clinical observations predict bleeding in thrombocytopenic oncology patients? A reevaluation of prophylactic platelet transfusions. *Transfus Med Rev* 16(1):34-45, 2002.
- 78.) Altman DG, **Goodman SN**, Schroter S. How statistical expertise is used in medical research. *JAMA* 287:2817-20, 2002.
- 79.) Tascilar M, van Rees BP, Sturm PD, Tytgat GN, Hruban RH, **Goodman SN**, Giardiello FM, Offerhaus GJ, Tersmette AC. Pancreatic cancer after remote peptic ulcer surgery. *J Clin Pathol* 55(5):340-5, 2002.
- 80.) Esteller M, Gaidano G, **Goodman SN**, Zagonel V, Capello D, Botto B, Rossi D, Gloghini A, Vitolo U, Carbone A, Baylin SB, Herman JG. Hypermethylation of the DNA repair gene O(6)-methylguanine DNA methyltransferase and survival of patients with diffuse large B-cell lymphoma. *J Natl Cancer Inst* 94(1):26-32, 2002.
- 81.) **Goodman SN.** The mammography dilemma: a crisis for evidence-based medicine? [Editorial] *Ann Intern Med* 137(5):363-5, 2002

- 82.) Lehmann HP, Robinson KA, Andrews JS, Holloway V, **Goodman SN**. Acne therapy: a methodologic review. *J Am Acad Dermatol* 47(2):231-40, 2002.
- 83.) Chang HW, Lee SM, **Goodman SN**, Singer G, Cho SK, Sokoll LJ, Montz FJ, Roden R, Zhang Z, Chan DW, Kurman RJ, and Shih Ie M. Assessment of plasma DNA levels, allelic imbalance, and CA 125 as diagnostic tests for cancer. *J Natl Cancer Inst* 94: 1697-1703, 2002.
- 84.) Mahadevia PJ, Fleisher LA, Frick KD, Eng J, **Goodman SN**, Powe NR. Lung cancer screening with helical computed tomography in older adult smokers: a decision and cost-effectiveness analysis. *JAMA*. 289:313-22, 2003.
- 85.) Califf RM, Morse MA, Wittes J, **Goodman SN**, Nelson DK, DeMets DL, Iafrate RP, and Sugarman J. Toward protecting the safety of participants in clinical trials. *Control Clin Trials* 24: 256-271, 2003.
- 86.) Bradley DJ, Bradley EA, Baughman KL, Berger RD, Calkins H, **Goodman SN**, Kass DA, Powe NR. Cardiac Resynchronization and Death from Progressive Heart Failure. *JAMA*. 289:730-740, 2003.
- 87.) **Goodman SN**. The P-value, Devalued. *International Journal of Epidemiology*, in press, 10/2003. [Invited commentary]

Book Chapters / Technical Reports / Miscellaneous

- 1.) **Goodman SN**: "Causes of Disagreement about the Direction of Cancer Trends", Technical report to Committee on Risk and Decision Making, National Research Council, Washington DC, 2/81.
- 2.) **Goodman SN**: "Evidence and Clinical Trials", doctoral dissertation for the Dept. of Epidemiology, JHU School of Hygiene and Public Health, 3/89.
- 3.) **Goodman SN**: "Adequacy of International Council on Radiation Protection (ICRP) Standards for Internal Alpha-Emitters", Technical report to Office of Technology Assessment, Divisions of Oceans and Environment, US Congress, 12/92.
- 4.) **Goodman SN** and Dickersin K: "Meta-analysis; Nuisance or New Science?", *Medical and Health Annual*, *Encyclopedia Britannica*, 1995 Edition.
- 5.) **Goodman SN**. "Philosophical foundations of causality arguments in the smoking-disease debate," Background paper prepared for Minnesota tobacco lawsuit, 8/97.
- 6.) **Goodman SN**. "Meta-analysis in Health Services Research," in Armenian H, Shapiro SS, eds. *Research Methods in Health Services Research*, Oxford University Press, 1998.
- 7.) **Goodman SN**: "The P-Value," in Armitage P, Colton T, eds. *Encyclopedia of Biostatistics*, Wiley, 1998.
- 8.) **Goodman SN**. Commentary on 'Is meta-analysis a valid approach in the evaluation of small effects?' by S. Shapiro. In: Hoffmeister H, Szklo M, Thamm M, eds. *Epidemiologic Practices in Research on Small Effects*. Berlin: Springer Verlag, pp.113-118, 1998.
- 9.) **Institute of Medicine Committee on Veterans and Agent Orange**. *Update 1998*, National Academy of Sciences Press, Washington, DC, 1999. (contributor)

- 10.) **Institute of Medicine Committee on Veterans and Agent Orange.** Report on Agent Orange and Diabetes. National Academy of Sciences Press, Washington, DC, 2000. (contributor)
- 11.) **Goodman SN.** “Measuring Truth and Uncertainty in Florida and Beyond,” Baltimore Sun (Op-Ed commentary), December 3, 2000.
- 12.) **Goodman SN.** “The First Quantum Election,” Weekend All Things Considered, National Public Radio, December 3, 2000.

Letters

- 1.) **Goodman SN:** On “Medical planning for nuclear war,” *NEJM*, December 1983.
- 2.) **Goodman SN:** “One or Two-Sided P-values?” *Controlled Clinical Trials*, 9:387-8,1988.
- 3.) **Goodman SN:** On “Sleep deprivation of residents”,*JAMA*, Feb. 10, 1989.
- 4.) **Goodman SN:** On “Confidence interval and power analyses,” *Epidemiology*, 5:266-8, 1994.
- 5.) **Goodman SN:** On “Calculating the longevity of the human species,”*Nature*, 368:106-7, 1994.
- 6.) **Goodman SN:** Reply to “Re: Statistical significance testing in the *American Journal of Epidemiology*, 1970-1990,” 142:103, 1995.
- 7.) **Goodman SN** and Sengul H: On “Bayesian Analysis for a Single 2x2 Table,” *Statistics in Medicine*, 17:2147-2148, 1998.

Abstracts

- 1.) **Goodman SN:** “Evidence in Clinical Trials”, *Cont. Clin. Trials*, 8: 312, 1987 (presented at the meeting of the Society for Clinical Trials, Atlanta Ga, May 1987).
- 2.) **Goodman SN:** “Evidential Analysis of Sequential Trials”, *Cont. Clin. Trials*, 9: 246, 1988 (presented at the meeting of the Society for Clinical Trials, San Diego CA, May 1988).
- 3.) **Goodman SN** and Stewart WS: “The Effect of Temporal Patterns in Exposure and Disease on Estimates of Relative Risk in Epidemiologic Studies”, *American Journal of Epidemiology*, 128:905, 1988 (Meeting of the Society for Epidemiologic Research, Vancouver BC, June 1988).
- 4.) Westra WH, Slebos RJC, Offerhaus GJA, **Goodman SN**, Evers SG, Rodenhuis S, Hruban RH: “K-Ras oncogene activation in lung adenocarcinomas from ex-smokers: evidence that K-Ras mutations are an early and irreversible event in the development of adenocarcinoma of the lung” , Presented at the meeting of the American Academy of Pathology, 1992.
- 5.) **Goodman SN:** “A Likelihood-Based Graphical Method for Meta-analysis”, (Presented at the meeting of the Society for Clinical Trials, Philadelphia, May 1992).
- 6.) **Goodman SN**, Dailey B, Cochran L, Corden B, Patel J, Josephs J, Civin C: “The Feasibility of Neuroblastoma Screening in Maryland”, (Presented at the meeting of Society for Pediatric Research, Baltimore, May 1992).
- 7.) Hruban RH, Offerhaus GJA, van Mansfeld ADM, Allison DC, **Goodman SN**, Kensler TW, Kern SE, Cameron JL, Bos JL: “K-Ras oncogene activation in adenocarcinoma of the human pancreas is associated with cigarette smoking”, (American Academy of Pathology, 1993).
- 8.) DiGiuseppe JA, Hruban RH, **Goodman SN**, Allison DC, Cameron JL, Offerhaus JA: “Overexpression of the P53 Tumor Suppressor Protein in Pancreatic Adenocarcinoma”, (American Academy of Pathology, 1993).

9.) Kelly K, Lazenby A, Yardley J, **Goodman S**, Perman J, Sampson H: "Eosinophilic Infiltration of the Esophagus Due to Unsuspected Food Protein Hypersensitivity: Response to Elemental Diet," (American Gastroenterological Association, Boston, MA, 5/93).

10.) **Goodman SN**, Berlin JA, Fletcher SW, Fletcher RH: "Effect of peer review and editorial changes on the quality of manuscripts published in *Annals of Internal Medicine*", (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93).

11.) **Goodman SN**, George S, Altman DG: "The utilization of expert statistical and methodologic reviewers in biomedical journals", (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93)

12.) Berlin JA, **Goodman SN**, Fletcher SW, Fletcher RH: "Effects of peer review and editing on readers' perception of research manuscripts published in *Annals of Internal Medicine*", (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93).

13.) Justice AC, Fletcher SW, Fletcher RH, Berlin JA, **Goodman SN**: "Do Journal Readers and Reviewers Agree on Manuscript Quality?" (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93).

14.) Berlin JA, **Goodman SN**, Fletcher SW, Fletcher RH: "An Instrument for Assessing the Quality of Reporting of Clinical Research", (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93).

15.) Altman DG, **Goodman SN**: "Transfer of Technology from Statistical Journals to the Biomedical Literature." (Presented at the 2nd International Peer Review Congress, Chicago, IL, 9/93).

16.) Gaudin PB, Rayburn BK, Hutchins GM, Kasper EK, Baughman KL, **Goodman SN**, Lecks LE, Baumgartner WA, Hruban RH: "Peritransplant Injury to the Myocardium is Associated with the Development of Accelerated Arteriosclerosis in Heart Transplant Recipients", Laboratory Investigation, 70:28A, 1994.

17.) **Goodman, SN**: "A Method For Allocating Evidence in Meta-Analyses" (Presented at the Second International Cochrane Colloquium, Hamilton, Ontario, 10/94)

18.) Kelley MJ, Kennedy MJ, Fetting JH, Gordon G, Davidson NE, Abeloff MD, Huelskamp AM, Zahurak ML, **Goodman SN**: "Prognostic Factors In Metastatic Breast Cancer Patients Treated With High-Dose Consolidation Therapy (Hdct) And Autologous Bone Marrow Transplantation (Abmt)."

19.) Lehmann H, **Goodman SN**: "Physicians' Conception of 'Clinical Significance", presented at the meeting of the Society for Medical Decision Making, 10/95.

20.) Seber A, Zahurak M, Noga SJ, Jones RJ, **Goodman SN**, Vogelsang GB: "Transient Leukocyte Slump: A Common Occurrence after Allogeneic BMT," 1995 Am. Society of Hematology meetings.

21.) Rowinsky EK, Mackey MK, **Goodman SN**: Meta-analysis of Paclitaxel Dose-reponse and Dose-intensity in Recurrent or Refractory Ovarian Cancer, 1996 ASCO meetings (Philadelphia, PA).

22.) Dees EC, O'Reilly S, **Goodman SN**, Jones RJ, Sartorius S, Grochow LB, Donehower RC, Fetting JH: "A Prospective Pharmacologic Evaluation of Age-Related Toxicity of Adjuvant Chemotherapy in Women with Breast Cancer, 1997 ASCO meetings.

Teaching

Johns Hopkins University

Doctoral Seminar, Department of Epidemiology, JHU School of Hygiene and Public Health (**Course director**, 2001-).

Inferential Problems in Epidemiologic Studies and Clinical Trials, Department of Epidemiology, JHU School of Hygiene and Public Health (**Primary Instructor**, 1993- present).

Meta-analysis, Department of Epidemiology, JHU School of Hygiene and Public Health (**Course director**, 1995 -).

Methods in Clinical Research, JHU Dept. of Medicine, (full-time 2 week course for faculty and fellows; **Lecturer**, 1990; **Course Co-director**, 1991-present).

Clinical Trials in 20 Hours, Department of Oncology, JHU School of Medicine, **Course faculty** – organized and given jointly by faculty of Oncology Biostatistics, 2001 -)

The Science of Clinical Investigation, JHU School of Medicine, **Course faculty**, 1997- present.

CORE – Course on Research Ethics, JHU School of Medicine, (Bi-annual course for research fellows and faculty, **Course faculty**, 1998 – present)

Clinical Epidemiology, JHU School of Medicine, **Lecturer**, 1999 – present.

Meta-Analysis, 1 week course, Graduate Summer Program in Epidemiology, JHU School of Hygiene and Public Health (**Primary Instructor**, 1995 - 1996).

Issues and Methods in the Interpretation of Medical Research, Department of Epidemiology, JHU School of Hygiene and Public Health (**Primary Instructor**, Spring, 1991).

Seminar on Data Interpretation, JHU Dept. of Pediatrics, (Didactic biweekly year-long seminar for pediatric fellows, **Primary instructor**, 1990-1)

Advanced Methods in Epidemiology, Dept. of Epidemiology, JHU School of Hygiene and Public Health (**Lab Instructor**, 1985-87)

Coordinator, Seminar Series for Center for Clinical Trials, 1991- 1997.

Short Courses

“Essentials of Evidence-Based Medicine,” 1-day course for medical employees of Blue Shield/Blue Cross of Michigan, March 2003.

“Assessing and synthesizing medical evidence,” 2-day course for CMS staff. (Centers for Medicare and Medicaid Services, Coverage Analysis Group). March 2001, April 2001, January 2002.

“How to do Cochrane systematic reviews:,” Three 1-2 day courses 1996-7.

Invited faculty for one-week course on clinical research methods sponsored by the American Association of Cancer Research and the American Society of Clinical Oncology, Vail, Colorado, 7/98.

Visiting faculty

Visiting Professor, Dept. of Clin. Epidemiology, University of Geneva, Switzerland, 4/93 - 5/93.

Visiting Professor, Dept. of Epidemiology, *Escuela Nacional de Sanidad*, Madrid, Spain. June-July 1999.
Taught 1 week course on Inference.

Selected Presentations

- 1.) “*Randomized Controlled Trials in Medicine: What Have They Taught Us?*” Invited talk to an education policy forum with the US Secretary of Education, sponsored by the Council for Excellence in Government, 11/02, Washington, DC.
- 2.) “*The Mammography Controversy: A Crisis for Evidence-Based Medicine?*” Invited talk to:
 - Dept. of Epidemiology and Preventive Medicine, University of Virginia School of Medicine, Charlottesville, VA. 4/02.
 - Welch Center Grand Rounds, Johns Hopkins University Department of Epidemiology, 5/02.
 - Division of Cancer Epidemiology and Genetics, National Cancer Institute, Rockville, MD, 1/03
- 3.) “*The Role of Bayesian Methods in Extrapolating Results of Oncology Studies from Adults to Children,*” Invited presentation to Pediatric Subcommittee of FDA ODAC (Oncology Drug Advisory Committee), Rockville, MD, 11/28/01.
- 4.) “*Can Nothing Tell Us Something? The case of albumin treatment for shock*”, Biostatistics Grand Rounds, JHU Dept. of Biostatistics, 12/5/01.
- 5.) Invited Discussant of Thall et al. “*Multi-Course Treatment Strategies for Clinical Trials of Rapidly Fatal Diseases*”, Case Studies in Bayesian Statistics – Workshop 6, Carnegie-Mellon University, Department of Statistics, Pittsburgh, PA, 9/28/01.
- 6.) “*Can the 'Right' Design Resolve Ethical Quandaries about Randomized Clinical Trials?*” Invited talk to:
 - Brown University Dept. of Community Health, Providence RI, 4/2001.
 - Annual Meeting of Am. Assoc. of Pharmaceutical Physicians, Baltimore, MD 10/2000
 - 1999 ENAR meetings, Atlanta, Georgia.
 - British Medical Association's conference "50 Years of Clinical Trials: Past, Present and Future", London, England, 10/98.
- 7.) “*The Scientific Process*” Invited Presentation, in symposium on Seeking Access to Research Data in the 21st Century, Institute of Medicine, Program on Science, Technology and the Law, Washington, DC, 3/2001.
- 8.) “*Moving Towards Evidence-Based Medical Statistics: The Bayes Factor*” Invited presentation as part of CDC Epidemiology and Biostatistics Seminar Series, Atlanta GA, 1/2001.
- 9.) “*What Doctors should know about Bayesian statistics, and What Bayesian statisticians should know about doctors,*” Invited presentation to:
 - Duke Institute of Statistical Decision Sciences, Durham NC, 12/2000.
 - International Workshop on Foundational Issues and Statistical Practice, Bibbiena, Italy, 10/99.
- 10.) “*When Worlds Collide: Statistics, Ethics and Clinical Research,*” Myrto Lefkopoulou Distinguished Lecture, Harvard School of Public Health, 9/2000.
- 11.) “*Bayesian/Likelihood Alternatives to Traditional Measures of Evidence*” Invited talk in FDA/ASA/Biopharm 2-day workshop on different approaches to clinical trial design and analysis. Bethesda, MD 9/2000.
- 12.) “*Bayesian alternatives to p-values in outcomes research,*” Invited talk in session on statistical methods in outcomes research, annual meeting of International Society for Pharmacoeconomic Outcomes Research (ISPOR), Crystal City, VA, 5/2000.

- 13.) "*How (Not?) to Publish Your Data,*" in workshop on "Steering Your Paper to Press," Society for General Internal Medicine Annual Meeting, Boston, Mass., 5/2000.
- 14.) "*Balancing Ethical Obligations to Patients Inside and Outside Clinical Trials,*" Invited talk to conference on relationship between IRBs and Data and Safety Monitoring Committees, Duke Clinical Research Institute, Durham, NC, 5/2000.
- 15.) "*How Bayesian Methods Solve Clinical Trial Problems Without Solving Clinical Trial Problems,*" Invited talk at Society for Clinical Trials Annual Meeting, Toronto, CA, 4/2000.
- 16.) "*Medical statistics: A Tragedy of Errors?*", Hematology Grand Rounds, NHLBI, NIH, 12/99 and Grand Rounds, Dept. of Cardiology, NYU School of Medicine, 12/99.
- 17.) "*Meta-analysis,*" Henry Stewart Conference Series, Rockville, MD, 10/99.
- 18.) "*Ethical Principles in Clinical Research,*" Invited lecture in one-week course on clinical research methods sponsored by the American Association of Cancer Research and the American Society of Clinical Oncology, Vail, Colorado, 7/98.
- 19.) "*Ethics of Human Growth Hormone Trials in non-GH Deficient Children,*" course in Ethics in Research, Johns Hopkins School of Public Health, 1/98.
- 20.) "*Ethics and Evidence in Clinical Research,*" in symposium on Ethics of Clinical Trials in Developing Countries, Johns Hopkins School of Public Health, 12/97.
- 21.) "*Likelihood-based Methods in Meta-analysis,*" Henry Stewart Conference Series, Rockville, MD, 9/97.
- 22.) "*Finding the Evidence in Pediatrics: The Cochrane Collaboration,*" Grand Rounds, Johns Hopkins Dept. of Pediatrics, 5/97.
- 23.) "*Meta-analysis,*" Talk at the International Conference on Peritoneal Dialysis, Denver, CO, 2/97.
- 24.) "*Critically assessing the medical literature: Introduction to Meta-analysis and the Cochrane Collaboration,*" One day workshop for the American College of Epidemiology, 9/96.
- 25.) "*The Origins of Medical Statistics: A Tragedy of Errors?*" Invited talk for the opening of the Center for Statistics in Medicine, Oxford University, England, 4/96.
- 26.) "*Likelihood Methods in Medical Research*" One day workshop for Center for Statistics in Medicine, Oxford University, England, 4/96.
- 27.) "*Likelihood and Bayesian methods of meta-analysis,*" a workshop at the 3rd Cochrane Collaboration Colloquium, Oslo, Norway, 10/95.
- 28.) "*Providing access to synthesized research information: The Cochrane Collaboration.*" A presentation to the President's Cancer Panel, 9/95.
- 29.) "*The adequacy of the consent process and patients' understanding of clinical research: Results of two studies conducted for the President's Advisory Committee on Human Radiation Experiments,*" JHU Center for Clinical Trials Seminar Series, 9/95.
- 30.) "*Published Pediatric research: Believe it or not?*" Pediatric research conference series, 9/95-99
- 31.) "*How to improve presentation and discussion of statistical analyses in JNCI*", a talk to editors of the Journal of the National Cancer Institute, 7/95.

- 32.) *"An Introduction to Meta-analysis and the Cochrane Collaboration,"* a workshop presented at the meeting of the Ambulatory Pediatric Association, San Diego, 5/95.
- 33.) *"The Cochrane Collaboration,"* a talk to the Committee on Assessment of Quality of Care in Pediatrics of the American Academy of Pediatrics, 3/95.
- 34.) *"A Jury of Our Peers? The Effects of Peer Review and Editing on Reports of Medical Research,"* Dept. of Ambulatory Care and Prevention, Harvard Medical School, 2/95.
- 35.) *"Human Growth Hormone Trial: Children with Short Stature without Growth Hormone Deficiency - NIH Review Committee Report,"* chairperson, Ethics and Politics in Clinical Trials, Center for Clinical Trials, Johns Hopkins University, 11/3-4, 1993.
- 36.) *"Does Peer Review Make a Difference?: The Results of a Study,"* Center for Clinical Trials Seminar Series, JHU Dept. of Epidemiology, 9/93.
- 37.) *"P-values in Epidemiology: A Comedy of Errors,"* University of Maryland Department of Epidemiology and Preventive Medicine seminar series, 11/92.
- 38.) *"Sequential Monitoring of Clinical Trials,"* in Principles of Clinical Trial Design, Dept. of Biostatistics (1989-91).
- 39.) *"Meta-analysis" and "How to Publish Data in Medical Journals,"* Methods in Clinical Research, JHU Dept. of Medicine (1990).
- 40.) Workshop on Logistic Regression, presented at the meeting of the Ambulatory Pediatric Association, New Orleans (Spring 1991).
- 41.) *"Ethical Issues in the Design and Conduct of Clinical Trials" and "Early Stopping Designs" in Design and Analysis Issues in Clinical Trials* (CME Course), JHU Center for Clinical Trials (6/13 - 6/14/91).
- 42.) *"Are randomized clinical trials ethical?: A review of the debate,"* JHU Center for Clinical Trials seminar series, 2/91.
- 43.) *"Statistical fallacies and philosophies in the interpretation of clinical trial results,"* Multidisciplinary conference series, JHU School of Medicine, 10/90.
- 44.) *"P-values and evidence: Is there any relationship?"*, Dept. of Epidemiology, Univ. North Carolina School of Public Health, (Feb. 1990); Dept. of Medicine, JHU Div. of General Internal Medicine research series, 12/91.
- 45.) *"From epidemiology to oncogenes: The debate about neuroblastoma screening,"* JHU Dept. of Epidemiology Friday Seminar Series, 3/90.
- 46.) *"When is screening for a rare disease justified? Neuroblastoma: A case study,"* presented at the meeting of the American Academy of Pediatrics, Chicago, 10/89.
- 47.) *"Neuroblastoma Screening,"* JHU Oncology Center Grand Rounds, 9/89.
- 48.) *"Interpreting Statistical Analyses from Clinical Trials,"* JHU Oncology Symposium, 4/89.
- 49.) *"Sequential analysis of clinical trials: Dogma or hoax?"*, Clinical Epidem. Seminar Series, 1989.