

# MELLORS CHART:

## INTERPRETING YOUR VIRAL LOAD

PUBLISHED BY



AUGUST 2001

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/mm<sup>3</sup>.

# 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/mm<sup>3</sup> 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.