

6. Literaturverzeichnis

1. Center for Disease Control (CDC). Kaposi's sarcoma and pneumocystis pneumonia among homosexual men in New York City and California. *MMWR* 30: 305-308, 1981.
2. Gottlieb MS, Schroff R, Schanker HM, et al. Pneumocystis carinii pneumonia and mucosal candidiasis in previously healthy homosexual men: evidence of a new acquired cellular immunodeficiency. *N Engl J Med* 305: 1425-1431, 1981.
3. Masur H, Michelis MA, Greene JB, Onorato I, Stouwe RA, Holzman RS, Wormser G, Brettman L, Lange M, Murray HW, Cunningham-Rundles S. An outbreak of community-acquired Pneumocystis carinii pneumonia: initial manifestation of cellular immune dysfunction. *N Engl J Med* 305: 1431-1438, 1981.
4. Siegal FP, Lopez C, Hammer GS, Brown AE, Kornfeld SJ, Gold J, Hassett J, Hirschman SZ, Cunningham-Rundles C, Adelsberg BR, et al. Severe acquired immunodeficiency in male homosexuals, manifested by chronic perianal ulcerative herpes simplex lesions. *N Engl J Med*. 1981 305: 1439-1444, 1981.
5. Barre-Sinoussi F, Chermann JC, Rey F, et al. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science* 220: 868-871, 1983.
6. Gallo S, Salahuddin SZ, Popovic M, et al. Frequent detection and isolation of cytopathic retroviruses (HTLV-III) from patients with AIDS and at risk for AIDS. *Science* 224: 500-503, 1984.

7. Louwagie, J., F. E. McCutchan, M. Peeters, T. P. Brennan, E. Sanders-Buell, G. A. Eddy, G. van der Groen, K. Fransen, G. M. Gershy-Damet, R. Deleys, and D.S. Burke. Phylogenetic analysis of gag genes from 70 international HIV-1 isolates provides evidence for multiple genotypes. *AIDS* 7: 769-780, 1993.
8. Simon, F., P. Mauclore, P. Roques, I. Loussert-Ajaka, M. C. Muller-Trutwin, S. Saragosti, M. C. Georges-Courbot, F. Barre-Sinoussi, and F. Brun-Vezinet. Identification of a new human immunodeficiency virus type 1 distinct from group M and group O. *Nat Med* 4: 1032-1037, 1998.
9. Gao F, Morrison SG, Robertson DL, et al. Molecular cloning and analysing of functional envelope genes from human immunodeficiency virus type 1 sequences subtypes A through G. *J Virol* 70, 3: 1651-1657, 1996.
10. Soto-Ramirez L, et al. HIV-1 Langerhans' cell tropism associated with heterosexual transmission of HIV. *Science* 271: 1291-1293, 1996.
11. Subbramanian RA, Cohen EA. Molecular biology of the human immunodeficiency virus accessory proteins. *J Virol* 68: 6831-6835, 1994.
12. Schnittman SM, Psallidopoulos MC, Lane HC, et al. The reservoir for HIV-1 in human peripheral blood is a T cell that maintains expression of CD4. *Science* 245: 305-308, 1989.
13. Lenardo MJ, Baltimore D. NF-kappa B: A pleiotropic mediator of inducible and tissue-specific gene control. *Cell* 58: 227-229, 1989.
14. Pantaleo G, Fauci AS. New concepts in the immunopathogenesis of HIV infection. *Ann Rev Immunol* 13: 487-512, 1995.

15. Simmons G, Reeves JD, Hibbitts S, Stine JT, Gray PW, Proudfoot AE, Clapham PR. Co-receptor use by HIV and inhibition of HIV infection by chemokine receptor ligands. *Immunol Rev* 177: 112-126, 2000.
16. Mack M, Kleinschmidt A, Bruhl H, Klier C, Nelson PJ, Cihak J, Plachy J, Stangassinger M, Erfle V, Schlöndorff D. Transfer of the chemokine receptor CCR5 between cells by membrane-derived microparticles: a mechanism for cellular human immunodeficiency virus 1 infection. *Nat Med* 6: 769-775, 2000.
17. Kaufmann GR, Duncombe C, Zaunders J, Cunningham P, Cooper D. Primary HIV-1 infection: a review of clinical manifestations, immunologic and virologic changes. *AIDS Patient Care STDS* 12: 759-767, 1998.
18. Schacker T, Little S, Connick E, Gebhard K, Zhang ZQ, Krieger J, Pryor J, Havlir D, Wong JK, Schooley RT, Richman D, Corey L, Haase AT. Productive infection of T cells in lymphoid tissues during primary and early human immunodeficiency virus infection. *J Infect Dis* 183: 555-562, 2001.
19. Dear ES, Moudgil T, Meyer RD, et al. Transient high levels of viremia in patients with symptomatic primary HIV-1 infection. *N Engl J Med* 324: 954-960, 1991.
20. Pantaleo G, Graziosi C, Demarest JF, et al. HIV infection is active and progressive in lymphoid tissue during the clinically latent stage of disease. *Nature* 362: 355-359, 1993.
21. Pantaleo G, Graziosi C, Demarest JF, et al. Role of lymphoid organs in the pathogenesis of human immunodeficiency virus (HIV) infection. *Immunol Rev* 140: 105-130, 1994.

22. Silvestris F, Williams RC Jr, Dammacco F. Autoreactivity in HIV-1 infection: the role of molecular mimicry. *Clin Immunol Immunopathol* 75: 197-205, 1995.
23. Dagleish AG. What is the role of autoimmunity in AIDS? *Autoimmunity* 15: 237-244, 1993.
24. Yarchoan R, Redfield RR, Broder S. Mechanisms of B cell activation in patients with acquired immunodeficiency syndrome and related disorders. Contribution of antibody-producing B cells, of Epstein-Barr virus-infected B cells, and of immunoglobulin production induced by human T cell lymphotropic virus, type III/lymphadenopathy-associated virus. *J Clin Invest* 78: 439-447, 1986.
25. Centers for Disease Control. Recommendations of the Advisory Committee on Immunization Practices (ACIP): use of vaccines and immune globulins in persons with altered immunocompetence. *MMWR* 42 (RR-4): 1-18, 1993. spez. Ak-Antwort
26. Kehrl JH, Rieckmann P, Kozlow E, Fauci AS. Lymphokine production by B cells from normal and HIV-infected individuals. *Ann N Y Acad Sci* 651: 220-227, 1992.
27. Kroon FP, van Dissel JT, de Jong JC, Zwinderman K, van Furth R. Antibody response after influenza vaccination in HIV-infected individuals: a consecutive 3-year study. *Vaccine* 18: 3040-3049, 2000.
28. Witt DJ, Craven DE, McCabe WR. Bacterial infections in adult patients with acquired immune deficiency syndrome (AIDS) and AIDS-related complex. *Am J Med* 82: 900-906, 1987.
29. Selwyn PA, Feingold AR, Hartel D, et al. Increased risk of bacterial pneumonia in HIV-infected intravascular drug users without AIDS. *AIDS* 2: 267-272, 1988.

30. Redd SC, Rutherford GW, Sande MA, et al. The role of human immunodeficiency virus infection in pneumococcal bacteremia in San Francisco residents. *J Infect Dis* 162: 1012-1017, 1990.
31. Steinhart R, Reingold AL, Taylor F, et al. Invasive *Haemophilus influenzae* infections in men with HIV infection. *J Am Med Assoc* 268: 3350-3352, 1992.
32. Cohn DL. Bacterial pneumonia in the HIV-infected patient. *Infect Dis Clin North Am* 5: 485-507, 1991.
33. Manfredi R, Nanetti A, Ferri M, Chiodo F. *Pseudomonas* spp. complication in patients with HIV disease: an eight-year clinical and microbiological survey. *Eur J Epidemiol* 16: 111-118, 2000.
34. Joab I, Triki H, de Saint Martin J, Perricaudet M, Nicolas JC. Detection of anti-Epstein-Barr virus trans-activator (ZEBRA) antibodies in sera from patients with human immunodeficiency virus. *J Infect Dis* 163: 53-56, 1991.
35. Schnittman SM, Lane HC, Higgins SE, et al. Direct polyclonal activation of human B lymphocytes by the acquired immune deficiency virus. *Science* 233: 1084, 1986.
36. Viard JP, Chabre H, Bach JF. Autoantibodies to nucleosomes in HIV-1-infected patients. *J Acquir Immune Defic Syndr* 7: 1286-1287, 1994.
37. Müller S, Richalet P, Laurent-Crawford A, Barakat S, Riviere Y, Porrot F, Chamaret S, Briand JP, Montagnier L, Hovanessian A. Autoantibodies typical of non-organ-specific autoimmune diseases in HIV-seropositive patients. *AIDS* 6: 933-942, 1992.

38. Rubbert A, Bock E, Schwab J, Marienhagen J, Nusslein H, Wolf F, Kalden JR. Anticardiolipin antibodies in HIV infection: association with cerebral perfusion defects as detected by ^{99m}Tc-HMPAO SPECT. *Clin Exp Immunol* 98: 361-368, 1994.
39. Grünewald Th, Burmester GR, Schüler-Maué W, Hiepe F, Buttgerit F. Anti-phospholipid antibodies and CD5+ B cells in HIV infection. *Clin Exp Immunol* 115: 464-471, 1999.
40. Weiss L, You JF, Giral P, Alhenc-Gelas M, Senger D, Kazatchkine MD. Anticardiolipin antibodies are associated with anti-endothelial cell antibodies but not with anti- β 2 glycoprotein I antibodies in HIV infection. *Clin Immunol Immunopathol* 77: 69-74, 1995.
41. Kuo CT, Leiden JM. Transcriptional regulation of T lymphocyte development and function. *Ann Rev Immunol* 17: 149-187, 1999.
42. Hayakawa K, Hardy RR, Parks DR, Herzenberg LA. The "Ly-1 B" cell population in normal, immunodeficient, and autoimmune mice. *J Exp Med* 157: 202-2xx, 1983.
43. Herzenberg LA, Stall AM, Lalor PA, Sidman C, Moore WA, Parks DR, Herzenberg LA. The Ly-1 B cell lineage. *Immunol Rev* 93: 81-102, 1986.
44. Hardy RR, Hayakawa K. B Cell Development Pathways. *Ann Rev Immunol* 19: 595-621, 2001.
45. Tarakhovsky A. Bar Mitzvah for B-1 Cell: How Will They Grow Up? *J Exp Med* 185: 981-984, 1997.

46. Hardy RR, Carmack CE, Shinton SA, Kemp JD, Hayakawa K. Resolution and characterization of pro-B and pre-pro-B cell stages in normal mouse bone marrow. *J Exp Med* 173: 1213-1225, 1991.
47. Osmond DG, Rolink A, Melchers F. Murine B lymphopoiesis: towards a unified model. *Immunol Tod* 19: 65-68, 1998.
48. Li YS, Wasserman R, Hayakawa K, Hardy RR. Identification of the earliest B lineage stage in mouse bone marrow. *immunity* 5: 527-535, 1996.
49. Kipps TJ. The CD5 B cell. *Adv Immunol* 47: 117-185, 1989.
50. Hippen KL, Tze LE, Behrens TW. CD5 Maintains Tolerance in Anergic B Cells. *J Exp Med* 191: 883-889, 2000.
51. Hughey CT, Brewer JW, Colosia AD, Rosse WF, Corley RB. Production of IgM Hexamers by Normal and Autoimmune B Cells: implications for the Physiologic Role of Hexameric IgM. *J Immunol* 161: 4091-4097, 1998.
52. Hardy RR, Carmack CE, Li YS, Hayakawa K. Distinctive developmental origins and specificities of murine CD5⁺ B cells. *Immunol Rev* 137: 91-118, 1994.
53. Masmoudi H, Mota-Santos T, Huetz F, Coutinho A, Cazenave PA. All T15 Id-positive antibodies (but not the majority of VHT15⁺ antibodies) are produced by peritoneal CD5⁺ B lymphocytes. *Int Immunol* 2: 515-520, 1990.
54. Martin F, Kearney JF. B-cell subsets and the mature preimmune repertoire. Marginal zone and B1 B cells as part of a "natural immune memory". *Immunol Rev* 175: 70-79, 2000.

55. McDaniel LS, Benjamin WH Jr, Forman C, Briles DE. Blood clearance by anti-phosphocholine antibodies as a mechanism of protection in experimental pneumococcal bacteremia. *J Immunol* 133: 3308-3312, 1984.
56. Cohn M, Langman RE. The protection: the unit of humoral immunity selected by evolution. *Immunol Rev* 115: 11-147, 1990.
57. Ibegbu C, Spira TJ, Nesheim S, Mendez H, Lee F, Polliotti B, Caba J, Nahmias A. Subpopulations of T and B cells in perinatally HIV-infected and noninfected age-matched children compared with those in adults. *Clin Immunol Immunopathol* 71: 27-32, 1994.
58. Indraccolo S, Mion M, Zamarchi R, Veronesi A, Veronese ML, Panozzo M, Betterle C, Barelli A, Borri A, Amadori A, et al. B cell activation and human immunodeficiency virus infection. V. Phenotypic and functional alterations in CD5⁺ and CD5⁻ B cell subsets. *J Clin Immunol* 13: 381-388, 1993.
59. Sampalo A, Lopez-Gomez M, Jimenez-Alonso J, Ortiz F, Samaniego F, Garrido F. CD5⁺ B lymphocytes in HIV infection: relationship to immunological progression of disease. *Clin Immunol Immunopathol* 66: 260-268, 1993.
60. Kouri YH, Basch RS, Karpatkin S. B-cell subsets and platelet counts in HIV-1 seropositive subjects. *Lancet* 339: 1445-1446, 1992.
61. Karpatkin S, Nardi MA, Hymes KB. Sequestration of anti-platelet GPIIIa antibody in rheumatoid factor immune complexes of human immunodeficiency virus 1 thrombocytopenic patients. *Proc Natl Acad Sci USA* 92: 2263-2267, 1995.

62. CDC. 1993 revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. *MMWR Morb Mort Wkly Rep* 41 (RR-17): 1-19, 1992.
63. Ghani AC, de Wolf F, Ferguson NM, Donnelly CA, Coutinho R, Miedema F, Goudsmit J, Anderson RM. Surrogate markers for disease progression in treated HIV infection. *J Acquir Immune Defic Syndr* 28: 226-231, 2001.
64. Damsgaard EM, Frøland A, Jorgensen OD, Mørgensen CE. Microalbuminuria as predictor of increased mortality in elderly people. *Brit Med J* 300: 297-300, 1990.
65. Keil U. Coronary artery disease: the role of lipids, hypertension and smoking. *Basic Res Cardiol* 95 (Suppl. 1): I52-I58, 2000.
66. Hogan CM, Hammer SM. Host determinants in HIV infection and disease. Part 1: cellular and humoral immune responses. *Ann Intern Med* 134: 761-776, 2001.
67. Weinfurt KP, Willke RJ, Glick HA, Freimuth WW, Schulman KA. Relationship between CD4 count, viral burden, and quality of life over time in HIV-1-infected patients. *Med Care* 38: 404-410, 2000.
68. Lillo FB, Cao Y, Concedi DR, Varnier OE. Improved detection of serum HIV p24 antigen after acid dissociation of immune complexes. *AIDS* 7: 1331-1336, 1993.
69. Desire N, Dehee A, Schneider V, Jacomet C, Goujon C, Girard PM, Rozenbaum W, Nicolas JC. Quantification of human immunodeficiency virus type 1 proviral load by a TaqMan real-time PCR assay. *J Clin Microbiol* 39: 1303-1310, 2001.
70. Schüpbach J, Flepp M, Pontelli D, Tomasik Z, Lüthy R, Boni J. Heat-mediated immune complex dissociation and enzyme-linked immunosorbent assay signal

amplification render p24 antigen detection in plasma as sensitive as HIV-1 RNA detection by polymerase chain reaction. *AIDS* 10: 1085-1090, 1996.

71. Sevin AD, DeGruttola V, Nijhuis M, Schapiro JM, Foulkes AS, Para MF, Boucher CA. Methods for investigation of the relationship between drug-susceptibility phenotype and human immunodeficiency virus type 1 genotype with applications to AIDS clinical trials group 333. *J Infect Dis* 182: 59-67, 2000.
72. Durant J, Clevenbergh P, Halfon P, Delgiudice P, Porsin S, Simonet P, Montagne N, Boucher CA, Schapiro JM, Dellamonica P. Drug-resistance genotyping in HIV-1 therapy: the VIRADAPT randomised controlled trial. *Lancet* 353: 2195-2199, 1999.
73. Debiaggi M, Zara F, Pistorio A, Bruno R, Sacchi P, Patruno SF, Achilli G, Romero E, Filice G. Quantification of HIV-1 proviral DNA in patients with undetectable plasma viremia over long-term highly active antiretroviral therapy. *Int J Infect Dis* 4: 187-193, 2000.
74. Tenner-Racz K, Stellbrink HJ, van Lunzen J, Schneider C, Jacobs JP, Raschdorff B, Grosschupff G, Steinman RM, Racz P. The unenlarged lymph nodes of HIV-1-infected, asymptomatic patients with high CD4 T cell counts are sites for virus replication and CD4 T cell proliferation. The impact of highly active antiretroviral therapy. *J Exp Med* 187: 949-959, 1998.
75. Kaslow RA, Phair JP, Friedman HB, Lyter D, Solomon RE, Dudley J, Polk BF, Blackwelder W. Infection with the human immunodeficiency virus: clinical manifestations and their relationship to immune deficiency. A report from the Multicenter AIDS Cohort Study. *Ann Intern Med* 107: 474-480, 1987.
76. Marimoutou C, Chene G, Mercie P, Neau D, Farbos S, Morlat P, Ceccaldi J, Dabis F. Prognostic factors of combined viral load and CD4+ cell count responses under

- triple antiretroviral therapy, Aquitaine cohort, 1996-1998. *J Acquir Immune Defic Syndr* 27: 161-167, 2001.
77. Nightingale SD, Jockusch JD, Haslund RN, et al. Logarithmic relationship of the CD4 count to survival in patients with human immunodeficiency virus infection. *Arch Intern Med* 153: 1313-1318, 1993.
 78. Masur H, Ognibene FP, Yarchoan R, et al. CD4 counts as predictors of opportunistic pneumonias in human immunodeficiency virus (HIV) infection. *Ann Intern Med* 111: 223-231, 1989.
 79. Racz P, Tenner-Racz K, Kahl C, Feller AC, Kern P, Dietrich M. Spectrum of morphologic changes of lymph nodes from patients with AIDS or AIDS-related complex. *Prog Allergy* 37: 81-181, 1986.
 80. Marti M, Feliu E, Campo E, Palacin A, Berga L, Casals FJ, Urbano Ispizua A, Cardesa A, Rozman C. Comparative study of spleen pathology in drug abusers with thrombocytopenia related to human immunodeficiency virus infection and in patients with idiopathic thrombocytopenic purpura. A morphometric, immunohistochemical, and ultrastructural study. *Am J Clin Pathol* 100: 633-642, 1993.
 81. Lewis DE, Yang L, Luo W, Wang X, Rodgers JR. HIV-specific cytotoxic T lymphocyte precursors exist in a CD28⁻CD8⁺ T cell subset and increase with loss of CD4 T cells. *AIDS* 13: 1029-1033, 1999.
 82. Kramer A, Biggar RJ, Hampl H, Friedman RM, Fuchs D, Wachter H, Goedert JJ. Immunologic markers of progression to acquired immunodeficiency syndrome are time-dependent and illness-specific. *Am J Epidemiol* 136: 71-80, 1992.

83. Cabral AR, Alarcon-Segovia D. Autoantibodies in systemic lupus erythematosus. *Curr Opin Rheumatol* 9: 387-392, 1997.
84. Buttgereit F, Grünewald Th, Schüler-Maué W, Burmester GR, Hiepe F. Value of Anticardiolipin Antibodies for Monitoring Disease Activity in Systemic Lupus Erythmatosis and Other Rheumatic Diseases. *Clin Rheumatol* 16: 562-569, 1997.
85. Vidal S, Gelpi C, Rodriguez-Sanchez JL. (SWR x SJL)F1 mice: a new model of lupus-like disease. *J Exp Med* 179: 1429-1435, 1994.
86. Becker H, Weber C, Storch S, Federlin K. Relationship between CD5⁺ B lymphocytes and the activity of systemic autoimmunity. *Clin Immunol Immunopathol* 56: 219-225, 1990.
87. Hayakawa K, Hardy RR. Development and function of B-1 cells. *Curr Opin Immunol* 12: 346-353, 2000.
88. Porakishvili N, Mageed R, Jamin C, Pers JO, Kulikova N, Renaudineau Y, Lydyard PM, Youinou P. Recent progress in the understanding of B-cell functions in autoimmunity. *Scand J Immunol* 54: 30-38, 2001.
89. Rutz S, Gros P. Phosphatidylcholine translocase: a physiological role for the *mdr2* gene. *Cell* 77: 1071-1081, 1994.
90. Gollapudi S, Gupta S. Human immunodeficiency virus 1-induced expression of P-glycoprotein. *Biochem Biophys Res Comm* 171: 1002-1007, 1990.
91. Pelicci PG, Knowles DM 2nd, Arlin ZA, Wieczorek R, Luciw P, Dina D, Basilico C, Dalla-Favera R. Multiple monoclonal B cell expansions and c-myc oncogene rearrangements in acquired immune deficiency syndrome-related

- lymphoproliferative disorders. Implications for lymphomagenesis. *J Exp Med* 164: 2049-2060, 1986.
92. Kaplan LD, Shiramizu B, Herndier B, Hahn J, Meeker TC, Ng V, Volberding PA, McGrath MS. Influence of molecular characteristics on clinical outcome in human immunodeficiency virus-associated non-Hodgkin's lymphoma: identification of a subgroup with favorable clinical outcome. *Blood* 85: 1727-1735, 1995.
 93. Ng VL, Hurt MH, Herndier BG, McGrath MS. VH gene use by CD5+ AIDS-associated B-cell lymphoproliferations. *Ann N Y Acad Sci* 764: 507-508, 1995.
 94. Johnson A, Olofsson T. Flow cytometric clonal excess analysis of peripheral blood, routine handling, and pitfalls in interpretation. *Cytometry* 14: 188-195, 1993.
 95. Clerici M, Shearer GM. The Th1-Th2 hypothesis of HIV infection: new insights. *Immunol Today* 15: 575-581, 1994.
 96. Rickinson AB, Lee SP, Steven NM. Cytotoxic T lymphocyte responses to Epstein-Barr virus. *Curr Opin Immunol* 8: 492-497, 1996.
 97. Patke CL, Shearer WT. gp120- and TNF-alpha-induced modulation of human B cell function: proliferation, cyclic AMP generation, Ig production, and B-cell receptor expression. *J Allergy Clin Immunol* 105: 975-982, 2000.
 98. Berberian L, Goodglick L, Kipps T J, Braun J. Immunoglobulin V_H3 gene products: natural ligands for HIV gp120. *Science* 261: 1588-1591, 1993.
 99. Juompan L, Lambin P, Zouali M. Selective deficit in antibodies specific for the superantigen binding site of gp120 in HIV infection. *FASEB J* 12: 1473-1480, 1998.

100. Joseph Am, Babcock GJ, Thorley-Lawson DA. EBV Persistence Involves Strict Selection of Latently Infected B Cells. *J Immunol* 165: 2975-2981, 2000.
101. Juompan L, Lambin P, Zouali M. Selective alterations of the antibody response to HIV-1. *Appl Biochem Biotechnol* 75: 139-150, 1998.
102. De Milito A, Morch C, Sonnerborg A, Chiodi F. Loss of memory (CD27) B lymphocytes in HIV-1 infection. *AIDS* 15: 957-964, 2001.
103. Vuillier F, Scott-Algara D, Tortevoye P, Pialoux G, Dighiero G. Serial study of CD5⁺ and CD5⁻ B cell subpopulations in 335 HIV seropositive patients. *Clin Exp Immunol* 85: 476-480, 1991.
104. Chan O, Shlomchik MJ. A New Role for B Cells in Systemic Autoimmunity: B Cells Promote Spontaneous T Cell Activation in MRL-*lpr/lpr* Mice. *J Immunol* 160: 51-59, 1998.
105. Struve J, Aronsson B, Frenning B, Granath F, von Sydow M, Weiland O. Intramuscular versus intradermal administration of a recombinant hepatitis B vaccine: a comparison of response rates and analysis of factors influencing the antibody response. *Scand J Infect Dis* 24: 423-429, 1992.
106. Buchanan RM, Arulanandam BP, Metzger DW. IL-12 Enhances Antibody Responses to T-Independent Polysaccharide Vaccines in the Absence of T and NK Cells. *J Immunol* 161: 5525-5533, 1998.

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