

REFERENCES

1. วรรษี กัณฐกนมาลาภูล. พยาธิกำเนิดของการติดเชื้อเอชไอวี. ใน: จันทพงษ์ วงศ์, บรรณาธิการ. การประมาณและสังเคราะห์องค์ความรู้การวิจัยการติดเชื้อเอชไอวีและโรคเอดส์ด้านชีววิทยาการแพทย์. กรุงเทพฯ: โรงพยาบาลสงข์, 2541:77-97.
2. เกียรติ รักษ์รุ่งธรรม. ลักษณะทางคลินิกและระยะต่างๆของการติดเชื้อ HIV. ใน: เกียรติ รักษ์รุ่งธรรม, บรรณาธิการ. การประมาณและสังเคราะห์องค์ความรู้เอดส์: การวิจัยทางคลินิก. พิมพ์ครั้งที่ 2. กรุงเทพฯ: โรงพยาบาลชานพิมพ์, 2541:22-34.
3. Nicholson JK A, Hearn T , Cross GD, White MD. 1997 Revised guidelines for performing CD4+ T-Cell determinations in persons infected with human immunodeficiency virus (HIV). MMWR 1997;46(No.RR-2): 1-29.
4. Hollander H. Initiating routine care for the HIV-infected adult. In: Sande MA, Volberding PA, editors. The medical management of AIDS. 5th ed. Philadelphia: W.B.Saunders, 1997:107-11.
5. Steger KA. Epidemiology, natural history, and staging. In: Libman H, Witzburg RA, editors. HIV infection a clinical manual. 2nd ed. Boston: Little, Brown, 1993:3-4.
6. Bird AG. Quantification of CD4-positive T lymphocytes. In: Karn J, editor. HIV: a practical approach volume 1 virology and immunology. Oxford: Oxford university press, 1995: 211-9.

7. Crowe SM, Mills J. Human immunodeficiency viruses: HIV-1 and HIV-2. In: Lennette EH, Smith TF, editors. *Laboratory diagnosis of viral infections*. 3rd ed. Rev. and exp. New York (NY): Marcel Dekker, 1999: 545-7.
8. Phanuphak P, Serwadda DM. Viral infections. In: Arya OP, Hart CA, editors. *Sexually transmitted infections and AIDS in the tropics*. Liverpool: CABI Publishing, 1998:70.
9. Black JG. Immunology II: immunological disorders and tests. In: Black JG editor. *Microbiology principles and explorations*. New York (NY): John Wiley, 1999:519.
10. Coffin JM, Hughes SH, Varmus HE. Pathogenesis of HIV and SIV. In: Coffin JM, Hughes SH, Varmus HE, editors. *Retroviruses*. New York (NY): CSHL Press, 1997:609-12.
11. Genini D, Sheeter D, Rought S, Zaunders JJ, Susin SA, Kroemer G, et al. HIV induces lymphocyte apoptosis by a p53-initiated, mitochondrial-mediated mechanism. *FASEB* 2001;15:5-6.
12. Fischl MA. An introduction to the clinical spectrum of AIDS. In: Broder S, Merigan TC, Bolognesi D, editors. *Textbook of AIDS medicine*. Baltimore: Williams & Wilkins, 1994:149-60.
13. Taylor JMG, Fahay JL, Delels R, Giorgi JV. CD4 percentage, CD number, and CD4/CD8 ratio in HIV infection : which to choose and how to use. *J Acquir Immun Defic Syndr* 1989;2:114-24.
14. โภวิท พัฒนาปัญญาสัตย์. การใช้ไฟลไซโตรเมทรีในการศึกษาโรคเอดส์. ใน: โภวิท พัฒนาปัญญาสัตย์, บรรณาธิการ. *ไฟลไซโตรเมทรี*. กรุงเทพฯ: วงศ์วัน, 2539:109-36.

15. Landay A, Ho JL, Hom D, Russell T, Zwerner R, Minuty JG, et al. A rapid manual method for CD4+ T-cell quantitation for use in developing countries. AIDS 1993;7:1565-8.
16. World Health Organization. Report of a WHO workshop on flow cytometry and alternative methodologies for CD4 lymphocyte determinations: applications for developing countries Washington, DC, 16 April 1992. AIDS 1994;8:WHO1-WHO4.
17. T cell diagnostics, Inc. The TRAx™ (Total Receptor Assay) CD4 test kit: an enzyme immunoassay using monoclonal antibodies for the quantitative measurement of total CD4 protein and for the enumeration of CD4 T lymphocytes in human peripheral blood specimens. Manual instruction, Catalog number: TK4000, 96 Determinations.
18. Nicholson JKA, Velleca WM, Jubert S, Green TA, Bryan L. Evaluation of alternative CD4 technologies for the enumeration of CD4 lymphocytes. J Immunol Methods 1994;177:43-54.
19. Paxton H, Pins M, Denton G, McGonigle AD, Meisner PS, Phair JP. Comparison of CD4 cell count by a simple enzyme-linked immunosorbent assay using the TRAx CD4 test kit and by flow cytometry and hematology. Clin Diagn Lab Immunol 1995;2:104-14.
20. Carriere D, Vendrell JP, Fontaine C, Jansen A, Reynes J, Pages I, et al. Whole blood Capcellia CD4/CD8 immunoassay for enumeration of CD4+ and CD8+ peripheral T lymphocytes. Clin Chem 1999;45:92-7.
21. Gaumer RH, Fink D, Jensen B, Vella F, Wong W. T cell subset quantitation by non-flow cytometric method. Abstracts 688th, The first national conference

- on human retroviruses and related infections, Washington, DC, 1993 Dec 12-16, p.730.
22. Saez MJ, Frutos M, Martinez P, Soriano V. Evaluation of a new fluorescence immunoassay for CD4+ and CD8+ T cell counts in clinical samples [letter]. Vox Sang 1994;67:86-7.
23. Denny TN, Jensen BD, Gavin EI, Louzao AG, Vella FA, Oleske JM, et al. Determination of CD4 and CD8 lymphocyte subsets by a new alternative fluorescence immunoassay. Clin Diagn Lab Immunol 1995 May;2:330-6.
24. Denny TN. Measurement of absolute CD4+ and CD8+ lymphocyte levels in a high HIV+ prevalent population by a new alternative technology. In: Denny TN, Jensen BD, Garcia A, Vella FA, Gavin EI, Stein D, Oleske JM, Wong W, editors. Biotech'94: Biotechnology against AIDS from basic science to diagnosis and therapy; 1994 Apr 10-13 ; Florence, Italy, congress center.
25. Simonsen M. New testing technologies emerge for CD4 analysis. The Clinical Chemistry News. 1993 Oct;19:1-4.
26. Louise A, Alan R, Earl K, Andrew D, Dan E, inventors. Becton Dickinson and company, assignee. Method for preparation and analysis of leukocytes in whole blood US patent 5,776,709.1998 Jul 7.
27. De Paoli P, Reitano M, Battistin S, Castiglia C, Santini G. Enumeration of human lymphocyte subsets by monoclonal antibodies and flow cytometry: a comparative study using whole blood or mononuclear cells separated by density gradient centrifugation. J Immunol Methods. 1984;72:349-53.

28. Ashmore LM, Shopp GM, Edwards BS. Lymphocyte subset analysis by flow cytometry. Comparison of three different staining techniques and effects of blood storage. *J Immunol Methods.* 1989;118:209-15.
29. Renzi P, Ginns LC. Analysis of T cell subsets in normal adults: comparison of whole blood lysis technique to Ficoll-Hypaque separation by flow cytometry. *J Immunol Methods.* 1987;98:53-6.
30. Romeu MA, Mestre M, Gonzalez L. Lymphocyte immunophenotyping by flow cytometry in normal adults: comparison of fresh whole blood lysis technique, Ficoll-Paque separation and cryopreservation. *J Immunol Methods.* 1992;154:7-10.
31. Jackson A. Basic phenotyping of lymphocytes: selection and testing of reagents and interpretation of data. *Clin Immunol Newslett.* 1990;10:49-55.
32. Kidd PG, Vogt RF. Report of the workshop on the evaluation of T-cell subsets during HIV infection and AIDS. *Clin Immunol Immunopathol.* 1989;52:3-9.
33. Landay AL, Muirhead KA. Procedural guidelines for performing immunophenotyping by flow cytometry. *Clin Immunol Immunopathol.* 1989;52:48-60.
34. Macey MG, McCarthy DA, Agthoven A, Newland AC. How should CD34+ cells be analysed? A study of three classes of antibody and five leucocyte preparation procedures. *J Immunol Methods.* 1997;204:175-88.
35. Caldwell CW, Taylor HM. A rapid, no-wash technique for immunophenotypic analysis by flow cytometry. *Am J Clin Pathol.* 1986;86:600-607.

36. โภวิท พัฒนาปัญญาสัตย์. การหาประชากรบุอยของลิมโฟไซด์ในตัวอย่างเลือดของคนปกติและผู้ป่วยโดยใช้โฟลไซโทมิเตอร์. ใน: โภวิท พัฒนาปัญญาสัตย์, บรรณาธิการ. โฟลไซโทเมทร์. กรุงเทพฯ: วงศ์วัน, 2539:83-108.
37. Kasinrerk W, Tokrasinwit H, Naveewongpanit P. Production of monoclonal antibody to CD4 antigen and development of reagent for CD4+ lymphocyte enumeration. J Med Assoc Thai. 1998;81:879-92.
38. Moonsom S, Kasinrerk W. Production of anti-CD14 monoclonal antibodies using CD14 expressing COS cells as immunizing antigen. Asian-Pacific J Allerg Immun. 2000;18:53-61.
39. Inganas M, Johansson SG, Sjoquist J. Further characterization of the alternative protein-A interaction of immunoglobulins: demonstration of an Fc-binding fragment of protein A expressing the alternative reactivity. Scand J Immunol. 1981;14:379-88.
40. Escribano MJ, Hadada H, De Vaux Saint Cyr C. Isolation of two immunoglobulin G subclasses, IgG2 and IgG1, from hamster serum using protein A-sepharose. J Immunol Methods. 1982;52:63-72.
41. Villemez CL, Russell MA, Cario PL. Mouse IgG1 heterogeneity: variable binding of monoclonal IgG1 antibodies to protein A-sepharose. Mol Immunol. 1984;21:993-8.
42. Der-Balian GP, Kameda N, Rowley GL. Fluorescein labeling of Fab' while preserving single thiol. Anal Biochem. 1988 Aug 15;173:56-63.
43. Wilderspin AF, Green NM. The reaction of fluorescein isothiocyanate with thiols: a method for assay of isothiocyanates. Anal Biochem. 1983;132:449-55.

44. Spendlove RS. Optimal labeling of antibody with fluorescein isothiocyanate. Proc Soc Exp Biol Med. 1966;122:580-3.
45. Jobbagy A, Kiraly K. Chemical characterization of fluorescein isothiocyanate-protein conjugates. Biochem Biophys Acta. 1966;124:166-75.
46. Haugland R. Monoclonal antibody protocols. New York: Humana Press, 1995.
47. Harlow Ed, Lane D. Antibodies: a laboratory manual. New York: Cold Spring Harbor Laboratory, 1988.
48. Goding JW. Monoclonal antibodies: a principles and practice. London: Academic Press, 1986.
49. Barclay AN, Brown MH, Alex SK, McKnight AJ, Tomlinson MG, Van Der-Merwe PA. The leucocyte antigen *FactsBook*. 2nd ed. San Diego (CA): Academic Press, 1997.
50. Wood F, Warner N, Wrank R. Anti-Leu3/T4 antibodies react with cells of monocyte/macrophage and langerhans lineage. J Immunol. 1983;132:212-6.
51. Lillevang ST, Sprogøe-Jakobsen U, Simonsen B, Kristensen T. Three-colour flow cytometric immunophenotyping in HIV-patients; comparison to dual-colour protocols. Scand J Immunol. 1995;41:114-20.
52. Nicholson JK, Hubbard M, Jones BM. Use of CD45 fluorescence and side-scatter characteristics for gating lymphocytes when using the whole blood lysis procedure and flow cytometry. Cytometry. 1996 Mar 15;26:16-21.
53. Jakso P, Pajor L. Advantages of CD45 vs. side scatter based gating in the course of flow cytometric immunophenotyping in malignant hematologic diseases. Orv Hetil. 1998;139:2509-13.

54. Gelman R, Wilkening C. Analyses of quality assessment studies using CD45 for gating lymphocytes for CD3(+)4(+)%. *Cytometry*. 15;42:1-4.
55. Gratama JW, Kraan J, Keeney M, Granger V, Barnett D. Reduction of variation in T-cell subset enumeration among 55 laboratories using single-platform, three or four-color flow cytometry based on CD45 and SSC-based gating of lymphocytes. *Cytometry*. 2002;50:92-101.
56. Bergeron M, Nicholson JKA, Phaneuf S, Ding T, Soucy N, Badley AD, et al. Selection of lymphocyte gating protocol has an impact on the level of reliability of T-cell subsets in aging specimens. *Cytometry*. 2002;50:53-61.
57. Mandy FF, Nicholson JKA, McDougal JS. Guidelines for performing single-platform absolute CD4⁺ T-cell determinations with CD45 gating for persons infected with human immunodeficiency virus. *MMWR*. 2003;52(RR02):1-13.