

MELLORS CHART:

INTERPRETING YOUR VIRAL LOAD

A PUBLICATION FROM



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Mellors Chart, a table of results from research conducted by J. Mellors, A. Munoz and J. Giorgi, et. al., presents information on plasma viral load and CD4+ lymphocytes as prognostic markers of HIV-1 infection and was originally published in the publication, *Annals of Internal Medicine*, #126, 1997, pp. 946–954. The table is reproduced here for ease of use and can also be found as Table V on page 39 of the August 13, 2001 issue of the federal *Guidelines for the Use of Antiretroviral Agents in HIV-infected Adults and Adolescents*.

Risk of Progression to AIDS Defining Illness in a Cohort of Homosexual Men Predicted by Baseline CD4+ T Cell Count and Viral Load *

| CD4+ Cell Count ≤ 200 Plasma Viral Load (copies/ml) # | | % AIDS (AIDS-defining Complication) ** | | | |
|--|---------------|---|---------|---------|---------|
| bDNA | RT-PCR | n | 3 years | 6 years | 9 years |
| ≤ 500 | <_ 1,500 | 0## | -- | -- | -- |
| 501-3,000 | 1,501-7,000 | 3## | -- | -- | -- |
| 3,001-10,000 | 7,001-20,000 | 7 | 14.3 | 28.6 | 64.3 |
| 10,001-30,000 | 20,001-55,000 | 20 | 50.0 | 75.0 | 90.0 |
| > 30,000 | > 55,000 | 70 | 85.5 | 97.9 | 100.0 |
| CD4+ Cell Count 200 – 350 † Plasma Viral Load (copies/ml) | | % AIDS (AIDS-defining Complication) | | | |
| bDNA | RT-PCR | n | 3 years | 6 years | 9 years |
| ≤ 500 | <_ 1,500 | 3## | -- | -- | -- |
| 501-3,000 | 1,501-7,000 | 27 | 0.0 | 20.0 | 32.2 |
| 3,001-10,000 | 7,001-20,000 | 44 | 6.9 | 44.4 | 66.2 |
| 10,001-30,000 | 20,001-55,000 | 53 | 36.4 | 72.2 | 84.5 |
| > 30,000 | > 55,000 | 104 | 64.4 | 89.3 | 92.9 |
| CD4+ Cell Count > 350 Plasma Viral Load (copies/ml) | | % AIDS (AIDS-defining Complication) | | | |
| bDNA | RT-PCR | n | 3 years | 6 years | 9 years |
| ≤ 500 | <_ 1,500 | 119 | 1.7 | 5.5 | 12.7 |
| 501-3,000 | 1,501-7,000 | 227 | 2.2 | 16.4 | 30.0 |
| 3,001-10,000 | 7,001-20,000 | 342 | 6.8 | 30.1 | 53.5 |
| 10,001-30,000 | 20,001-55,000 | 323 | 14.8 | 51.2 | 73.5 |
| > 30,000 | > 55,000 | 262 | 39.6 | 71.8 | 85.0 |

* Data from the Multi-Center AIDS Cohort Study (MACS).

** In this study, AIDS was defined according to the 1987 CDC definition and does not include asymptomatic individuals with CD4+ T cells <200/mm³.

MACS numbers reflect plasma HIV RNA values obtained by bDNA testing. RT-PCR values are consistently 2 – 2.5 fold higher than bDNA values, as indicated.

Too few subjects were in the category to provide a reliable estimate of AIDS risk.

† A recent evaluation of data from the MACS cohort of 231 individuals with CD4+ T cell counts > 200 and <350 cells/mm³ demonstrated that of 40 (17%) individuals with plasma HIV RNA <10,000 copies/ml, none progressed to AIDS by 3 years (Alvaro Munoz, personal communication). Of 28 individuals (29%) with plasma viremia of 10,000–20,000 copies/ml, 4% and 11% progressed to AIDS at 2 and 3 years, respectively. Plasma HIV RNA was calculated as RT-PCR values from measured bDNA values.