



Fatal and non-fatal AIDS and non-AIDS events in HIV-1 infected patients with high CD4 counts according to viral load strata

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for the EuroSIDA study group

Background

- Some non-AIDS defining illnesses associated with low CD4 count
- The development of both AIDS and non-AIDS defining illnesses in patients who are not immune compromised has not been fully investigated
- Uncontrolled HIV replication may be an independent risk factor associated with the occurrence of non-AIDS events

Aim

- In people with current CD4 count >350 cells/mm³, to compare between viral load strata the incidence of fatal and non-fatal AIDS and non-AIDS events

Methods

A patient contributed person years at risk if their most recent CD4 count was >350 cells/mm³ in addition to a viral load measured in previous 6 months

Patients were eligible to contribute person years at risk from

- 1/1/1997 for **AIDS** events
- 1/1/2001 for **non-AIDS** events

Person years were split into three different viral load strata

- <500 copies/ml
- 500-10000 copies/ml
- ≥ 10000 copies/ml

Methods

- All fatal and non-fatal AIDS and non-AIDS events, occurring during the follow-up time were recorded
- Recurrences of the same diagnosis were excluded
- Incidence rates calculated per 100 PYFU
- Poisson regression analysis was used to investigate the relationship between viral load and clinical events after adjustment for confounding variables
- Possible confounding variables:
gender, ethnic origin, age, HIV exposure group, region of Europe, hepatitis B & C status, smoking status, hypertension, year of follow-up, on cART, prior AIDS, CD4 count

Follow-up characteristics

Fatal and non-fatal **AIDS** events (Total 43,524 PYFU)

Viral load categories
(% of follow-up)

		<500	500-10000	≥10000
Total PYFU	(% of total)	34676 (80%)	5315 (12%)	3533 (8%)
Gender	Male	77%	72%	75%
Ethnic origin	White	86%	88%	89%
HIV exposure group	Homosexual	48%	43%	47%
	IDU	17%	21%	19%
	Heterosexual	28%	30%	28%
On cART*		91%	62%	37%
CD4 count	<500	34%	49%	56%
	500-750	41%	38%	34%
	>750	25%	13%	10%

**on cART defined as currently taking ≥3 antiretrovirals*

AIDS results

43,524 PYFU

379 AIDS events occurred

- 54 Pulmonary Tuberculosis
- 49 Oesophageal Candidiasis
- 46 Cervical Carcinoma
- 38 Non-Hodgkin's lymphoma
- 31 Herpes Simplex
- 27 Extra pulmonary Tuberculosis
- 26 Kaposi's Sarcoma
- 21 Pneumonia
- 14 Deaths

Non-AIDS results

35,252 person years of follow-up

- 83% <500 copies/ml
- 10% 500-10000 copies/ml
- 7% ≥10000 copies/ml

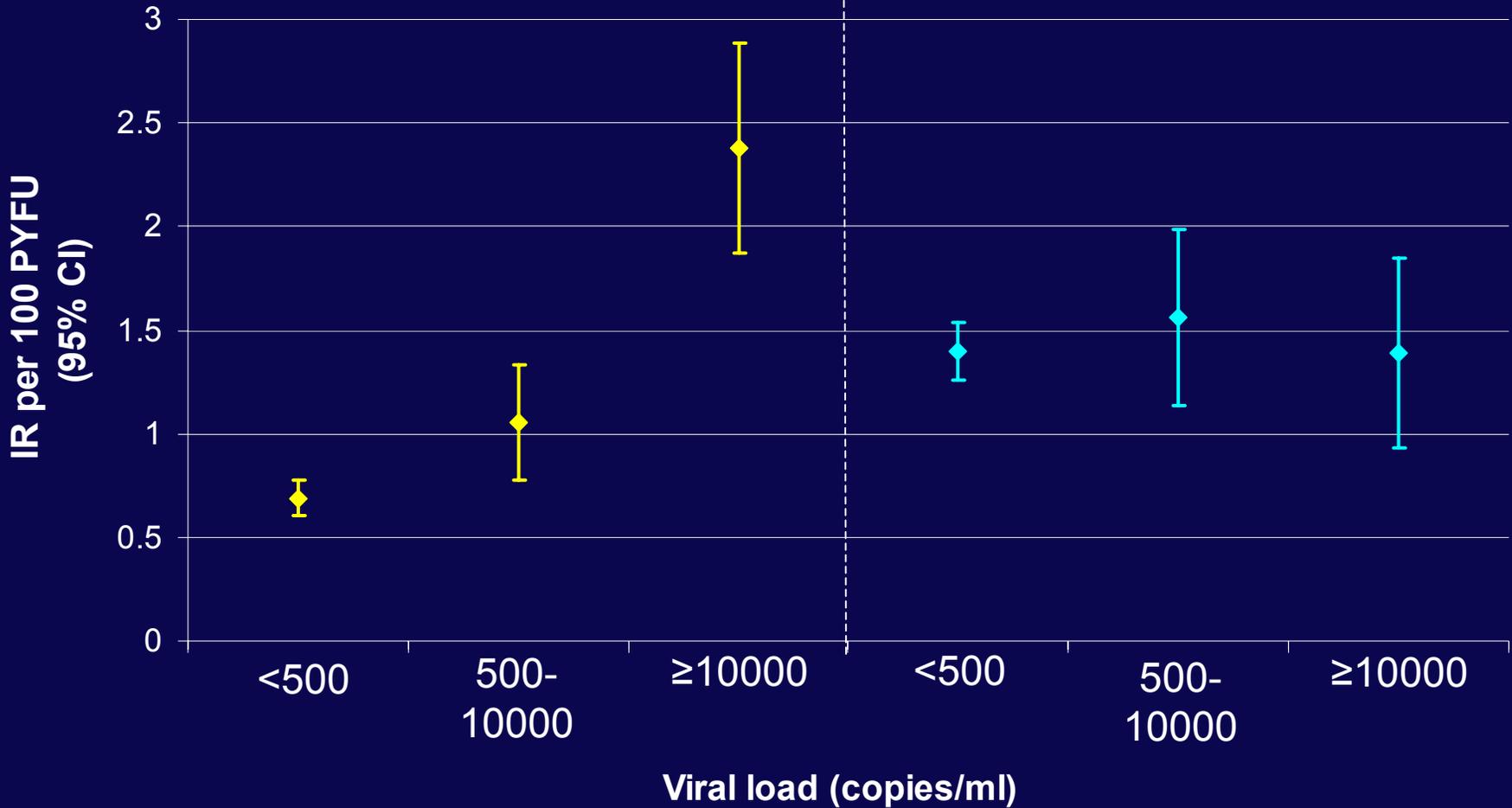
476 non-AIDS events

- 176 Cardiovascular events
- 163 Non-AIDS defining malignancies
- 32 Liver related events
- 28 Pancreatitis
- 15 End stage renal disease
- 62 Deaths

Crude incidence rate per 100 PYFU

◆ AIDS events

◆ Non-AIDS events



N events **239**

56

84

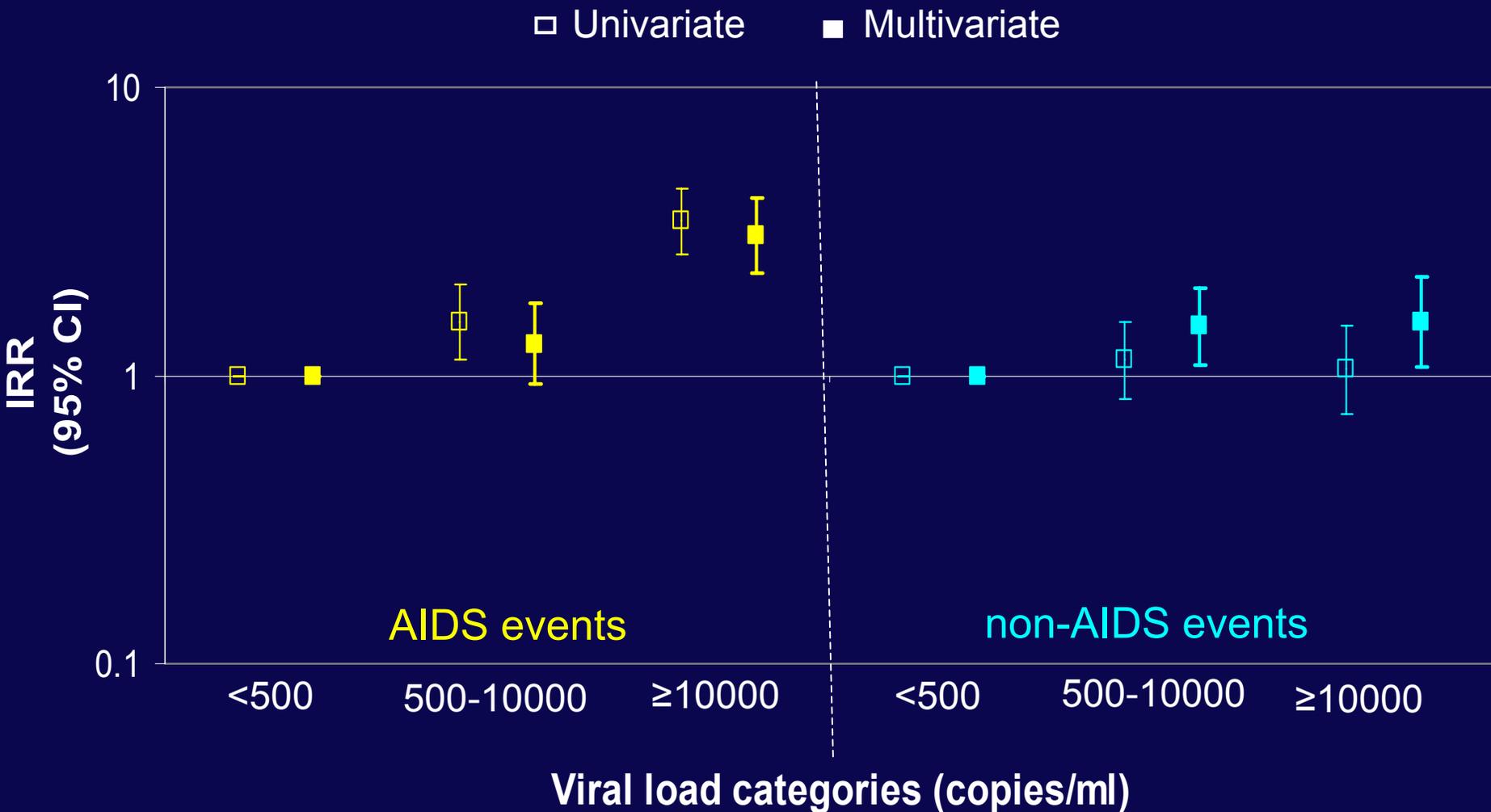
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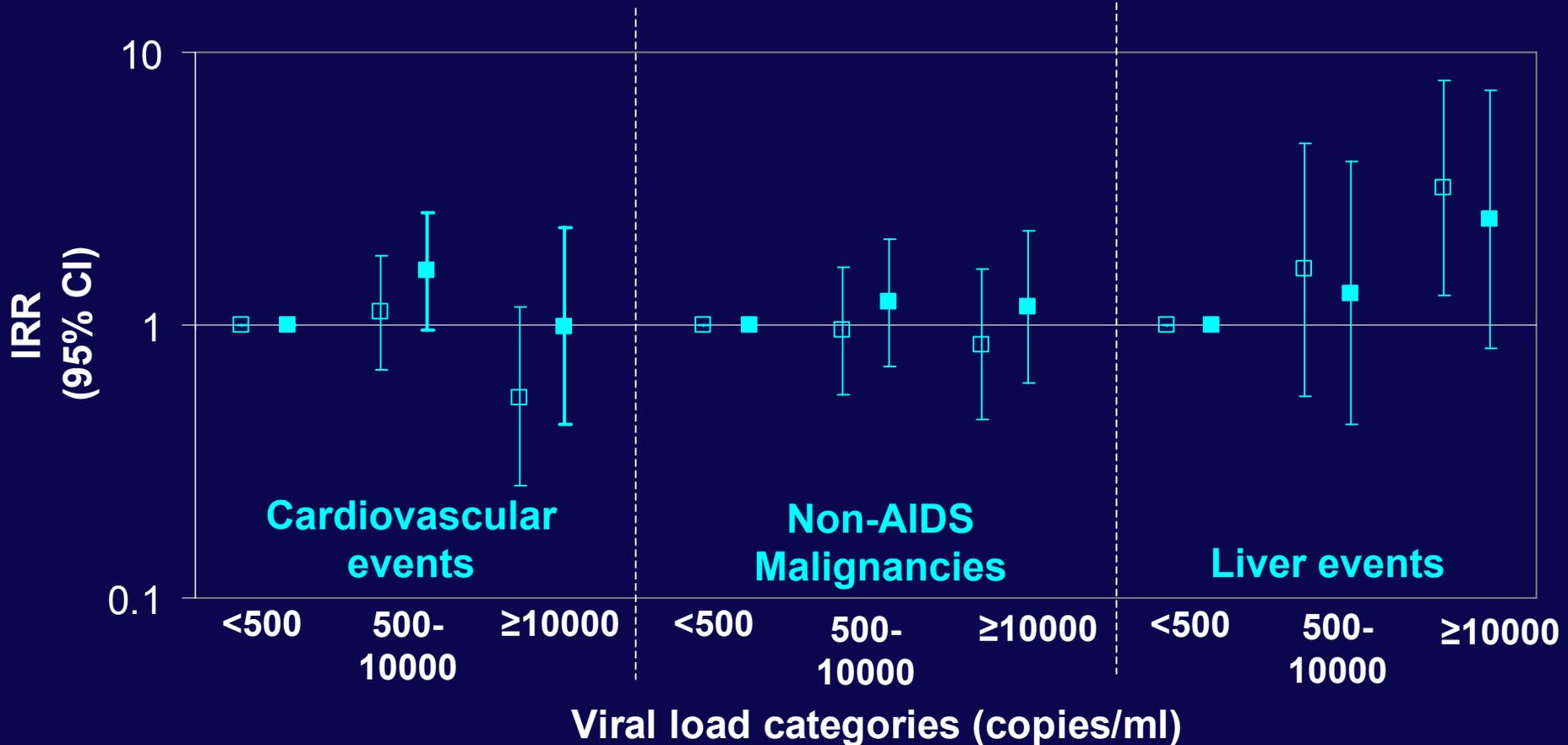
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EuroSIDA

Univariate and multivariate incidence rate ratios



Univariate and multivariate incidence rate ratios for specific non-AIDS events



N Events 150

19

7

138

15

10

22

4

6

Conclusion

In patients with a CD4 count > 350 cells/mm³

- An increased incidence of **AIDS** events was found in patients with uncontrolled viral replication
- A slightly increased incidence of **non-AIDS** events was found with high viral replication
 - No difference observed between moderate and high viral replication
 - Despite adjustment, there could remain confounding in the association between viral load and outcome
 - Non-AIDS events are a very heterogeneous group
 - Limited number of other specific non-AIDS events to form clear conclusions

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