

IRWIN M BRAVERMAN, M.D.

Curriculum Vitae

Born: April 17, 1929 Boston, Massachusetts

Education: AB, Summa cum laude, Harvard College 1951
Phi Beta Kappa
MD, Yale University School of Medicine 1955
Alpha Omega Alpha

Career: Intern-Medicine- 1955-1956
Yale-New Haven Medical Center

Captain, U.S. Army Medical Corps 1956-1958
Pentagon, Washington, D.C.

Assistant Resident - Medicine 1958-1959
Yale-New Haven Medical Center

Helen Hay Whitney Foundation Fellow 1959-1962
Dept. of Medicine - Section of Dermatology
Yale University School of Medicine

Assistant Professor of Dermatology 1962-1973
Yale University School of Medicine

Visiting Scientist, Dept. of 1969-1970
Biologic Structure
University of Washington, Seattle

Professor of Dermatology 1973-present
Yale University School of Medicine

Yale University School of Medicine
Vice Chairman - Department of Dermatology 1980-1997

Professor Emeritus of Dermatology July 2010 -

Positions Held:

Board of Directors 1980-1984
American Academy of Dermatology

Board of Directors 1982-1987
Society of Investigative Dermatology

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| Nominating Committee Society of Investigative Dermatology Chairman, Nominating Committee | 1987-1989 1989 |
| New England Dermatological Society Vice President | 1990-1991 |
| New England Dermatological Society President | 1991-1992 |
| The Society for Investigative Dermatology President-Elect President | 1991-1992 1992-1993 |
| New England Dermatological Society Council Member | 1992-1995 |

Professional Honors or Recognition:

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| Francis Gilman Blake Teaching Award awarded by class of 1977 as the most outstanding teacher in the medical sciences | 1977 |
| Mr. and Mrs. J.N. Taub International Memorial Award for Psoriasis Research | 1980 |
| Udo Wile Visiting Professor, University of Michigan | 1982 |
| Martin Haight Visiting Professor, Cedars-Sinai Medical Center, Los Angeles, CA | 1982 |
| Invited Lecturer, Valley of the Sun Symposium at La Posada, sponsored by the Phoenix Dermatology Society | 1982 |
| Invited Lecturer, C.I.R.D., Nice, France | 1982 |
| First Annual Herbert A. Luscombe Lecturer in Dermatology, Jefferson Medical College of Thomas Jefferson University Philadelphia, PA 1984 | |
| Litchfield Lecturer of Oxford University at the 3rd World | |

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| Congress for Microcirculation, Oxford University, UK September 9-14 | 1984 |
| Invited Speaker Danish Dermatology Society, Copenhagen June 4 | 1987 |
| Sulzberger International Lectureship Award Awarded by The American Academy of Dermatology | 1989 |
| Master of Dermatology Awarded by American Academy of Dermatology | 1993 |
| Invited speaker Japanese Dermatological Association April 20-23 | 1994 |
| Castle and Connolly Medical Ltd. Recognition: Top Doctors in New York Metro area | 1997,1999-2006 |
| Career Recognition Award, Medical Dermatology Society | 1998 |
| D. Martin Carter Mentorship Award (American Skin Association) | 2000 |
| Everett C Fox MD Memorial Lecturer Awarded by American Academy of Dermtaology | 2001 |
| New York Magazine: Top Doctors | 2000-06 |
| Contemporary Clinical Medicine: Great Teachers. NIH Clinical Center Lecture: The Skin and the Eye April 10 | 2002 |
| Philip W. Felts Lecture in the Humanities, Vanderbilt Medical School April 4 | 2003 |
| Castle and Connolly Medical Ltd. Recognition: Top Doctors for Cancer United Services University for Health Sciences November 20 | 2005-07 2007 |
| Lifetime Career Educator Award from Dermatology Foundation Feb 2 | 2008 |
| Invited Discussor, Historical CPC on Akhenaten, University of Maryland, Baltimore, May 2 | 2008 |
| Invited Speaker, Yale Club of Cincinnati Annual Meeting April 21 | 2009 |
| Invited Speaker Mexican Academy of Dermatology, Mexico City, April 14-7 | 2010 |

Professional Societies:

American Medical Association
 Connecticut State Medical Society
 New England Dermatological Society
 American Academy of Dermatology
 Society of Investigative Dermatology
 American Federation of Clinical Research
 Association of American Physicians
 American Dermatologic Association
 Honorary member, Pacific Dermatologic Society
 Dermatology Foundation
 Sigma Xi

Committees:

Chairman, Clinical - Pathologic Conference, New England
 Dermatological Society, Boston, May 1968.
 Chairman, Stephen Rothman Skin Research Club, Chicago, December
 1968.
 National Program for Dermatology, Division of Education and
 Communication.
 Chairman of Task Force on Education for Residents, 1969 - 1974.
 Member, Medical and Scientific Committee, Dermatology Foundation,
 1972-1974.
 Editorial Board Index of Dermatology 1974 - 1984.
 Member, Task Force on Psoriasis, American Academy of Dermatology,
 1975 - 1980t.
 Editorial Board, American Journal Dermatopathology 1978 - 1982.
 Moderator, Third International Symposium on Psoriasis, 1980.
 Key Person, American Academy of Dermatology, 1984 - 1990.
 Editorial Board - Microvascular Research, 1992 - 1999.
 General Medicine A Study Section (NIH), 1993 - 1995

Certification:

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| Diplomate National Board of Medical Examiners | 1956 |
| American Board of Dermatology | 1963 |
| American Board of Dermatopathology | 1982 |

Miscellaneous:

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| Udo Wile Visiting Professor, University of Michigan | 1982 |
| Martin Haight Visiting Professor, Cedars-Sinai Medical Center, Los Angeles, CA | 1982 |
| Invited Lecturer, Valley of the Sun Symposium at La Posada, sponsored by the Phoenix Dermatology Society | 1982 |
| Invited Lecturer, C.I.R.D., Nice, France | 1982 |
| First Annual Herbert A. Luscombe Lecturer in Dermatology, Jefferson Medical College of Thomas Jefferson University Philadelphia, PA | 1984 |

Publications:**Research Reports:**

1. Braverman IM. Neurological actions caused by the mutant gene "Trembler" in the house mouse (*Mus Musculus*, L.). *J. Neuropath and Exp Neurol* 12:64-72, 1953.
2. Braverman IM, Lerner AB. Hydralazine disease in the guinea pig as an experimental model for lupus erythematosus. *J Invest Derm* 39:317-327, 1962.
3. Braverman IM. Zirconium: Its effect on the reticuloendothelial system and action as an immunologic adjuvant. *J Invest Derm* 43:509-518, 1964.
4. Braverman IM. Study of autoimmune disease in New Zealand Mice. II. Immunologic and parabiotic studies of NZB/NZW F₁ Hybrids. *J Invest Derm* 49:469-473, 1967.
5. Braverman IM. Study of autoimmune disease in New Zealand Mice. I. Genetic features and natural history of NZB, NZW, and NZY strains and NZB/NZW hybrids. *J Invest Derm* 50:483-499, 1968.
6. Kauffman HJ, Braverman IM, Spiro HM. Esophageal manometry in scleroderma. *Scand J Gastroenterology* 3:246-254, 1968.
7. Braverman IM, Slesinkis J. Study of autoimmune disease in New Zealand Mice. III. Mechanisms underlying hemolytic anemia of NZB mice. *J Invest Derm* 51:274-279, 1968.
8. Braverman IM, Slesinki J. Study of autoimmune disease in New Zealand Mice. IV. Immunologic reactivity and reticuloendothelial function. *J Invest Derm* 55:317-324, 1970.
9. Braverman IM, Cohen I, O'Keefe E. Metabolic and ultrastructural studies in a patient with

pustular psoriasis (von Zumbusch). *Arch Derm* 105:189-196, 1972.

10. Braverman IM. Electron microscopic studies of the microcirculation in psoriasis. *J Invest Derm* 59:91-98, 1972.
11. Braverman IM, Yen A. Microcirculation in psoriatic skin. *J Invest Derm* 62:493-502, 1974.
12. Braverman IM, Yen A. Demonstration of immune complexes in spontaneous and histamine induced lesions and in normal skin of patients with leukocytoclastic angiitis. *J Invest Derm* 64:105, 1975.
13. Yen A, Braverman IM. Ultrastructure of the human dermal microcirculation. The horizontal plexus of the papillary dermis. *J Invest Derm* 66:131-142, 1976.
14. Braverman IM, Yen A. Ultrastructure of the human dermal microcirculation II. The capillary loops of the dermal papillae. *J Invest Derm* 68:44-52, 1977.
15. Braverman IM, Yen A. Ultrastructure of the capillary loops in the dermal papillae of psoriasis. *J Invest Derm* 68:53-60, 1977.
16. Braverman IM. Microcirculation in psoriasis. *Psoriasis: Proceedings of the Second Intl Symp, 1976, New York. York Medical Books, pp. 28-35, 1977.*
17. Braverman IM, Yen A. Ultrastructure of the human dermal microcirculation III. The microvasculature in the mid and lower dermis and subcutis. *J Invest Derm* 77:297-304, 1981.
18. Braverman IM, Sibley J. Role of the Microcirculation in the Treatment and Pathogenesis of Psoriasis. *J Invest Dermatol* 78:12-17, 1982.
19. Braverman IM, Fonferko E. Studies in Cutaneous Aging. I. The Elastic Fiber Network. *J Invest Dermatol* 78:434-443, 1982.
20. Braverman IM, Fonferko E. Studies in Cutaneous Aging. II. The Microvasculature. *J Invest Dermatol* 78:444-448, 1982.
21. Braverman IM, Key-Yen A. Ultrastructure Human Dermal Microcirculation. IV. Valve-containing collecting veins at the dermal-subcutaneous junction. *J Invest Dermatol* 81:438-442, 1983.
22. Braverman IM, Keh-Yen A. Ultrastructure and three-dimensional reconstruction of several macular and papular telangiectases. *J Invest Dermatol* 81:489-497, 1983.
23. Braverman IM. Role of blood vessels and lymphatics in cutaneous inflammatory processes - an overview. *Brit J Dermatol* 109:89-98, 1983.

24. Braverman IM, Keh-Yen A. Ultrastructural abnormalities of the microvasculature and elastic fibers in the skin of juvenile diabetics. *J Invest Dermatol* 82:270-274, 1984.
25. Braverman IM, Sibley J. The response of psoriatic epidermis and microvessels to treatment with topical steroids and oral methotrexate. *J Invest Dermatol* 85:(6)584-586, 1985.
26. Braverman MS, Braverman IM. Three dimensional reconstruction of serial sections using a microcomputer graphics system. *J Invest Dermatol* 86:290-294, 1986.
27. Braverman IM, Keh-Yen A. Three dimensional reconstruction of the endothelial cell gaps in psoriatic vessels and their identity with those produced by the intradermal injection of histamine. *J Invest Dermatol* 86:577-581, 1986.
28. Braverman IM, Sibley J, Keh-Yen A. A study of the veil cells around normal, diabetic and aged cutaneous microvessels. *J Invest Dermatol* 86:57-62, 1986.
29. Braverman IM. Elastic fiber and microvascular abnormalities in aging skin. *Dermatologic Clinics* 4:391-405, 1986.
30. Braverman IM, Yager NB, Chen M, Cadman EC, Hait WN, Maynard T. Combined total body electron beam irradiation and chemotherapy for mycosis fungoides. *J Amer Acad Dermatol* 16:45-60, 1987.
31. Braverman IM, Klein S, Grant A. Electron microscopic and immunolabelling studies of the lesional and normal skin of patients with mycosis fungoides treated by total body electron beam irradiation. *J Amer Acad Dermatol* 16:61-74, 1987.
32. Braverman IM. Computers and Morphology. *Archives of Dermatology* 124:1415-1417, 1988.
33. Imayama S, Braverman IM. Scanning electron microscopic study of elastic fibers of the loose connective tissue (Superficial Fascia) in the rat. *Anatomical Rec* 222:115-120, 1988.
34. Brody CM, Tilson JE, Braverman IM. Age of onset, pattern of distribution, and histology of aneurysm on development in a genetically predisposed mouse model. *J Vasc Surg* 81: 45-48, 1988.
35. Imayama S, Braverman IM. A hypothetical explanation for the aging of the skin. Chronological alteration of the three-dimensional arrangement of collagen and elastic fibers in connective tissue. *American J Pathology* 134:1019-1025, 1989.
36. Longley J, Braverman IM, Edelson RL. Immunology and the skin: Current concepts in Endocrine, Metabolic and Immunologic Functions of Keratinocytes. *Ann NY Acad Sciences* 548:225-232, 1989.
37. Braverman IM. Ultrastructure and 3-dimensional organization of the cutaneous microvasculature in normal and pathologic states. *J Invest Dermatol* 93:2S-9S, 1989.

38. Malhotra R, Stenn KS, Fernandez LA, Braverman I. The angiogenic properties of psoriatic skin associate with the epidermis (E) - not the dermis (D). *Laboratory Investigation* 61:162-165, 1989.
39. Bologna JL, Braverman IM, Rousseau ME, Sarrel PM. Skin changes in menopause. *Maturitas* 11:295-304, 1989.
40. Braverman IM, Sibley J, Keh A. Ultrastructural Analysis of the Endothelial-Pericyte Relationship in Diabetic Cutaneous Vessels. *J Invest Dermatol* 95:147-153, 1990.
41. Braverman IM, Sibley J. Ultrastructural and three-dimensional analysis of the contractile cells of the cutaneous microvasculature. *J Invest Dermatol* 95:90-96, 1990.
42. Braverman IM, Keh A, Goldminz D. Correlation of laser Doppler wave patterns with underlying microvascular anatomy. *J Invest Dermatol* 95:283-286, 1990.
43. Braverman IM, Keh A, Jacobson B. 3-D reconstructions of the cutaneous lesions of hereditary hemorrhagic telangiectasia. *J Invest Dermatol* 95:422-427, 1990.
44. Braverman IM. Bowen's disease and internal cancer. *JAMA* 266:842-843, 1991.
45. Verga M, Braverman IM. The use of immunohistological analysis in differentiating cutaneous T cell lymphoma from psoriasis and dermatitis in clinically ambiguous cases. *Archives of Dermatology* 127:1503-1510, 1991.
46. Braverman IM, Schechner JS. Contour mapping of the cutaneous microvasculature by computerized laser Doppler velocimetry. *J Invest Derm* 97:1013-1018 1991.
47. Schechner JS, Braverman IM. Synchronous vasomotion in the human cutaneous microvasculature provides evidence for central modulation. *Microvascular Research* 44:27-32, 1992.
48. Braverman IM, Schechner JS, Silverman DG, Keh-Yen A. Topographic mapping of the cutaneous microcirculation using two outputs of laser Doppler flowmetry: Flux and the concentration of moving blood cells. *Microvascular Research* 44:33-48, 1992.
49. Braverman IM, Keh-Yen A. The periadventitial cell of the cutaneous microvasculature known as the veil cell is the dermal dendrocyte. *Clin Res* 40:496A, 1992.
50. Braverman IM. A study of the veil cells around normal, diabetic, and aged cutaneous microvessels. In: Dermal Immune System. Edited by Nickoloff BJ. CRC Press, MI. pp. 91-115, 1993.
51. Wardell K, Braverman IM, Silverman DG, Nilsson GE. Spatial heterogeneity in normal skin perfusion recorded with laser Doppler imaging and flowmetry. *Microvascular Research* 48(1):26-38, 1994.
52. Petzelbauer P, Pober JS, Keh A, Braverman IM. Inducibility and expression of microvascular endothelial adhesion molecules in lesional, perilesional, and uninvolved skin of psoriatic patients. *J*

Invest Dermatol 103(3):300-5, 1994.

53. Silverman DG, Jotkowitz AB, Freemer M, Gutter V, O'Conner TZ, Braverman IM. Peripheral assessment of phenylephrine-induced vasoconstriction by laser Doppler flowmetry and its potential relevance to homeostasis mechanisms. *Circulation* 90(1):23-6, 1994.
54. Braverman IM. Anatomy and physiology of skin circulation. In: Handbooks of Skin Bioengineering: Volume 2. Cutaneous Blood Flow and Erythema. Edited by Berardesca, Elsner and Maibach. CRC Press, pp. 3-22,1995.
55. Younes M, Paus R, Stenn KS, Braverman I, Keh-Yen A. Localization and abundance of fodrin during keratinocyte differentiation. *In Vitro Cellular Development Biology. ANIMAL.* 30A:69-74, 1994
56. Sessa WC, Garcia-Cardena G, Liu J, Keh A, Pollock JS, Bradley J, Thiru S, Braverman IM, Desai KM. The Golgi association of endothelial nitric oxide synthase is necessary for the efficient synthesis of nitric oxide. *J Biol Chem* 270(30): 17641-4, 1995.
57. Silverman DG, Jotkowitz AB, Gutter V, Braverman IM, O'Connor TZ. Regional vs systemic responses to mental stress: a potential mechanism for non-demand-related ischemia. *Microvascular Research* 51(3):396-9, May 1996.
58. Braverman IM. The cutaneous microcirculation: Ultrastructure and microanatomical organization. *Microcirculation* 4:329-40, 1997.
59. Braverman IM. The cutaneous microcirculation. *Journal of Investigative Dermatology Symposium Proceedings*, 5:3-9, 2000.
60. Dolev JC, Friedlaender LK, Braverman IM. Use of fine art to enhance visual diagnostic skills. *JAMA* 286(9):1020-1, 2001.
61. Braverman IM, Redford DB, Mackowiak PA. Akhenaten and the strange physiques of Egypt's 18th dynasty. *Annals Intern Med* 150:556-560, 2009.
62. Braverman IM, Mackowiak PA. King Tutankhamun's family and demise. (Letter) *JAMA* 303:2472-2475, 2010

Clinical Papers and Chapters:

1. Braverman IM, Lerner AB. Diffuse malignant proliferation of vascular endothelium: A possible new clinical and pathological entity. *Arch Derm* 84:22-30, 1961.
2. Braverman IM, Johnson ML, Lerner AB. Recognition and management of the lupus erythematosus. *Med Science* 9:749-768, 1961. This was originally written for a closed circuit FM radio program sponsored by Albany Medical School as part of its post-graduate education program.

3. Lerner MR, Braverman IM. Case report - Psoriasis, lupus erythematosus and pityriasis rubra pilaris in one family. Arch Derm 85:229-231, 1962.
4. Braverman IM, Levin J. Dilantin-induced serum sickness. Case report and inquiry into its mechanism. Am J Med 35:418-422, 1963
5. Braverman IM. Malignant proliferation of vascular endothelium. Proceedings of the 12th International Congress of Dermatology, II, 1562, 1963.
6. Braverman IM. A look at lupus erythematosus. Consultant 3:24-27, 1963.
7. Braverman IM. Second annual review of dermatology. Med World New 5:146, 1964.
8. Braverman IM. Urticaria as a sign of internal disease. Post-graduate Med 41:450-454, 1967.
9. Braverman IM, McGuire JS. Developmental disorders of skin In: Biologic Basis of Pediatric Practice. Edited by Robert C. Cooke. McGraw-Hill Book Company, Inc., New York, NY, pp. 205-219, 1968.
10. Sawyer CS, Braverman IM. Basal cell nevus syndrome with inflammatory disease of the bowel. Arch Dermatol 94:131-132, 1969.
11. Braverman IM. Telangiectasia as a sign of systemic disease. Conn Med 33:42-46, 1969.
12. Braverman IM. Graduate training in Dermatology. Opinions of those in training 1968. Arch Derm 99:304-311, 1969.
13. Braverman IM. Acne Rosacea, In: Current Therapy 1970. Edited by HF Conn. WB Saunders. Philadelphia, pp. 600-601, 1970.
14. Hurwitz S, Braverman IM. White spots in tuberous sclerosis. J of Pediatrics 77:587-594, 1970.
15. Braverman IM. Cutaneous manifestations of diabetes mellitus. In: Medical Clinics of North America, Diabetes Mellitus Issue. Edited by PK Bondy and P Felig. WB Saunders, pp. 1019-1029, July 1971.
16. Braverman IM. Systemic lupus erythematosus. In: Merck Manual, Twelfth Edition, pp. 1252-1255, 1972.
17. Braverman IM. Chronic discoid lupus erythematosus. In: Merck Manual, Twelfth Edition, p. 1251-1252, 1972.
18. Braverman IM. Lupus Erythematosus. In: Clinical Dermatology. Harper and Row, Hagerstown. Unit 5-1, 1:1-24, 1972.
19. Braverman IM. Scleroderma. In: Clinical Dermatology. Harper and Row, Hagerstown. Unit 5-3,

- 1:1-5, 1972.
20. Braverman IM. Morphea. In: Clinical Dermatology. Harper and Row, Hagerstown. Unit 5-3, 1:1-5, 1972.
 21. Braverman IM. Dermatomyositis and Polymyositis. In: Clinical Dermatology. Harper and Row, Hagerstown. Unit 5-4, 1:1-10, 1972.
 22. O'Keefe E, Braverman IM, Cohen I. Annulus migrans: Identical lesions in pustular psoriasis, Reiter's Syndrome and geographic tongue. *Arch Derm* 107:240-244, 1973.
 23. Nordlund J, Lerner A, Braverman IM, McGuire J. Multiple lentiginos syndrome. *Arch Derm* 107:259-261, 1973.
 24. Braverman IM. Cutaneous signs of systemic disease. *Medical Times* 105:82-95, 1977.
 25. Braverman IM. Striped nails and kidney transplantation. *Ann Intern Med* 89:286-7, 1978.
 26. Braverman IM. The neutrophilic dermatosis, in *Dermatology Update, Review for Physicians*. Elsevier, New York, pp. 225-271, 1979.
 27. Goodenberger DM, Lawley TJ, Strober W, Wyatt L, Sangree MH, Jr, Sherwin R, Rosenbaum H, Braverman I and Katz SI. Neurolytic migratory erythema without glucagonoma. Report of two cases. *Arch Dermatol* 115:1429-1432, 1980.
 28. Cohen SR, Stenn KS, Braverman IM, Beck GJ: Mycosis fungoides: clinicopathologic relationships, survival and therapy in 59 patients with observations on occupation as a new prognostic factor. *Cancer* 46:2654-2666, 1980.
 29. Braverman IM. Lupus Erythematosus. In: Clinical Dermatology. Harper and Row, Hagerstown, 1979.
 30. Braverman IM. Scleroderma. In: Clinical Dermatology. Harper and Row, Hagerstown, 1979.
 31. Braverman IM. Morphea. In: Clinical Dermatology. Harper and Row, Hagerstown, 1979.
 32. Braverman IM. Dermatomyositis and Polymyositis. In: Clinical Dermatology. Harper and Row, Hagerstown, 1979.
 33. Goldgeier MH, Cohen SR, Braverman IM, Stenn KS. An unusual and fatal case of disseminated cutaneous herpes simplex infection in a patient with cutaneous T-cell lymphoma (Mycosis Fungoides). *J Amer Acad Derm* 4:176-180, 1981.
 34. Witman G, Cadman E, Braverman I. Cisplatin treatment of cutaneous T cell lymphoma. *Cancer Treatment Reports* 65:920, 1981.
 35. Braverman IM. "Cutaneous manifestations of internal tumors" by Decker, Kahn and Rothman,

- June 1942. Commentary: Migratory necrolytic erythema. *Arch Dermatol* 118:784-798, 1982.
36. Milstone LM, Braverman IM, Lucky P, Fleckman P. Classification and therapy of atrophie blanche. *Arch Dermatol* 119:963-969, 1983.
 37. Goldgeier MH, Braverman IM. Etiology and diagnosis of purpura. *Current Concepts in Skin Disorders* 5:10-14, 1984.
 38. Braverman IM. Leukocytoclastic vasculitis. In: Current Therapy. Edited by T.T. Provost. BC Decker, Inc. Toronto, Canada, pp. 131-134, 1985.
 39. Braverman IM. Cutaneous signs of diabetes. In: Diabetes Mellitus: New Concepts in Treatment and Complications. Edited by JM Olefsky, MD and Robert Sherwin, MD. Churchill Livingstone, Inc., New York, NY, pp. 277-294, 1985.
 40. Braverman IM. Microcirculation in psoriasis. In: Psoriasis. Edited by H.H. Roenigk, Jr, MD and H Maibach, MD. Marcel Dekker, Inc., New York, NY, pp. 287-298, 1985.
 41. Leffell DL, Braverman IM. Familial multiple lipomatosis. Report of a case and a review of the literature. *J Amer Acad Dermatol* 15:275-280, 1986.
 42. Braverman IM. The skin in pregnancy. In: Medical Complications During Pregnancy. Edited by GN Burrow, MD and TF Ferris MD. WB Saunders, Philadelphia, 3rd edition, pp. 498-509, 1987.
 43. Barnhill RL, Braverman IM. Progression of pigmented purpura-like eruptions to mycosis fungoides: Report of Three Cases. *J Amer Acad Dermatol* 19:25-31, 1988.
 44. Braverman IM. Elastic fiber and microvascular changes. In: Cutaneous Aging. Edited by Albert M. Kligman and Yoshio Takase. University of Tokyo Press, pp. 371-391, 1988.
 45. Braverman IM. Elastic fiber and microvascular abnormalities in aging skin. *Clinics in Geriatric Medicine* 5:69-90, 1989.
 46. Braverman IM. Microcirculation in psoriasis. In: Psoriasis. Edited by H.H. Roenigk, Jr, MD and H Maibach, MD. Marcel Dekker, Inc. New York, NY, second edition, pp. 447-459, 1991.
 47. Bologna J, Braverman IM. Skin signs of systemic disease. In: Harrison's Principles of Internal Medicine. Edited by Braunwald E, Isselbacher KJ, Petersdorf RG, Wilson JD, Martin JB, and Fauci AS. McGraw-Hill, New York, 12th ed, pp. 322-338, 1990.
 48. Bologna JL, Braverman IM. Skin and subcutaneous tissues. In: Therapy for Diabetes Mellitus and Related Disorders. Edited by Lebovitz HE, DeFronzo, R, Genuth S, Kreisberg R, Pfeifer M, and Tamborlane W. American Diabetes Association Inc., Alexandria Virginia, pp. 204-215, 1991.
 49. Braverman IM. Cutaneous T-cell lymphoma. *Current Problems in Dermatology*, 1991.
 50. Bologna JL, Braverman IM. Skin and subcutaneous tissue. In: Therapy for Diabetes Mellitus and

Related Disorders. Edited by Lebovitz HE, DeFonzo R, Genuth S, Kreisberg R, Pfeifer M, and Tamborlane W. American Diabetes Association Inc., Alexandria, VA, pp 204-215, 1991.

51. Bologna JL, Braverman IM. Pseudoxanthoma-elasticum-like skin changes induced by penicillamine. *Dermatology* 184:12-18, 1992.
52. Smith LT, Wertelecki W, Milstone LM, Petty EM, Seashore MR, Braverman IM, Jenkins TG, Byers PH. Human dermatosparaxis: a form of Ehlers-Danlos syndrome that results from failure to remove the amino-terminal propeptide of type 1 procollagen. *Am J Hum Gen* 51(2):235-44, 1992.
53. Wilson LD, Licata AL, Braverman IM, Edelson RL, Heald PD, Feldman AM, Kacinski BM. Adjuvant extracorporeal photochemotherapy or doxorubicin/cyclophosphamide chemotherapy may improve the survival of tumor-stage and erythrodermic patients who have achieved a complete response to total skin electron beam therapy for cutaneous T-cell lymphoma. *Int J Radiation Oncology Biol Phys* 27(Sup 1):97-98, 1993.
54. Cooper DL, Braverman IM, Sarris AH, Durivage HJ, Saidman BH, Davis CA, Hait WN. Cyclosporine treatment of refractory T-cell lymphomas. *Cancer* 71(7):335-41, 1993.
55. Braverman IM. Transformation in cutaneous T-cell lymphoma [editorial]. *J Invest Dermatol* 101(3):249-50, 1993.
56. Petty EM, Seashore MR, Braverman IM, Spiesel SZ, Smith LT, Milstone LM. Dermatosparaxis in children. A Case report and review of the newly recognized phenotype [see comments]. *Arch Dermatol* 129(10):1310-5, 1993.
57. Braverman IM. Cutaneous Microvasculature. In: Fitzpatrick's Dermatology in General Medicine. Edited by Freedberg IM, Eisen AZ, Wolff K, Austen KF, Goldsmith LA, Katz SI, Fitzpatrick TB. McGraw-Hill, New York, 4th ed, pp 390-96, 1993.
58. Braverman IW. Unique and uncommon skin signs of systemic diseases. *J Dermatol* 21:929-934, December 1994.
59. Bologna JL, Braverman IM. Skin signs of systemic disease. In: Harrison's Principles of Internal Medicine. Edited by Isselbacher KJ, Braunwald E, Wilson JD, Martin JB, Fauci AS, and Kasper DL. McGraw-Hill, New York, 13th ed, pp. 290-307, 1994.
60. Bologna JL, Braverman IM. Skin signs of systemic disease. In: Harrison's Principles of Internal Medicine. Edited by Fauci AS, Braunwald E, Isselbacher KJ, Wilson JD, Martin JB, Kasper DL, Hansen SL, Longo DL, 14th ed, pp 310-328, 1998.
61. Wilson LD, Licata AL, Braverman IM, Edelson RL, Heald PW, Feldman AM, Kacinski BM. Systemic chemotherapy and extracorporeal photochemotherapy for T3 and T4 cutaneous T-cell lymphoma patients who have achieved a complete response to total skin electron beam therapy. *Int J Radiation Oncology Biol Phys*, 1995.

62. Lambroza E, Cohen SR, Phelps R, Lebwohl M, Braverman IM, DiCostanzo D. Hypopigmented variant of mycosis fungoides: demography, histopathology, and treatment of seven cases. *J Am Acad Dermatol* 32:987-93, 1995.
63. Aghassi D, Monoson T, Braverman IM. Reproducible measurements to quantify cutaneous involvement in scleroderma. *Arch Dermatol*. 131:1160-166, 1995.
64. Licata AG, Wilson LD, Braverman IM, Feldman AM, Kacinski BM. Malignant melanoma and other second cutaneous malignancies in cutaneous T-cell lymphoma. The influence of additional therapy after total skin electron beam radiation. *Arch Dermatol* 131(4):432-5, 1995.
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