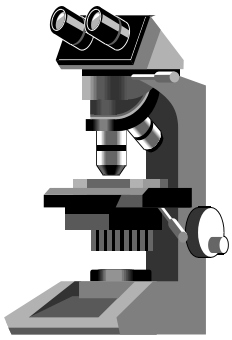
CALIFORNIA
TUMOR TISSUE REGISTRY



SKIN PATHOLOGY

Minutes – Subscription B

February 1999

SUGGESTED READING (General Topics from Recent Literature):

Trichilemmal Keratosis. A Clinicopathologic and Immunohistochemical Study of Two Cases. Poblet E, Jimenez-Ryes J, Gonzalez-Herrada C and Rosario Granados. *Am J of Dermatopathol* 1996; 18(5):543-547.

Early- and Late-Stage Kaposi's Sarcoma Lesions Exhibit Similar Proliferation Fraction. De Their F, Simonart T, Hermans P, Andre J, Van Vooren J-P and Noel JC. *Am J Dermatopathol* 1999; 21(1):25.

Induction of Cutaneous Hyperplasias by Altered Stroma. Requena L, Yus ES, Simon P and Rio E. *Am J of Dermatopathol* 1996; 18(3):248-268.

Expression and Mutation of the Tumor Suppressor Gene p53 in AIDS-Associated Kaposi's Sarcoma. Li JJ, Huang Y-Q, Cockerell CJ, et al. *Am J of Dermatopathol* 1997; 19(4):373-378.

Malignant Melanoma In-Situ Colonizing Basal Cell Carcinoma. A Simulator of Invasive Melanoma. Burkhalter A and White WL. *Am J of Dermatopathol* 1997; 19(3):303-307.

Clear Cell Hidradenoma Associated with the Folliculo-Sebaceous-Apocrine Unit. Histologic Study of Five Cases. Gianotti,R and Alessi E. *Am J of Dermatopathol* 1997; 19(4):351-357.

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CASE NO. 1, ACCESSION NO. 28302 **FEBRUARY 1999**

OAKLAND - Nodular amyloidosis (4)
SAN DIEGO (Naval Medical Ctr) - Nodular amyloidosis (10)
GLENDALE - Amyloidosis
TEXAS (Houston) - Cutaneous amyloidosis
LOUISIANNA (River Ridge) - Nodular amyloidosis
FLORIDA (Ocala) - Amyloidoma
FLORIDA (Winter Haven Hospital) - Amyloid
KENTUCKY (University of Louisville) - Amyloidoma
MARYLAND (National Naval Medical Ctr) - Cutaneous nodular amyloidosis
PENNSYLVANIA (Philadelphia) - Amyloidosis
MASSACHUSETTS (Medfield) - Nodular amyloidosis of skin
MASSACHUSETTS (Longmeadow) - Nodular amyloidosis, skin
MAINE - Amyloid
JAPAN (Okayama) - Amyloidoma
JAPAN (Hamamatsu) - Amyloidoma, most probably AL amyloidosis
SLOVENIA (Institute of Oncol) - Amyloid tumor (3)

DIAGNOSIS:

NODULAR AMYLOIDOSIS (AMYLOIDOMA), SKIN OF LEFT LEG
TY9400, M55150

REFERENCES:

Krishnan J, Chu WS, Elrod JP and Frizzera G. Tumoral Presentation of Amyloidosis (Amyloidomas) in Soft Tissue. A Report of 14 Cases. *Anat Pathol* 1992; 135.

Kyle RA and Gertz MA. Primary Systemic Amyloidosis. Clinical and Laboratory Features in 474 Cases. *Semin Hematol* 1995; 32(1):45-59.

Stone MJ. Amyloidosis. A Final Common Pathway for Protein Deposition in Tissues. *Blood* 1990; 75(3):531-545.

Hoshii Y Takabrashi M Tshihara T and Uchino F. Immunohistochemical Classification of 140 Autopsy Cases with Systemic Amyloidosis. *Pathol Int* 1994; 44(5):352-358.

CASE NO. 2, ACCESSION NO. 12777 **FEBRUARY 1999**

OAKLAND - Plexiform neurofibroma (4)
SAN DIEGO (Naval Medical Ctr) - Malignant peripheral nerve sheath tumor (4);; Neurofibroma (5)
GLENDALE - Plexiform neurofibroma
TEXAS (Houston) - Neurofibroma, epithelioid
ARKANSAS (Little Rock) - Neurofibroma
LOUISIANNA (River Ridge) - Neurofibroma with schwannomatosis
FLORIDA (Ocala) - Plexiform neurofibroma
FLORIDA (Winter Haven Hospital) - Schwannoma
KENTUCKY (University of Louisville) - Plexiform schwannoma
MARYLAND (National Naval Medical Ctr) - Benign nerve sheath tumor with plexiform features
PENNSYLVANIA (Philadelphia) - MPNST
MASSACHUSETTS (Medfield) - Malignant schwannoma
MASSACHUSETTS (Longmeadow) - Plexiform neurofibroma, skin
MAINE - Plexiform neurofibroma with sarcomatous transformation
JAPAN (Okayama) - Neurofibroma with schwannoma-like features
JAPAN (Hamamatsu) - Schwannoma
SLOVENIA (Institute of Oncol) - Plexiform neurofibroma (3)

DIAGNOSIS:

PLEXIFORM NEUROFIBROMA WITH FOCAL, EARLY SARCOMATOUS TRANSFORMATION
T01000, M95500

REFERENCES:
Riccardi VM. Neurofibromatosis. Past, Present, and Future. *N Eng J Med* 1991; 324(18):1283-1285.
Pelton J, Jaakkola S, Lebwohl M, Rawall S, et al. Cellular Differentiation and Expression of Matrix Genes in Type I Neurofibromatosis. *Lab Invest* 1988; 59(6):760-771.
Barker D, Wright E and Nguyen L, et al. Gene for von Recklingshausen Naurofibromatosis is in the Pericentromeric Region of Chromosome 17. *Science* 1987; 236:1100.
Guccion JG and Enzinger FM. Malignant Schwannoma Associated with von Recklinghausen's Neurofibromatosis. *Virchows Arch* (Pathol Anat) 1979; 31:555.
Mulvihill JJ, Parry DM, Sherman JL, Pikus A, et al. Neurofibromatosis 1 (Recklinghausen Disease) and Neurofibromatosis 2 (Bilateral Acoustic Neurofibromatosis). *Ann Intern Med* 1990; 113:39.

CASE NO. 3, ACCESSION NO. 28308 **FEBRUARY 1999**

OAKLAND - Pilomatricoma (4)
SAN DIEGO (Naval Medical Ctr) - Pilomatricoma (10)
GLENDALE - Pilomatrixoma
TEXAS (Houston) - Pilomatricoma
ARKANSAS (Little Rock) - Pilomatricoma
LOUISIANNA (River Ridge) - Pilomatrix carcinoma
FLORIDA (Ocala) - Pilomatrixoma
FLORIDA (Winter Haven Hospital) - Pilomatrixoma
KENTUCKY (University of Louisville) - Pilomatricoma (minority pilomatrix carcinoma)
MARYLAND (National Naval Medical Ctr) - Pilomatrixoma
PENNSYLVANIA (Philadelphia) - Pilomatricoma
MASSACHUSETTS (Medfield) - Calcifying epithelioma of Malherbe (pilomatrixoma)
MASSACHUSETTS (Longmeadow) - Pilomatricoma, skin
MAINE - Calcifying epithelioma of Malherbe (pilomatrixoma)
JAPAN (Okayama) - Pilomatrixoma
JAPAN (Hamamatsu) - Calcifying epithelioma
SLOVENIA (Institute of Oncol) - Pilomatrixoma (3)

DIAGNOSIS:

PILOMATRIXOMA, LEFT UPPER ARM
TY8220, M81100

REFERENCES:

Farrier S and Morgan M. bcl-2 Expression in Pilomatricoma. *Am J of Dermatopathol* 1997; 19(3):254-257.
Green DE, Sanusi ID and Fowler MR. Pilomatrix Carcinomas. *J Am Acad Dermatol* 1987; 17(2 Pt 1):264-270.
Lineaweaver WC, Wang TN, Lebo TPE. Pilomatrix Carcinoma. *J Surg Oncol* 1988; 37(3):171-174.
Sau P, Lupton GP and Graham JH. Pilomatrix Carcinoma. *Cancer* 1993; 71(8):2491-2498.

CASE NO. 4, ACCESSION NO. 28038 **FEBRUARY 1999**

OAKLAND - Sebaceous carcinoma (4)

SAN DIEGO (Naval Medical Ctr) - Sebaceous carcinoma (5); Adnexal carcinoma (1); Basal cell carcinoma (3)

GLENDALE - Skin appendage tumor

TEXAS (Houston) - Basal cell carcinoma with sebaceous differentiation

ARKANSAS (Little Rock) - Squamous cell carcinoma with clear cell features vs. metastasis, clinical correlation required

LOUISIANNA (River Ridge) - Malignant eccrine poroma

FLORIDA (Ocala) - Sebaceous cell carcinoma

FLORIDA (Winter Haven Hospital) - Sebaceous epithelioma

KENTUCKY (University of Louisville) - Sebaceous carcinoma

MARYLAND (National Naval Medical Ctr) - Sebaceous carcinoma (11); Basal cell carcinoma with sebaceous differentiation (1)

PENNSYLVANIA (Philadelphia) - Basal cell carcinoma (trichoblastic carcinoma)

MASSACHUSETTS (Medfield) - Eccrine carcinoma (adenoid cystic variant)

MASSACHUSETTS (Longmeadow) - Sebaceous carcinoma, skin

MAINE - Sebaceous carcinoma

JAPAN (Okayama) - Sebaceous carcinoma

JAPAN (Hamamatsu) - Sebaceous carcinoma

SLOVENIA (Institute of Oncol) - Sebaceous epithelioma (1); Basalioma with sebaceous differentiation (1); Trichoepithelioma (1)

DIAGNOSIS:

BASAL CELL CARCINOMA WITH SEBACEOUS DIFFERENTIATION ("BASALOID SEBACEOUS CARCINOMA"), LEFT BACK
TY1100, M81233

REFERENCES:

Hogan DJ, To T, Grant, et al. Risk Factors for Basal Cell Carcinoma. *Int J Dermatol* 1989; 28(9):591-594.

Robinson JK. Risk of Developing Another Basal Cell Carcinoma. A 5 Year Prospective Study. *Cancer* 1987; 60(1):118-120.

Epstein E. Value of Follow-Up After Treatment of Basal Cell Carcinoma. *Arch Dermatol* 1973; 108(6):798-800.

Headington JT. Mixed Tumors of the Skin. Eccrine and Apocrine Types. *Arch Dermatol* 1961; 84:989-996.

Rulon DB and Helwig EB. Cutaneous Sebaceous Neoplasms. *Cancer* 1974; 33:82-102.

Wick MR, Goellner JR, Wolfe JT III and Su WP. Adnexal Carcinomas of the Skin II. Extraocular Sebaceous Carcinomas. *Cancer* 1985; 56:1163-1172.

CASE NO. 5, ACCESSION NO. 25849 **FEBRUARY 1999**

OAKLAND - Melanoma (4)
SAN DIEGO (Naval Medical Ctr) - Clear cell sarcoma (1); Malignant melanoma (9)
GLENDALE - Melanoma
TEXAS (Houston) - Nodular melanoma
ARKANSAS (Little Rock) - Malignant melanoma, Clark's level V
LOUISIANNA (River Ridge) - Malignant melanoma
FLORIDA (Ocala) - Melanoma
FLORIDA (Winter Haven Hospital) - Spitz nevus
KENTUCKY (University of Louisville) - Spitzoid melanoma (minority spitz)
MARYLAND (National Naval Medical Ctr) - Malignant melanoma
PENNSYLVANIA (Philadelphia) - Malignant melanoma
MASSACHUSETTS (Medfield) - Malignant melanoma (nodular type)
MASSACHUSETTS (Longmeadow) - Nodular malignant melanoma, skin
MAINE - Malignant melanoma, epithelioid cell type
JAPAN (Okayama) - Malignant melanoma, possibly metastatic
JAPAN (Hamamatsu) - Malignant melanoma, invasive
SLOVENIA (Institute of Oncol) - Melanoma

DIAGNOSIS:

MALIGNANT MELANOMA, LEFT HEEL
TY9600, M87203

REFERENCES:

Barziloi A, Goldberg I, Yulash M and Pavlotsky F. Silver-Stained Nuclear Organizer Regions (AgNORs) as a Prognostic Value in Nucleolar Malignant Melanoma. *Am J Dermatol Pathol* 1998; 20(5):473-477.
Streetly A and Markowe H. Changing Trends in the Epidermiology of Malignant Melanoma. Gender Differences and Their Implications for Public Health. *Int J Epidimol* 1995; 24(5):897-907.
Rigel DS, Friedman RJ and Kopf AW. The Incidence of Malignant Melanoma in the United States. Issues as We Approach the 21st Century . *J Am Head Dermatol* 1996; 34(5 Pt 1):839-847.
Piepkorn M. Melanoma Resection Margin Recommendations, Unconventionally Based on Available Facts. *Semin Diag Pathol* 1998; 15(3):230-234.
Halpern AC, Guerry DIV, Elder DE, et al. Natural History of Dysplastic Nevi. *J Am Acad Dermatol* 1993; 29(1):51-57.

CASE NO. 6, ACCESSION NO. 28184 **FEBRUARY 1999**

OAKLAND - Angiosarcoma (4)
SAN DIEGO (Naval Medical Ctr) - Angiosarcoma (10)
GLENDALE - Hemangioma
TEXAS (Houston) - Angiosarcoma
ARKANSAS (Little Rock) - Angiosarcoma
LOUISIANNA (River Ridge) - Angiosarcoma
FLORIDA (Ocala) - Epithelioid angiosarcoma
FLORIDA (Winter Haven Hospital) - Bacillary angiomatosis
KENTUCKY (University of Louisville) - Angiosarcoma
MARYLAND (National Naval Medical Ctr) - Kaposi's sarcoma (8); Angiosarcoma (4)
PENNSYLVANIA (Philadelphia) - Angiosarcoma
MASSACHUSETTS (Medfield) - Angiosarcoma
MASSACHUSETTS (Longmeadow) - Angiosarcoma, scalp
MAINE - Angiosarcoma
JAPAN (Okayama) - Hemorrhage with granulation tissue formation
JAPAN (Hamamatsu) - Lobular capillary hemangioma (pyogenic granuloma)
SLOVENIA (Institute of Oncol) - Bullous pemphigoid (2); Angiokeratoma (1)

DIAGNOSIS:

ANGIOSARCOMA, SCALP
TY0160, M91203

REFERENCES:

Perez-Guillermo, et al. Fine Needle Aspiration Cytology of Cutaneous Vascular Lesions. *Cytopathol* 1992; 3(4):231-244.

Duke D, Dvorak AM, Harris TJ and Cohen LM. Multiple Retiform Hemangioendotheliomas. A Low Grade Angiosarcoma. *Am J Dermatopathol* 1996; 18(6):606-610.

Hodgkinson DJ, Soule EH, Woods JE, et al. Cutaneous Angiosarcoma of the Head and Neck. *Cancer* 1979; 44(3):1106-1113.

Reed RJ, Palomegue FE, Hairston MA and Krementz ET. Lymphangiosarcoma of the Scalp. *Arch Dermatol* 1966; 94(4):396-402.

Alles JU and Bosslet K. A Study of 19 Cases with Special Emphasis on the Applicability of Endothelial Cell Specific Markers to Routinely Prepared Tissues. *Am J Clin Pathol* 1988; 89(4):463-471.

CASE NO. 7, ACCESSION NO. 28466 **FEBRUARY 1999**

OAKLAND - Leiomyosarcoma (4)
SAN DIEGO (Naval Medical Ctr) - Leiomyosarcoma (10)
GLENDALE - Leiomyosarcoma
TEXAS (Houston) - Spindle cell sarcoma favor leiomyosarcoma
ARKANSAS (Little Rock) - Cutaneous leiomyosarcoma
LOUISIANNA (River Ridge) - Leiomyosarcoma
FLORIDA (Ocala) - Leiomyosarcoma
FLORIDA (Winter Haven Hospital) - Leiomyosarcoma
KENTUCKY (University of Louisville) - Leiomyosarcoma, grade 2
MARYLAND (National Naval Medical Ctr) - Leiomyosarcoma (8); Malignant peripheral nerve sheath tumor (4)
PENNSYLVANIA (Philadelphia) - Leiomyosarcoma
MASSACHUSETTS (Medfield) - Leiomyosarcoma
MASSACHUSETTS (Longmeadow) - Leiomyosarcoma, skin
MAINE - Sarcoma, favor leiomyosarcoma
JAPAN (Okayama) - Leiomyosarcoma
JAPAN (Hamamatsu) - Leiomyosarcoma
SLOVENIA (Institute of Oncol) - Leiomyosarcoma (3)

DIAGNOSIS:

CUTANEOUS LEIOMYOSARCOMA, LEFT HIP
Director's Note: This leiomyosarcoma was vimentin and desmin positive. It also expressed cytokeratin, an unusual but occasionally reported phenomenon.
TY1500, M88903

REFERENCES:
Raj S, Calonje E, Kraus M, Kavanagh G, et al. Cutaneous Pilar Leiomyoma. Clinicopathologic Analysis of 53 Lesions in 45 Patients. *Am J of Dermatopathol* 1997; 19(1):2-9.
Suster S. Epithelioid Leiomyosarcoma of the Skin and Subcutaneous Tissue. Clinicopathologic, Immunohistochemical and Ultrastructural Study of Five Cases. *Am J Surg Pathol* 1994; 18(3):232-240.
Swanson PE, et al. Primary Cutaneous Leiomyosarcoma. A Histological and Immunohistochemical Study of 9 Cases with Ultrastructural Correlation. *J Cutan Pathol* 1988; 15(3):129-141.
Fish FS. Soft Tissue Sarcomas in Dermatology. *Dermatol Surg* 1996; 22(3):268-273.
Konomoto T, et al. Leiomyosarcoma in Soft Tissue. Examination of p53 Status and Cell Proliferating Factors in Different Locations. *Hum Pathol* 1998; 29(1):74-81.

CASE NO. 8, ACCESSION NO. 28430 **FEBRUARY 1999**

OAKLAND - Melanoma (4)
SAN DIEGO (Naval Medical Ctr) - Malignant melanoma (10)
GLENDALE - Melanoma
TEXAS (Houston) - Nodular melanoma with ulceration
ARKANSAS (Little Rock) - + for malignancy suspect malignant melanoma perform IPOX
LOUISIANNA (River Ridge) - Malignant melanoma
FLORIDA (Ocala) - Malignant melanoma
FLORIDA (Winter Haven Hospital) - Melanoma
KENTUCKY (University of Louisville) - Malignant melanoma
MARYLAND (National Naval Medical Ctr) - Malignant melanoma (12)
PENNSYLVANIA (Philadelphia) - Malignant melanoma
MASSACHUSETTS (Medfield) - Malignant melanoma (spindle cell variant) (needs confirmation with tumor markers)
MASSACHUSETTS (Longmeadow) - Nodular malignant melanoma, skin
MAINE - Malignant melanoma
JAPAN (Okayama) - Malignant melanoma
JAPAN (Hamamatsu) - Malignant melanoma, invasive
SLOVENIA (Institute of Oncol) - Melanoma (3)

DIAGNOSIS:

NODULAR ("POLYPOID") MALIGNANT MELANOMA, RIGHT ARM
TY8000, M87203

REFERENCES:

Chang AE, Karnell H and Menck HR. The National Cancer Data Base Report on Cutaneous and Noncutaneous Melanoma. A Summary of 84,836 Cases From the Past Decade. *Cancer* 1998; 83(8):1664-1678.

Rigel DS. Malignant Melanoma. Incidence Issues and Their Effect on Diagnosis and Treatment in the 1990's. *Mayo Clin Proc* 1997; 72(4):367-71.

NIH Consensus Development Conference. Diagnosis and Treatment of Early Melanoma *Consenses Statement* 1992; 10(1):1-25.

Thorn M, Ponten F, Bergstrom R, Spasen P and Adami H-O. Clinical and Histopathologic Predictors of Survival in Patients with Malignant Melanoma. A Population Based Study in Sweden. *J Natl Cancer Inst* 1994; 86:761-769.

Kirkwood JM, Strawerman MH, Ernstoff MS, et al. Interferon Alpha-2b Adjuvant Therapy of High-Risk Resected Cutaneous Melanoma. The Eastern Cooperative Oncology Group Trial EST 1684. *J Eastern Oncol* 1996; 14(1):7-17.

Rosenberg SA, Yang JC, Schwartzentruber DJ, Hwu P, et al. Immunologic and Therapeutic Evaluation of a Synthetic Peptide Vaccine for the Treatment of Patients with Metastatic Melanoma. *Nat Med* 1998; 4(3):321-327.

CASE NO. 9, ACCESSION NO. 8783 **FEBRUARY 1999**

OAKLAND - Eccrine spiradenoma (4)
SAN DIEGO - Eccrine spiradenoma (9); Cutaneous cylindroma (1)
GLENDALE - Cylindroma
TEXAS (Houston) - Eccrine spiradenoma
ARKANSAS (Little Rock) - Cylindroma
LOUISIANNA (River Ridge) - Trichoepithelioma
FLORIDA (Ocala) - Spiradenoma
FLORIDA (Winter Haven Hospital) - Benign appendage tumor
KENTUCKY (University of Louisville) - Benign adnexal neoplasm with cylindroma and spiradenoma-like features
MARYLAND (National Naval Medical Ctr) - Eccrine spiradenoma
PENNSYLVANIA (Philadelphia) - Spiradenoma
MASSACHUSETTS (Medfield) - Sebaceous adenoma
MASSACHUSETTS (Longmeadow) - Spiradenoma, skin
MAINE - Eccrine spiradenoma
JAPAN (Okayama) - Cylindroma
JAPAN (Hamamatsu) - Cylindroma
SLOVENIA (Institute of Oncol) - Benign adnexal tumor (3)

DIAGNOSIS:

BENIGN ECCRINE ADNEXAL TUMOR, RIGHT LEG
TY9400, M83900

CONSULTATION: Dr. Fred Soeprono, Dermatopathologist--LLUMC. "This is a benign eccrine adenexal tumor that has features of both a hidradenoma and spiradenoma."

REFERENCES:
McCalmont TH. A Call For Logic in Classification of Adnexal Neoplasms. *Am J Dermatopathol* 1996; 18(2):103-109.
Wick MR, Goellner JR, Wolfe III JT and Daniel SU. Adnexal Carcinomas of the Skin I. Eccrine Carcinomas. *Cancer* 1985; 56(5):1147-1162.
Dissanayake RVP and Salm R. Sweat Gland Carcinomas. Prognosis Related to Histological Type. *Histopathol* 1980; 4(4):445-466.
Mehregan AH, Hashimoto K and Rahbari H. Eccrine Adenocarcinoma. A Clinicopathologic Study of 35 Cases. *Arch Dermatol* 1983; 119(2):104-114.
Cruz DJ, Meyers JH, et al. Sweat Gland Carcinomas. A Comprehensive Review. *Semin Diagn Pathol* 1987; 4(1):38-74.

CASE NO. 10, ACCESSION NO. 26439 **FEBRUARY 1999**

OAKLAND - Kaposi's sarcoma (4)
SAN DIEGO (Naval Medical Ctr) - Kaposi's sarcoma (10)
GLENDALE - Kaposi's sarcoma
TEXAS (Houston) - Kaposi's sarcoma
ARKANSAS (Little Rock) - Kaposi's sarcoma
LOUISIANNA (River Ridge) - Lichen sclerosis et atrophicus
FLORIDA (Ocala) - Spindle cell hemangioendothelioma
FLORIDA (Winter Haven Hospital) - Kaposi's sarcoma
KENTUCKY (University of Louisville) - Lentigo maligna
MARYLAND (National Naval Medical Ctr) - Kaposi's sarcoma
PENNSYLVANIA (Philadelphia) - Kaposi's sarcoma (nodular type)
MASSACHUSETTS (Medfield) - Kaposi's sarcoma
MASSACHUSETTS (Longmeadow) - Kaposi's sarcoma, nodular phase
MAINE - Kaposi's sarcoma
JAPAN (Okayama) - Kaposi's sarcoma
JAPAN (Hamamatsu) - Malignant melanoma, superficial spreading type
SLOVENIA (Institute of Oncol) - Kaposi's sarcoma

DIAGNOSIS:

KAPOSI'S SARCOMA, FOOT
TY9700, M91403

REFERENCES:
Krigel RL, Laubenstein LJ and Muggia FM. Kaposi's Sarcoma. A New Staging Classification. *Cancer Treat Rep* 1983; 67(6):531-534.
Ganem D. KSHV and Kaposi's Sarcoma. The End of the Beginning? *Cell* 1997; 91(2):157-160.
Hall CB. Human Herpesviruses at Sixes, Sevens and More. *Ann Intern Med* 1997; 127(6):481-483.
Schacker TW, Hughes JP, Shea T, et al. Biological and Virologic Characteristics of Primary HIV Infection. *Ann Intern Med* 1998; 128(8):613-620.