

CURRICULUM VITAE

Mark M. Applefeld, M.D.
Clinical Professor of Medicine
University of Maryland School of Medicine
Director, Division of Cardiology
Mercy Medical Center
301 St. Paul Place
Baltimore, Maryland 21202-2165
(410) 332-9752
Fax: 410-332-0626

EDUCATION:

1965	B.S.	-	Washington and Lee University Lexington, Virginia
1969	M.D.	-	University of Maryland School of Medicine Baltimore, Maryland

Internship:

1969-1970	University of Maryland Hospital Baltimore, Maryland July 1, 1969 - June 30, 1970
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Residency:

1970-1972	Junior Assistant Resident, Department of Medicine University of Maryland Hospital Baltimore, Maryland July 1, 1970 - June 30, 1971
	Assistant Resident, Department of Medicine University of Maryland Hospital Baltimore, Maryland July 1, 1971 - June 30, 1972
1974-1975	Chief Resident in Medicine Department of Medicine University of Maryland Hospital Baltimore, Maryland July 1, 1974 - June 30, 1975

Fellowship:

1972-1974 Fellow in Medicine (Cardiology)
Georgetown University Hospital
Washington, D. C.
July 1, 1972 - June 30, 1974

CERTIFICATIONS:

1969 Diplomate,
National Board of Medical Examiners

1975 Diplomate,
American Board of Internal Medicine

1982 Fellow,
American Board of Internal Medicine

1977 Diplomate, Cardiovascular Diseases
American Board of Internal Medicine

1978 Fellow, Cardiovascular Diseases
American Board of Internal Medicine

LICENSURE: Maryland

CLINICAL INTERESTS:

1. Heart disease in the patient who has cancer
2. Congestive heart failure
3. Infective endocarditis

MAJOR RESEARCH INTERESTS:

1. The clinical spectrum of radiation related cardiac disease. Applefeld MM, Slawson RG, Wiernik PH, Schimpff SC.
2. The pathogenesis of experimental radiation induced cardiac disease. Applefeld MM, Slawson RG, Sewchand W, Mergner W, Wiernik PH.

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3. Homoharringtonine - evaluation of its clinical cardiac toxicity. Van Echo DA, Applefeld MM, Dutcher J, Whitacre MY, Wiernik PH.
4. Adriamycin cardiomyopathy - a clinical evaluation. Applefeld MM, Bishop J, Johnson G, Wiernik PH, Schimpff SC.
5. Alternate forms of therapy for congestive heart failure - a trial of chronic dobutamine infusion. Applefeld MM, Sutton FJ, Roffman DS.
6. Chronic intermittent infusions of inotropic agents in congestive heart failure: A clinical trial of an implantable drug deliver system. Applefeld MM, Sutton FJ, Roffman DS, Williams J.: Partial funding from Medtronic, In.
7. A comparison of computed axial tomography and echocardiography in the evaluation of chronic pericardial disorders. Applefeld MM, Whitley NO, Sutton FJ.
8. A phase I clinical and pharmacologic trial of menogarol. Sigman LM, Van Echo DA, Egorin MJ, Whitacre MY, Applefeld MM, Aisner J.

MILITARY SERVICE:

1970-1983 U.S. Army Reserve

FACULTY APPOINTMENTS HELD PRIOR TO PRESENT:

1974-1975 Instructor, Department of Medicine
University of Maryland Hospital, Baltimore

1975-1982 Assistant Professor of Medicine
University of Maryland Hospital, Baltimore

MAJOR ACADEMIC TASKS AT PRESENT AND TITLES:

1982-2004 Associate Professor of Medicine
University of Maryland School of Medicine
Baltimore, Maryland

April 1, 2004 Clinical Associate Professor of Medicine
University of Maryland School of Medicine
Baltimore, Maryland

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July 1, 2005	Clinical Professor of Medicine University of Maryland School of Medicine Baltimore, Maryland
July 1, 1985- Present	Director, Division of Cardiology Mercy Medical Center
Oct. 1, 1985- 1988	Chairman, Medical Records Subcommittee, Mercy Medical Center
Oct. 1, 1985- 1988	Member, Quality Assurance Committee Mercy Medical Center
1975-1985	Attending Physician, University of Maryland Hospital
1982-1985	Director, Consultative Cardiology Service University of Maryland Hospital
1976-1985	Medical Records Committee University of Maryland Hospital
1978-1985	Member
1981-1983	Chairman
	Member, Systems Planning Subcommittee University of Maryland Hospital
1982-1983	Chairman, Security Subcommittee University of Maryland Hospital
1978-1985	Member, Medical Board University of Maryland Hospital
1977-present	Member, Medical Staff, University of Maryland Hospital
1985-present	Member, Medical Staff Mercy Medical Center
1997-2000	Member, Development Committee Mercy Medical Center

PROFESSIONAL MEMBERSHIPS:

1971-present	Alpha Omega Alpha
1976-present	American Society for Internal Medicine
1977-present	Member, American College of Physicians
1982-present	Fellow, American College of Physicians
1977-present	Member, American College of Cardiology
1978-present	Fellow, American College of Cardiology
1978-present	Member, Maryland Society of Cardiology
1983-present	Member, Baltimore City Medical Society

Maryland Affiliate - American Heart Association

1977-present	Member
1982-1985	President Elect
1985-1987	President
1987-1989	Immediate Past President
1985-1989	Member, Board of Directors
1979-1982	Chairman and Member, Public Health Education Subcommittee
1980-1989	Member, Nominating Committee
1979-1985	Member,
1982-1985	Chairman
1980	Member, Task Force on Program Planning & Evaluation
1980-1982	Chairman and Member, Committee to Develop Permanent Cardiovascular Exhibit at the Maryland Science Center

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1980-1984	Member, Board of Directors
1982-1989	Member, Executive Committee
1982-1984	Representative, National Delegate Assembly
1983	Chairman and Member, "Win One for Randy" special event
1985-1986	Heart Ball, Co-Chairman
1987	Heart Ball, Vice Chairman
1986-1987	Building Task Force Member
1986-1987	Capital Campaign Committee, Member
1987	New Building Dedication Committee, Chairman
1988-1990	Member, Medical Advisory Board

OTHER ORGANIZATIONAL TASKS:

1989-1990	Physicians Advisory Board, New England Critical Care Medicine, Marlboro, Massachusetts New England Critical Care
1991-1996	Member, Counsel for Quality Healthcare Maryland Hospital Association
1992 -1994	Member, Medical Advisory Board Cardiac Alliance Chicago, Illinois
Jan. 1995-Sept. 1995	Member, Board of Medical Advisors (Baltimore). Abbey Health Care Corporation

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- May 1994-May 2005 Member,
Board of Directors,
University of Maryland School of Medicine
Alumni Association
- 1997-May, 2005 Treasurer, Board of Directors
University of Maryland School of Medicine Alumni Association
- Oct. 1995-2003 Consultant DelMarva Foundation peer review organization.
- July 1996-1999 Member,
Medical Advisory Board
EDC Corporation
- July 1997-1999 Member,
Practice Management Committee,
University of Maryland Cardiac Network
- Oct. 2001-June 2005 State Advisory Council on Heart Disease and Stroke Prevention
Programs
- Jan 2005-Nov 2006 Board of Directors, Health Care for the Homeless

MEDICAL HONORS AND AWARDS

- 1969 Cum laude graduate,
University of Maryland School of Medicine
- 1969 Leonard E. Hummel Award in Medicine
University of Maryland School of Medicine
Baltimore, Maryland
- 1969 Edmund J. Bradley Award in Pediatrics
University of Maryland School of Medicine
Baltimore, Maryland
- 1972 Louis, Ida and Samuel Cohen Award
Department of Medicine
University of Maryland Hospital
- 1981 Medical and Community Service Award
Maryland Affiliate - American Heart Association

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| 1982 | Special Award for Service
American Heart Association - Maryland Affiliate |
| 1984 | Silver Award for Service
American Heart Association - Maryland Affiliate |
| 1987 | Gold Award for Service
American Heart Association - Maryland Affiliate |

EDITORIAL TASKS:

- | | |
|-----------|--|
| 1981-1985 | Manuscript Reviewer,
American Journal of Cardiology |
| 1981-2003 | Manuscript Reviewer,
Chest, A Cardiopulmonary Journal |
| 1981-1988 | Manuscript Reviewer,
Cancer Treatment Reports |

CAMPUS ACTIVITIES:

University of Maryland Medical School

- | | |
|-----------|---|
| 1975-1985 | Attending Physician, Medical Service
University of Maryland Hospital |
| 1975-1985 | Student Faculty Advisor |
| 1979 | Member and Chairman,
Peer Review Committee (Psychiatry) |
| 1982-1985 | Member,
Office of Medical Education Advisory Committee |
| 1983 | Member, Peer Review Committee
Neurological Science Course |
| 1983 | Member, Steering Committee
United Way Campaign |
| 1984 | Member, Subcommittee, Organization &
Administration - Site Visit of Liaison Committee of
Graduate Medical Education |

Trustees of the Endowment Fund of the University of Maryland

1980-present	Member
1983-1989	Secretary-Treasurer
1983-present	Executive Committee
1989-present	President

COMMUNITY ACTIVITIES:

1983-1987 Coach, Roland Park Little League (Baseball)

Recognition for volunteer services provided to Healthcare for the Homeless, February 2001

TEACHING RESPONSIBILITIES:

1974-2000	Instructor
1982-1994	Course Director Introductory Medicine (Sophomore Physical Diagnosis) University of Maryland School of Medicine
1975-1985	Lecturer, University of Maryland School of Dentistry
1976-1985	Lecturer, Subject Systems, Cardiovascular Diseases University of Maryland School of Medicine
1977-1985	Lecturer, Summer Program in Anatomy

GRANT SUPPORT:

7/84-3/85 Dobutamine vs. placebo infusions in the outpatient management of chronic congestive heart failure. Applefeld, MM, Sutton, FJ, Roffman DS, Newman K, Grove W, Reed W. Sponsored by Eli Lilly & Company. Total Grant Support \$360,000.

- 1983-1985 Beta receptor activity in intermittent dobutamine therapy. Roffman DS, El-Fakaheny EF, Applefeld MM, Grant-in-Aid Award; Maryland Affiliate - American Heart Association. Total Grant Support \$10,000 in 1984/84; \$15,000 in 1984/85.
- 1984-1985 Response of beta lymphocyte receptors to chronic stimulation by beta agonist. El-Fakeheny I, Roffman D, Sutton FJ, Applefeld MM. Sponsored by Eli Lilly & Company, Total Grant Support \$10,000.

PUBLICATIONS

Monographs

1. Woodward TE, Applefeld MM, Synder MJ and Wagner J: 200 years of medicine in Baltimore.
2. Applefeld MM, Woodward T: Infective endocarditis - A clinical overview. Current Problems in Cardiology, May, 1977.
3. Applefeld MM, Pollock SH: Cardiac disease in patients who have malignancies. Current Problems in Cardiology, Vol 4, Nos 11, February, 1980.

Book Chapters

1. Hornick RB, Applefeld MM: Endocarditis and myocarditis. In Quick Reference to cardiovascular Diseases. Chung EK (Ed), pp 95-106, 1977.
2. Applefeld MM: Jugular venous pressure and pulse contour. In Clinical Methods, Third Edition, Walker HK, Hall WD, Hurst JW (Eds), 1987.
3. Applefeld MM: Cardiac disease caused by cancer therapy. In Current Therapy in Cardiovascular Disease - II. Fortuin NJ (Ed), BC Decker Inc., Philadelphia, 1987.
4. Applefeld MM: Hypertensive crises. In Trauma: Emergency Surgery and Critical Care. Siegel JH (Ed), Churchill Livingstone, New York, 1987.
5. Applefeld MM: "The Effects of Cancer and its Treatment on the Heart: A Clinical Perspective" in Classic Teachings in Clinical Cardiology, Chizner, MA, (Ed), Laennec Publishing, 1995.

Journal Articles

Refereed

1. Applefeld MM and Hornick RB: Infective endocarditis in patients over 60. American Heart Journal 88:90-94, 1974.
2. Applefeld MM and Ronan JA Jr: Prinzmetal's angina with extensive spasm of the right coronary artery. Chest 66:721-722, 1974.
3. Applefeld MM, Billingsley L, Tucker H, Fiset P: Q fever endocarditis - A case occurring in the United States. American Heart Journal 93:669-670, 1977.
4. Applefeld MM, Austin SM, Turney SZ, Mech KF Jr: Traumatic left anterior descending coronary artery to right ventricular fistula. Southern Medical Journal 70:581-584, 1977.
5. Mikulski SM, Love LJ, Bergquist EJ, Hargadon MT, Applefeld MM, Mergner W: Aspergillus vegetative endocarditis and complete heart block in a patient with acute leukemia. Chest 76:473-476, 1979.
6. Goldscher DA, Vaccaro MC, Applefeld MM, Satterfield JR, Ramos E, Diaconis JN: Herniation of the heart following intrapericardial pneumonectomy - an unusual cause of cardio-renal failure. The American Surgeon
7. Applefeld MM, Milner SD, Vigorito RD, Shamsuddin AK: Congestive heart failure and endocardial fibroblastosis caused by chronic lymphocytic leukemia. Cancer 46:173-178, 1980.
8. Applefeld MM, Adir J, Crouthamel W, Roffman D: Digoxin pharmacokinetics in congestive heart failure. Journal of Clinical Pharmacology 21:114-120, 1981.
9. Applefeld MM, Slawson RG, Hall-Craggs M, Green DC, Singleton RT, Wiernik PH: Delayed pericardial disease following radiotherapy. American Journal of Cardiology 47:210-213, 1981.
10. Applefeld MM, Cole JF, Pollock SH, Sutton FJ, Slawson RG, Singleton RT, Wiernik PH: The late appearance of chronic pericardial disease in patients treated by radiotherapy for Hodgkin's disease. Annals of Internal Medicine 94:338-441, 1981.
11. Van Echo DA, Whitacre MY, Aisner J, Applefeld MM, Wiernik PH: A phase I trial of acinomyacin-A. Cancer Treatment Reports 66:1127-1132, 1982.

12. Applefeld MM, Slawson RG, Spicer KM, Singleton RT, Westley M, Wiernik PH: Longterm cardiovascular evaluation of patients with Hodgkin's disease treated by thoracic mantle radiation therapy. Cancer Treatment Reports 66:1003-1013, 1982.
13. Connor TB, Rose BL, Blaustein MP, Applefeld MM, Doyle LA: Hypocalcemia precipitating congestive heart failure. New England Journal of Medicine 307:869-872, 1982.
14. Applefeld MM, Sutton FJ, Newman KA, Grove WR, Roffman DS, Reed WP: Chronic, outpatient dobutamine infusion in the management of congestive heart failure - a preliminary report. American Journal of Cardiology 51:455-458, 1983.
15. Applefeld MM, Wiernik PH: Cardiac disease after radiation therapy for Hodgkin's disease: Analysis of 48 patients. American Journal of Cardiology 51:1679-1681, 1983.
16. Taylor AL, Applefeld MM, Wiernik PH, Grochow LF, Mader LC, Bulkley BH: Acute anthracycline cardiotoxicity: Comparative morphologic study of three analogues. Cancer 53:1660-1667, 1984.
17. Sutton FJ, Whitley NO, Applefeld MM: The role of echocardiography and computed tomography in the evaluation of constrictive pericarditis. American Heart Journal 109:350-355, 1985.
18. Applefeld MM, Egorin MJ: The anthracycline antibiotics depress left ventricular contractility: A clinical fact or laboratory fancy? Editorial, International Journal of Cardiology 6:351-353, 1984.
19. Roffman DS, Applefeld MM, Grove WR, Talesnick BS, Sutton FJ, Newman KA: Intermittent dobutamine in outpatients with chronic congestive heart failure. Clinical Pharmacy 4:195-199, 1985.
20. Reed WD, Newman KA, Applefeld MM, Sutton FJ: Drug extravasation as a complication of venous access ports. Annals of Internal Medicine 102(6):788-790, 1985.
21. Applefeld MM, Roffman DS: Digitalis and other positive catecholamine-like inotropic agents in the management of congestive heart failure. American Journal of Medicine 80(2B):40-45, 1986.
22. Applefeld MM: Chronic congestive heart failure: Where have we been? Where are we heading? American Journal of Medicine 80(2B):73-77, 1986.
23. Applefeld MM: Radiation-induced cardiac disease. Primary Cardiology 12(5):148-170, 1986.

24. Hassan E, Roffman DS, Applefeld MM: The value of mixed venous oxygen saturation as a therapeutic indicator in the treatment of advanced congestive heart failure. American Heart Journal 113:743-749, 1987.
25. Applefeld MM, Sutton FJ, Reed WP, Roffman DS, Newman KA, Grove WR: Outpatient dobutamine infusions in the management of chronic heart failure - clinical experience in 21 patients. American Heart Journal 114:589-595, 1987.
26. Tommaso CK, Applefeld MM, Singleton RT: Isolated left main coronary stenosis and mediastinal radiotherapy as an etiologic factor. American Journal of Cardiology 61:1119-1120, 1988.
27. Sohl LL, Applefeld MA: Nontraditional administration of dobutamine: Changing with the times. Nursing 90, 1990.
28. Patterson JH, Adams, Jr KF, Applefeld MM, Corder CN, Masse BR: Orally administered torsemide in patients with chronic congestive heart failure: Effects on body weight, edema, and electrolyte excretion. Pharmacotherapy, 1994.
29. Contributor, Section on Cardiovascular Diseases, MKSAP 11 American College of Physicians, 1995-1997.

Not Refereed

Applefeld MM: Cardiac disease in the patient with cancer. Primary Care and Cancer 5 No. 1:23-28; No. 2:52-62, 1985.

"History of the Trustees of the Endowment Fund of the University of Maryland", Bulletin of the Medical Alumni Association School and Hospital, Vol. 73, No. 4, Spring, 1989.

ABSTRACTS:

1. Effects of hypertension in the clinical assessment of the severity of aortic stenosis. Genovese B, Applefeld MM, Ronan JA, Perloff JK: Circulation 56:No. 4, suppl. 3, 260, 1977.
2. Digoxin absorption in congestive heart failure. Applefeld MM, Roffman DS, Adir J, Crouthamel WG: Regional meeting of the American College of Physicians, Williamsburg, Virginia, October, 1978.

3. Pharmacokinetics of oral digoxin in congestive heart failure. Adir J, Crouthamel WG, Roffman DS, Applefeld MM: American Academy of Pharmaceutical Sciences, Hollywood, California, December, 1978.
4. Constrictive pericarditis (CP) more than five years post irradiation for Hodgkin's disease (HD). Cole J, Applefeld MM, Pollock SH, Sutton FJ, Chang P: Proceedings of the American Society of Clinical Oncology 21:466, 1980.
5. Radionuclide cineangiography in practice. Johnston G, Buddemyer EU, Applefeld MM, Sorandes T, George F, Scherlis L, Whitley J:
Poster Sessions:
Radiology Society of North America, Dallas, Texas, November 16-21, 1980.
American College of Cardiology, San Francisco, California, March 16-19, 1981.
American Roentgen Ray Society, San Francisco, California, March 24-25, 1981.
Maryland Medical and Chirurgical Faculty Meetings, Baltimore, Maryland
April 29 - May 1, 1981.
6. Longterm cardiovascular evaluation of patients treated for Hodgkin's disease by thoracic mantle radiotherapy. Applefeld MM, Slawson RG, Wiernik PH: Hodgkin's Disease Symposium, September 9-12, San Francisco, 1981.
7. Delayed appearance of cardiac disease in patients treated by thoracic mantle field radiotherapy for Hodgkin's disease. Applefeld MM, Cole JF, Pollock SH, Sutton FJ, Slawson RG, Singleton RT, Wiernik PH: Meeting of the American College of Physicians, Baltimore, Maryland, October, 1981.
8. Changes in left ventricular function in patients treated by radiotherapy for Hodgkin's disease. Applefeld MM, Johnston GS, Wiernik PH: American Federation for Clinical Research, Eastern Section Meeting, Mary, 1982.
9. Comparison of noninvasive methods in the diagnosis of constrictive pericarditis. Applefeld MM, Sutton FJ, Whitley NO, Wiernik PH: Circulation 66 No. 4:216, 1982, Meetings of the American Heart Association, Dallas, Texas, November, 1982.
10. Phase I study of homoharringtonine. Whitacre MY, Van Echo DA, Applefeld MM, Aisner J: American Society of Clinical Oncology, San Diego, May 22-24, 1983.
11. The effect of intermittent dobutamine: Infusion on beta-adrenergic receptors in human lymphocytes. Ramkumar V, El-Fakahany EE, Roffman DS, Applefeld MM, Sutton FJ: Meeting of the Federation of the American Society for Experimental Biology, St. Louis, Missouri, April, 1984.

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12. Incidence and etiology of isolated left main coronary artery stenosis. Tommaso CL, Applefeld MM, Scherlis L, Singleton RT: Meeting of the American College of Chest Physicians, October 8-12, 1984, Dallas, Texas.
13. Beta adrenergic receptor activity and clinical response in intermittent dobutamine therapy. Applefeld MM, El-Fakahany EE, Roffman DS, Ramkumar V, Sutton FJ: 34th Annual Scientific Session of the American College of Cardiology, March 10-14, 1985, Anaheim, California.
14. Outpatient dobutamine infusions in the management of chronic congestive heart failure. Applefeld MM, Sutton FJ, Roffman DS, Newman KA, Grove WS, Reed WP: Poster Presentation, 34th Annual Scientific Session of the American College of Cardiology Scientific Sessions, March 10-14, 1985, Anaheim, California.
15. Pericardial disease after radiation therapy for Hodgkin's disease. Whitley NO, Applefeld MM, Sutton FJ, Whitley JE: 17th International Congress of Radiology, Hawaii, July 1985.
16. Drug extravasation as a complication of venous access ports. Reed WP, Newman KA, Applefeld MM, Sutton FJ: American Society of Clinical Oncology, Houston, Texas, May 18-21, 1985.
17. Home continuous, intermittent dobutamine infusion in the treatment of chronic intractable congestive heart failure: A case report. Choy FN, Lindner DP, Applefeld MA: Poster Session: American Society of Hospital Pharmacists Midyear Clinical Meeting, Atlanta, Georgia, December 6-10, 1987.

INVITED SPEECHES:

1. Systolic murmurs in coronary artery disease. Continuing Education Course, Hunt Valley, June, 1977.
2. Heart disease for the family practitioner. Topics in Family Medicine, University of Maryland Hospital, April, 1978.
3. Differential diagnosis of myocardial infarction. Topics for Licensed Practical Nurses, Sponsored by the Heart Association of Maryland, May 1978.
4. Arrhythmias for the family physician. Topics in Family Medicine, Annapolis, Maryland, June, 1978.
5. Refractory heart failure. Medical Grand Rounds, South Baltimore General Hospital, July, 1978.

6. Ischemic heart disease - An overview. Meeting of the Zonta Club of Baltimore, Cross Keys Inn, November, 1978.
7. Congestive heart failure. Fifth Annual Family Medicine Review Course, Baltimore Hilton Inn, Baltimore, Maryland, June, 1979.
8. Evaluation and significance of heart murmurs. American Heart Association, Central Maryland Chapter, Cross Keys Inn, June, 1979.
9. Moderator, Cardiovascular diseases for the family physician. Hunt Valley Inn, Baltimore Hilton Hotel, October, 1979.
10. Luncheon Panel Discussant, Annual Meeting of the Medical and Chirurgical Faculty of Maryland, April 24, 1980.
11. Participant, Cardiovascular Disease Panel, MSKAP Review Course, June 14, 1980.
12. Moderator and Participant, Cardiovascular Diseases for the Family Physician, Baltimore Hilton Hotel, October, 1980.
13. Participant, Drug induced cardiomyopathy, Luncheon Panel, American College of Cardiology Meetings, San Francisco, March 17, 1981.
14. Angiosarcoma of the heart, Medical Grand Rounds, Union Memorial Hospital, Baltimore, April 16, 1981.
15. Myocarditis: Evolving concepts and new strategies, Medical Housestaff Conference, University of Maryland Hospital, Baltimore, December 15, 1982.
16. Moderator, Maryland Heart Association Symposium on Stroke, Montebello State Hospital, June 18, 1981.
17. Cardiac disease in the cancer patient, Southern Maryland Hospital Center, July 22, 1981.
18. Pericardial effusions in the cancer patient, University of Maryland Cancer Center Grand Rounds, November 13, 1981.
19. Malignant pericardial effusions - Diagnosis and management, Visiting Professor Program of the Program of Continuing Education, Prince George's General Hospital, Cheverly, Maryland, December 11, 1981.
20. Myocarditis - Diagnosis, management and prognosis, Pediatric Grand Rounds, University of Maryland Hospital, March 17, 1982.

21. The clinical and pathologic spectrum of radiation induced heart disease, Department of Diagnostic Radiology, University of Maryland Hospital, March 5, 1982.
22. Radiation induced cardiac disease - New faces of a generally unrecognized syndrome. Conjoint Meeting, Irish Cardiac Society - Maryland Heart Association, Dublin, Ireland, April 30 - May 1, 1982.
23. Diagnosis and management of the large heart syndrome. Calvert Memorial Hospital, May 18, 1982.
24. Newer beta blockers and calcium channel antagonists in the management of patients with cardiac disease. Topics in Family Medicine, University of Maryland School of Medicine, October 14, 1982.
25. Newer beta blockers and calcium channel antagonists in the management of patients with cardiac disease. Prince George's General Hospital, December 14, 1982.
26. Cardiac myxoma. Medical Grand Rounds, Union Memorial Hospital, Baltimore, Maryland, January 20, 1983.
27. The clinical spectrum of radiation induced cardiac disease. Medical Grand Rounds, University of Maryland Hospital, February 15, 1983.
28. Management of the patient with angina pectoris - Use of the newer beta blocking agents. Family Practice Symposium, University of Maryland Hospital, Baltimore, Maryland, March 16, 1983.
29. The Charlie Donovan Talk Show. WFBR Radio, Baltimore, Maryland, April 28, 1983.
30. Medical management of refractory congestive heart failure - Old saws and new tricks. Topics in Cardiovascular Disease, Maryland Affiliate - American Heart Association, Council on Clinical Cardiology, and the Irish Cardiac Society, Hyatt Regency Hotel, Baltimore, Maryland, May 13-14, 1983.
31. Ambulatory home use of dobutamine in patients with chronic congestive heart failure. Critical Care Symposium: The Role of Inotropic Agents in Heart Failure and Shock, Presented at the 12th Annual Symposium of the Society of Critical Care Medicine, New Orleans, Louisiana, May 23-27, 1983.
32. After surgery, intractable congestive heart failure - What to do next? Presented at the Meetings of the Society for Vascular Surgery and the International Cardiovascular Surgical Society, San Francisco, California, June 15, 1983.

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33. Cardiac tamponade: Current perspectives on diagnosis and management. Kent and Queen Anne's Hospital, Chestertown, Maryland, October 26, 1983.
34. Present perspectives in the management of chronic congestive heart failure. Meeting of the Southern Medical Association, Baltimore Convention Center, Baltimore, Maryland, November 6, 1983.
35. Congestive heart failure - Perspectives for the 1980's. Medical Grand Rounds, St. Joseph's Hospital, Baltimore, Maryland, January, 1984.
36. Update in internal medicine - A continuing education for the U.S. Army, Berchtesgaden, West Germany, January 28 through February 4, 1984.
37. Mitral valve prolapse syndrome - Current perspectives and management. Department of Obstetrics & Gynecology, University of Maryland Hospital, February 17, 1984.
38. Congestive heart failure - Old saws and new tricks. Doctors Hospital, Prince George's County, Maryland, March 1, 1984.
39. New developments in the treatment of congestive heart failure. Medical Grand Rounds, Mercy Hospital, Inc., Baltimore, Maryland, March 7, 1983.
40. Cardiovascular complications of radiation therapy for Hodgkin's disease - Current perspectives of a common clinical problem. Advances in Cancer Treatment Research sponsored by the Albert Einstein College of Medicine, Grand Hyatt Hotel, New York, New York, March 16, 1984.
41. Congestive heart failure: Management strategies for the 1980's. Medical Grand Rounds, Franklin Square Hospital, Baltimore, Maryland, April 19, 1984.
42. Cardiac potpourri - Focus on valve replacement. Annual Meeting of the Medical and Chirurgical Faculty of Maryland, Hunt Valley, April 29, 1984.
43. Management of intractable congestive heart failure. Medical Grand Rounds, Department of Medicine, University of Maryland Hospital, May 1, 1984.
44. Management of angina pectoris - A perspective. Family Practice Grand Rounds, Franklin Square Hospital, Baltimore, Maryland, July 11, 1984.
45. Chronic congestive heart failure - New perspectives on an old problem. Medical Grand Rounds, York Hospital, York, Pennsylvania, August 16, 1984.

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46. The management of intractable congestive heart failure - Current concepts and future directions. Medical Grand Rounds, Prince George's Hospital, Prince George's, Maryland, September 19, 1984.
47. Ambulatory use of inotropic agents in congestive heart failure. Medical Grand Rounds, University of South Carolina, Columbia, South Carolina, December 7, 1984.
48. Medical management of patients with congestive heart failure prior to cardiac transplantation. International Heart Transplantation Society Meeting, Anaheim, California, March 9, 1985.
49. The patient with congestive heart failure - Current approaches to medical management. Medical Grand Rounds, Waynesboro General Hospital, Waynesboro, Pennsylvania, April 22, 1985.
50. Use of digoxin and other positive inotropic agents in the medical management of congestive heart failure. Presented at "Contemporary Issues in the Management of Congestive Heart Failure", University of Maryland School of Medicine and Hospital, Baltimore, Maryland, May 3, 1985.
51. Chronic congestive heart failure - Where are we now? Where are we headed?: Conference Synopsis Presented at "Contemporary Issues in the Management of Chronic Congestive Heart Failure", University of Maryland School of Medicine, Baltimore, Maryland, May 5, 1985.
52. The use of ambulatory dobutamine infusions in the management of chronic congestive heart failure. The Academic Medical Center, Amsterdam, Holland, May 6, 1985.
53. Chronic congestive heart failure: A critique of the current approaches and future directions. The Elizabeth Hospital, Tilbury, Netherlands, May 7, 1985.
54. The management of chronic congestive heart failure with emphasis on outpatient infusions of dobutamine. Meddelheim Hospital, Antwerp, Belgium, May 8, 1985.
55. Chronic congestive heart failure: Perspectives of our current therapy and future directions. National Heart House, London, England, May 8, 1985.
56. The management of intractable chronic congestive heart failure. Annual Meeting of the Irish Cardiac Society, Cork, Ireland, May, 1985.
57. Myocarditis - Current perspectives. Pediatric Grand Rounds, Mercy Hospital, Baltimore, Maryland, October 18, 1985.

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58. Congestive heart failure - An overview. Medical Grand Rounds, Greater Baltimore Medical Center, Towson, Maryland, November 1, 1985.
59. Radiation induced cardiac dysfunction. University of Maryland Cancer Center Grand Rounds, Baltimore, Maryland, November 8, 1985.
60. New directions in the management of heart failure. Medical Grand Rounds, Mercy Hospital, Inc., Baltimore, Maryland, November 27, 1985.
61. Positive inotropic agents in the management of chronic heart failure. Crozier Medical Center, Chester, Pennsylvania, January 10, 1986.
62. Concepts - old and new - in the therapy of chronic heart failure, Washington County Hospital, Hagerstown, Maryland, April 20, 1986.
63. Contemporary issues in the management of chronic congestive heart failure. Malcolm Grow Medical Center, Andrews Air Force Base, Washington, D. C., May 23, 1986.
64. Chronic congestive heart failure: Current perspectives and other ruminations. Medical Grand Rounds, Mercy Catholic Hospital, Philadelphia, Pennsylvania, August 13, 1986.
65. Current strategies in management of congestive heart failure. Medical Grand Rounds, Einstein Medical Center, Philadelphia, Pennsylvania, October 21, 1986.
66. Radiation induced cardiac disease: Current perspectives. Cardiology Conference, Einstein Hospital, Philadelphia, Pennsylvania, October 22, 1986.
67. Evaluation of cardiac risk prior to non-cardiac surgery. Surgical Grand Rounds, Mercy Hospital, Baltimore, Maryland, April 9, 1987.
68. Current concepts in the management of chronic congestive heart failure. Advances in Cardiovascular Therapy. Meeting of the Maryland Pharmacy Coordinating Council, Hilton Hotel, Pikesville, Maryland, April 12, 1987.
69. Use of inotropic agents in the management of congestive heart failure. Memorial Medical Center, Jacksonville, Florida, April 30, 1987.
70. Current perspectives in the therapy of congestive heart failure. St. Petersburg's Medical Clinic, St. Petersburg, Florida, May 1, 1987.
71. Use of inotropic agents in the management of congestive heart failure. Methodist Hospital, Memphis, Tennessee, May 6, 1987.

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72. Therapeutic congestive heart failure with a focus on positive inotropic agents. Medical Staff Conference, Good Samaritan Hospital, Baltimore, Maryland, May 20, 1987.
73. Use of inotropes in the management of congestive heart failure. Humana Hospital Northside, St. Petersburg, Florida, August 13, 1987.
74. Congestive heart failure: Old saws and new tricks with an emphasis on positive inotropic agents. Cardiology Grand Rounds, University of Kansas Medical Center, Kansas City, Kansas, September 15, 1987.
75. Cardiomyopathy - Diagnosis, treatment, and prognosis. Advanced Topics in Cardiovascular Nursing Symposium, Hyatt Regency Hotel, Baltimore, Maryland, September 29, 1987.
76. Positive inotropic agents perspectives in cardiology. An Overview from the University of Maryland, Sheraton Inner Harbor, Baltimore, October 9, 1987.
77. New Horizons in chronic congestive heart failure. Presented at the 11th Annual Cardiology Symposium, Wilkes Barre General Hospital, Wilkes Barre, Pennsylvania, October 21, 1987.
78. The use of inotropes in congestive heart failure. Delaware County Memorial Hospital, Philadelphia, Pennsylvania, October 24, 1987.
79. Visiting Professor of Cardiology, Good Samaritan Hospital, Phoenix, Arizona, November 16-17, 1987.
80. Current perspectives in the management of the therapy of chronic congestive heart failure with an emphasis on inotropic agents. Cardiology Rounds, Good Samaritan Hospital, Phoenix, Arizona, November 17, 1987.
81. Malignant pericardial disease diagnosis and therapy. Medical Grand Rounds, University of Maryland Hospital, December 9, 1987.
82. Use of positive inotropic agents in the management of congestive heart failure. Staff Rounds, Westchester County Medical Center, Chester, Pennsylvania, December 18, 1987.
83. Management of congestive heart failure, Round Table Discussions, Maryland Academy of Family Practice Annual Meeting, Ocean City, Maryland, May 12, 1988.
84. Cardiac disease in the cancer patient. Medical Grand Rounds, Mercy Medical Center, Baltimore, Maryland, May 25, 1988.

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85. Strategies in the therapy of patients with end stage heart failure - an update, Medical Grand Rounds, Saint Joseph's Hospital, Baltimore, Maryland, March 8, 1989.
86. Symposium Moderator, Current Perspectives in Clinical Cardiology, Hilton Head, South Carolina, March 11, 1989.
87. Treatment strategies in patients with end stage heart failure - an update. Current Perspectives in Clinical Cardiology, Hilton Head, South Carolina, March 11, 1989.
88. Symposium moderator, Current Perspectives in Clinical Cardiology, San Francisco, California, April 29, 1989.
89. Treatment of refractory congestive heart failure. Current Perspectives in Clinical Cardiology, San Francisco, California, April 29, 1989.
90. Management of the patient with refractory heart failure. Medical Grand Rounds, Chesapeake General Hospital, June 30, 1989.
91. Use of positive inotropic agents in the management of congestive heart failure. Meclinburg Cardiovascular Consultants, Charlotte, North Carolina, July 19, 1989
92. Radiation induced cardiac disease. Oncology Grand Rounds, University of Maryland Cancer Center, University of Maryland Hospital, September, 1989.
93. Treatment of patient with refractory congestive heart failure - are there other alternatives. Medical Grand Rounds, Sentara Hospital, Eastern Virginia Medical Center, Norfolk, Virginia, October 11, 1989.
94. Radiation induced cardiac disease: Diagnoses and Therapy. Medical Grand Rounds, Harbor Health Center, Baltimore, Maryland, December 1, 1989
95. Congestive heart failure: A case study and other ramifications. 9th Annual Symposium, Advances in Cardiology, St. Francis Hospital and Medical Center, Topeka, Kansas, February 23, 1990
96. New approaches for treating the cardiac patient - dobutamine therapy in the home. 18th Annual League of Intravenous Education Seminar, Pittsburgh, Pennsylvania, March 7, 1990.
97. Treatment strategies in congestive heart failure - focus on outpatient infusion of positive inotropic agents. Cardiology Rounds, Hanneman Hospital, Philadelphia, Pennsylvania. March 27, 1990.

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98. Management of acute and chronic congestive heart failure with an emphasis on therapy in the home care setting. Annual Meeting of the American Academy of Home Care Physician, Atlanta, Georgia, May 17, 1990.
99. Strategies in managing the patient with refractory congestive heart failure. Medical Grand Rounds, Arthur Long Hospital, Atlanta, Georgia, August 21, 1990.
100. Strategies in managing the patient with refractory congestive heart failure. Cardiology Rounds, Emory University, August 21, 1990.
101. New methods in treating refractory congestive heart failure. Hickory Cardiology Association, Hickory, North Carolina, September 25, 1990.
102. Hypertrophic cardiomyopathy with particular emphasis on neonates, infants, and children. Pediatric Grand Rounds, Mercy Medical Center, Baltimore, Maryland, November 1, 1990.
103. Treating the patient with refractory congestive heart failure: Changing strategies. Welburn Baptist Hospital, Evansville, Indiana, January 22, 1991.
104. Outpatient infusions of positive inotropic agents in the management of refractory congestive heart failure. Cardiology Rounds, Nasser Cardiology Associates, St. Vincent's Hospital, Indianapolis, Indiana, February 13, 1991
105. Alternative approaches for the management of patients with refractory heart problems. Cardiology Rounds - Division of Cardiology, University of Florida, Division of Cardiology, Gainesville, Florida, March 8 1991,
106. Management of congestive heart failure using home infusions of positive inotropic agents. California Society for Hospital Pharmacists Semi-Annual Meeting, Sacramento, California, April 6, 1991.
107. Outpatient infusions of positive inotropic agents in the management of refractory congestive heart failure. Cardiology Grand Rounds, University of Tennessee Medical Center, Knoxville, Tennessee, May 1, 1991.
108. Outpatient infusions of dobutamine in the management of congestive heart failure. Northwest Cardiology Associates, Chicago, Illinois, May 9, 1991
109. Diagnosis and prognosis for the patient with congestive heart failure. Presented at Practical Management of Cardiovascular Disease Moving Into the Twenty First Century in Nova Institute of Research and Education, Falls Church, Virginia, Friday, December 6, 1991.

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110. Congestive heart failure: An overview of pathogenesis, prognosis, and treatment strategies. Medical Grand Rounds, St. Luke's Hospital, Bethlehem, Pennsylvania, March 24, 1992.
111. Case Presentation, Housestaff Conference, St. Luke's Hospital, Bethlehem, Pennsylvania, March 24, 1992.
112. Outpatient treatment for chronic congestive heart failure with positive inotropic agents. Mease Medical Center, Clearwater, Florida, June 3, 1992.
113. Cardiac potpourri. Housestaff Conference, University of Maryland Hospital, Department of Medicine, April 25, 1994.
114. The First Ardiac Memorial Lecture: Rediscovering the lost art of medicine. Medical Grand Rounds, Franklin Square Hospital, Baltimore, Maryland, April 28, 1994
115. Clinical Pathologic Conference. Baltimore Veterans Administration Hospital, March, 1994.
116. Clinical Pathologic Conference. Baltimore Veterans Administration Hospital, February 10, 1995.
117. Rediscovering the lost art of medicine. Pediatric Grand Rounds, Mercy Medical Center, Baltimore, Maryland, March 3, 1995.
118. Rediscovering the lost art of medicine. Sophomore Class, University of Maryland School of Medicine, August 17, 1995.
119. Rediscovering the art of medicine. Alpha Omega Alpha, History of Medicine Lecture Series, University of Maryland School of Medicine, March 12 1996.
120. Weight Gain and Dyspnea in a 12 Year-old. Clinical Pathologic Conference, University of Maryland Medical School, Department of Medicine, January 31, 1997.
121. Management of patients who have had myocardial infarction - Strategies to reduce post-infarct risk . Fifth Annual Mid-Winter Conference, Cardiology for the Family Physician. Rockville, Maryland, February 8, 1997
122. Risk factor assessment in patients undergoing dental surgery. American Dental Society of Anesthesiology, Washington, D.C., April 23, 1999,
123. Peripartum Cardiomyopathy. Department of Obstetrics & Gynecology Grand Rounds, Mercy Medical Center, Baltimore, Maryland, June 3, 1999.

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124. Evaluation and management of the cardiac patient undergoing noncardiac surgery. Surgical Grand Rounds, Mercy Medical Center. Baltimore, Maryland, December 9, 1999.
125. Pericardial Disorders: Things you may not know but should. Medical Grand Rounds, Union Memorial Hospital, April, 30, 2000.
126. Cardiac Potpourri, OB/GYN Grand Rounds, Mercy Medical Center, June 1, 2000.
127. Update on the Diagnosis and Management of Congestive Heart Failure. Medical Staff Rounds. Sacred Heart Hospital Center, Cumberland, Maryland. November 10, 2004.

STUDY PROTOCOLS

Principal Investigator "A Study of Home Inotropic Therapy in Patients with Chronic Congestive Heart Failure", sponsored by Cardiology Associates Inc., Chicago, Illinois, 1992.

Principal Investigator (Mercy Medical Center) "A Study of Outpatient Infusions of Milrinone in Individuals with Chronic Congestive Heart Failure", sponsored by Sanofi, Winthrop, 1995