a multicentre study

EuroSIDA

11th International Congress on Drug Therapy in HIV Infection

Increases in acute hepatitis C (HCV) incidence across Europe: which regions and patient groups are affected?

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Background

- Co-infection with HCV occurs in up to 30% of HIV-positive people in Europe due to shared transmission routes[1]
- In the last decade several outbreaks of acute HCV have been described in MSM infected with HIV in Australia, Europe and North America[2,3,4]
- Studies have suggested the outbreaks are explained by an increase in sexually transmitted HCV[4-6]

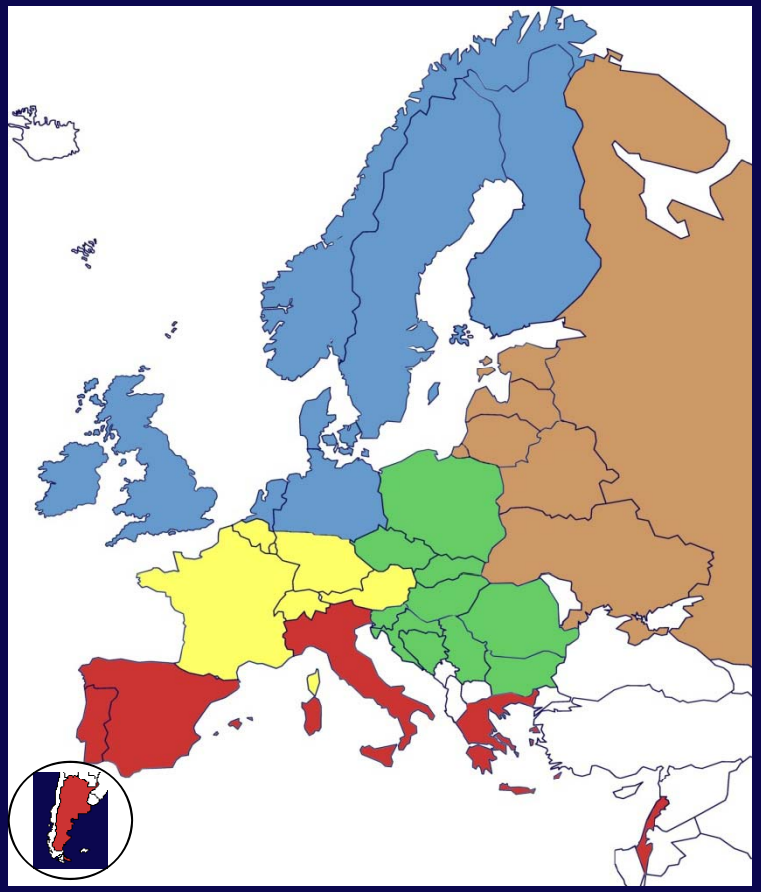
[1]Rockstroh JK, *J Infect Dis* 2005; [2]Rauch A, *CID* 2005; [3]Danta M, *AIDS* 2007; [4]Van d Laar TJW, *JID* 2007; [5]Schmidt A, *Plos One* 2011; [6]Wandeler G, *CID* 2012

Objectives

- To determine the incidence of acute HCV in EuroSIDA
- To explore possible differences in incidence of acute HCV across regions of Europe and in different HIV transmission groups

Methods - EuroSIDA

EuroSIDA is a large prospective cohort with 16597 patients from 33 European countries, Israel and Argentina. Regularly collecting:



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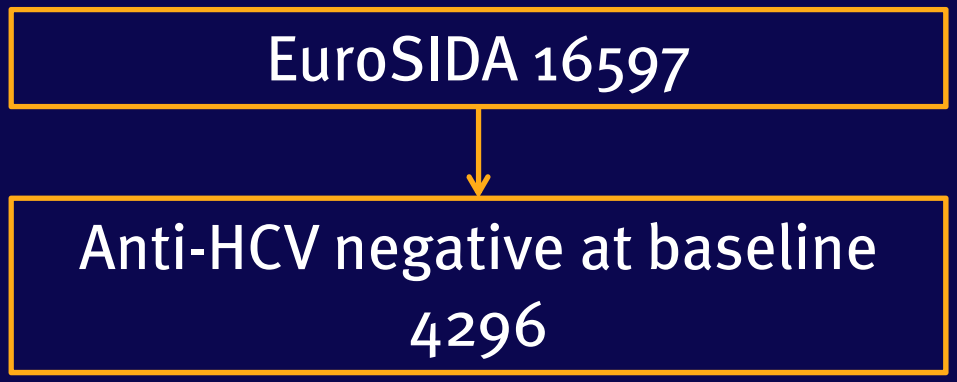
- HCV antibody test results
- HCV-RNA and genotype
- HIV transmission risk group
- CD_4 counts, HIV viral loads
- All treatment start/stop dates

Methods

- Patients HCVAb- at baseline, with ≥2 HCVAb test results available were included
- Baseline: Jan 2002 or entry into EuroSIDA, whichever occurred later
- Follow-up: from baseline to HCV seroconversion or last available HCVAb- test result
- Acute HCV was defined as seroconversion from HCVAb- to HCVAb+ within the observation period
- Methods: Poisson regression



Number of Seroconversions

Risk Group	Events	PYFU
MSM	95	11196
IDU	16	376
Heterosexual	29	6267
Other	10	1339
Total	150	19178

- In total 150 seroconversion in a total of 19178 PYFU
- Overall incidence = **0.79 (95% CI: 0.67 – 0.92) /100 PYFU**

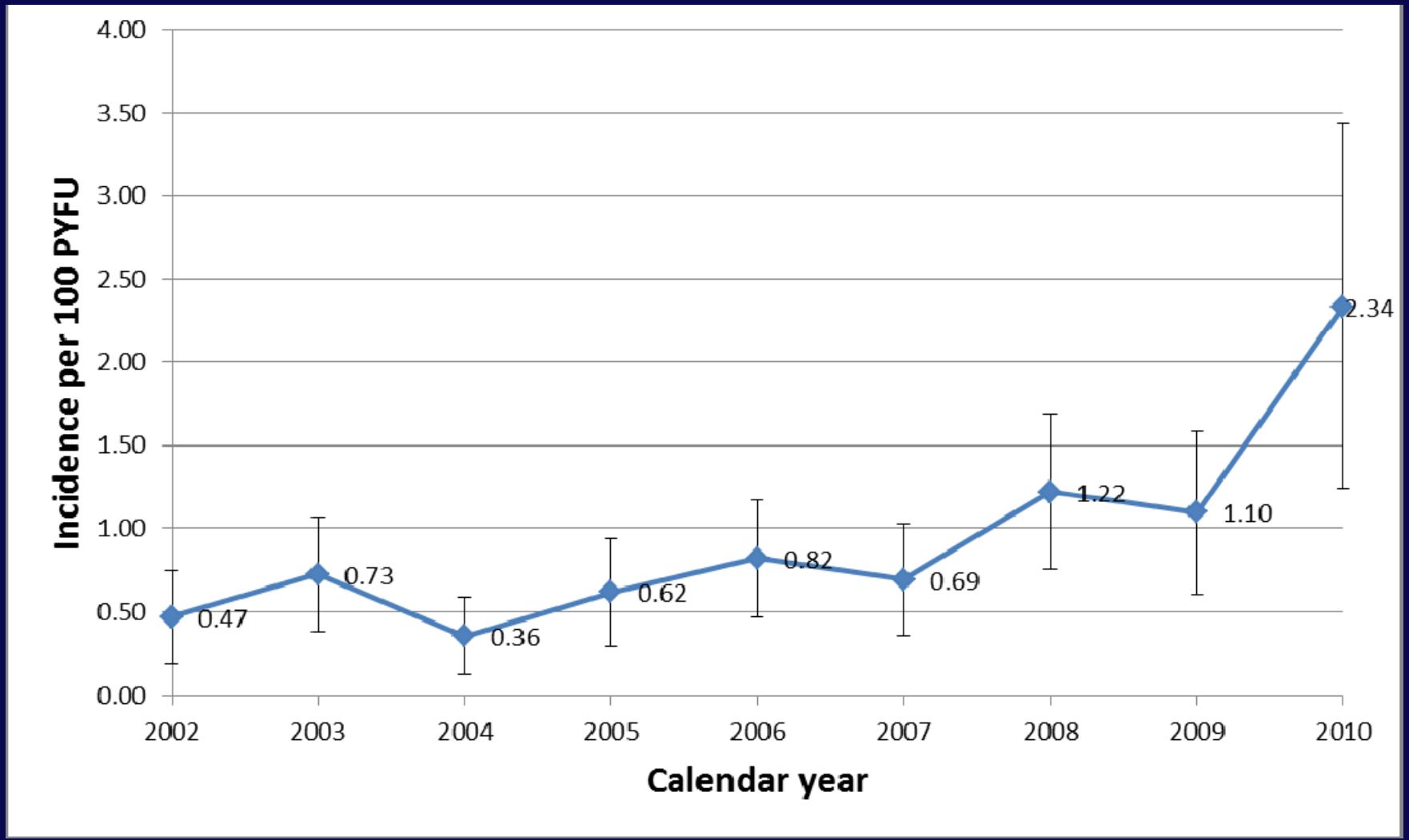
Patient Characteristics at Baseline (1)

		HCVAb – (n=4146)	HCV seroconverters (n=150)	P-value
		(%)	(%)	
Race	(Caucasian)	85.4	90.0	0.10
Gender	(Female)	23.5	18.0	0.12
Risk	(MSM)	55.5	63.3	<0.0001
	(HET)	34.9	19.3	
	(IDU)	2.0	10.7	
Region	(South)	16.9	16.0	0.0018
	(West)	34.3	23.3	
	(North)	27.0	32.7	
	(East Central)	14.0	12.7	
	(East)	7.8	15.3	

Patient Characteristics at Baseline (2)

	HCVAb – (n=4146)	HCV seroconverters (n=150)	P-value
	(%)	(%)	
Prior AIDS (Yes)	27.5	32.7	0.17
HBsAg- (No)	86.5	76.7	0.0028
HBsAg+ (Yes)	5.7	10.0	
HBsAg unknown (Yes)	7.8	13.3	
cART at baseline (Yes)	83.1	79.3	0.23
	(median, IQR)	(median, IQR)	
CD4 count (/mm^3)	450 , 307-629	447 , 278-603	0.53
pVL (log10 copies/mL)	1.7, 1.7-3.4	1.9, 1.7-3.4	0.20
Age (years)	40 , 34-47	38, 34-44	0.0186

Incidence of Acute HCV by Calendar Year



Unadjusted Incidence Rate Ratio (IRR) per every 2 calendar years : 1.25 (1.17 – 1.34; p<0.0001)

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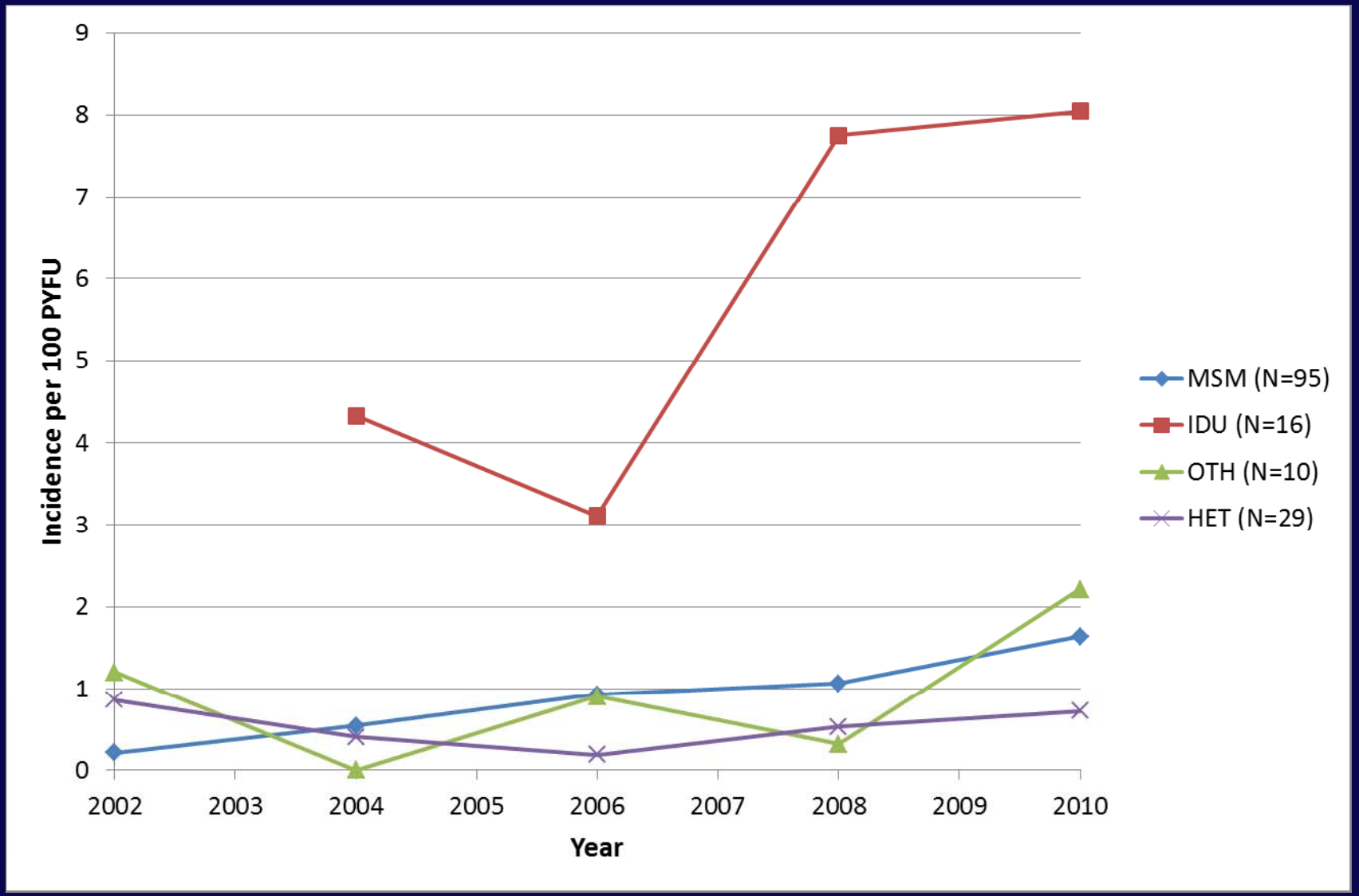
Slide 9

A7 need title?
is this the crude IRR or adjusted?
Admin; 30-10-2012

Incidence of Acute HCV by Risk Group



Interaction between transmission group and year p-value=0.43

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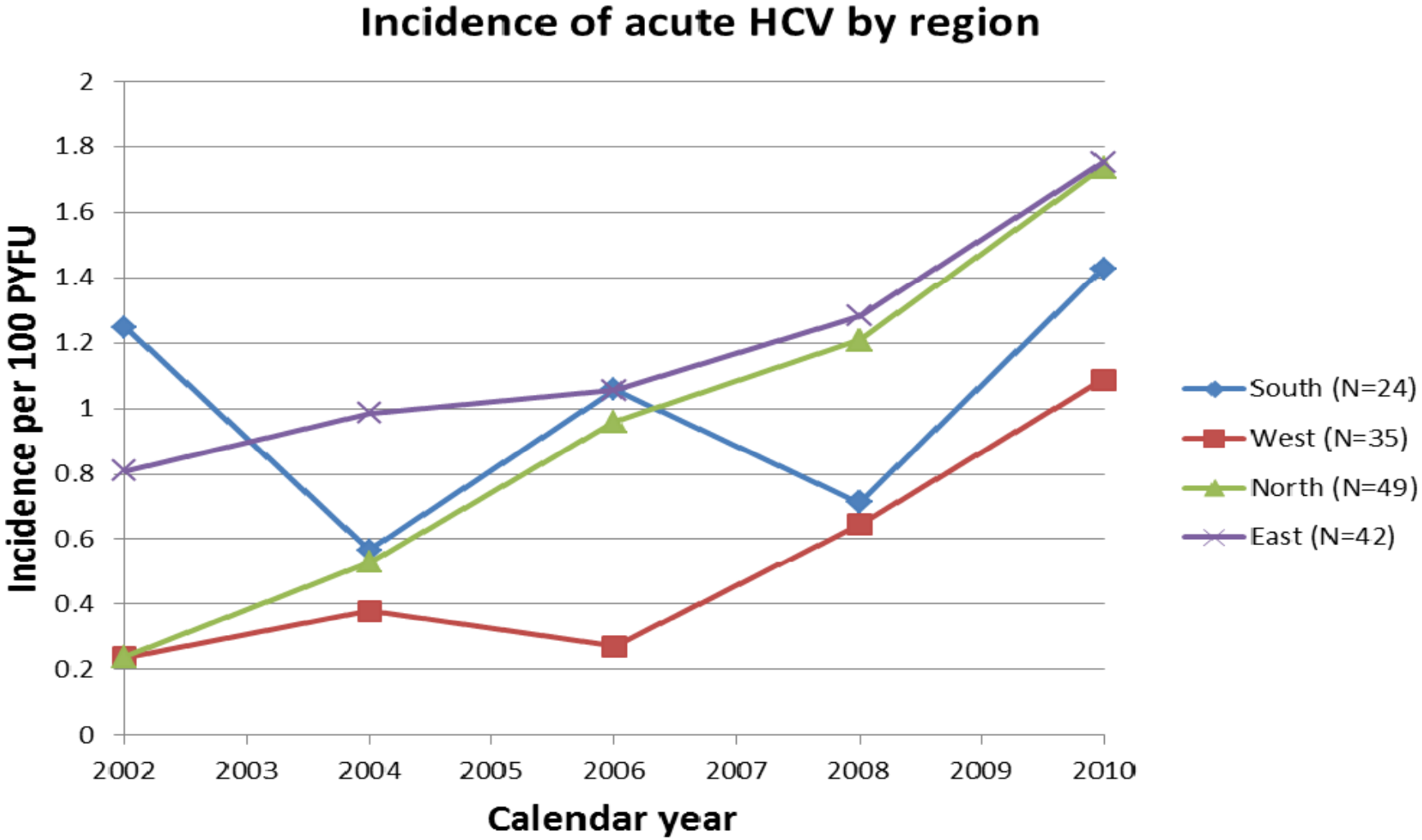
Incidence of Acute HCV by regions of EuroSIDA by Calendar Year



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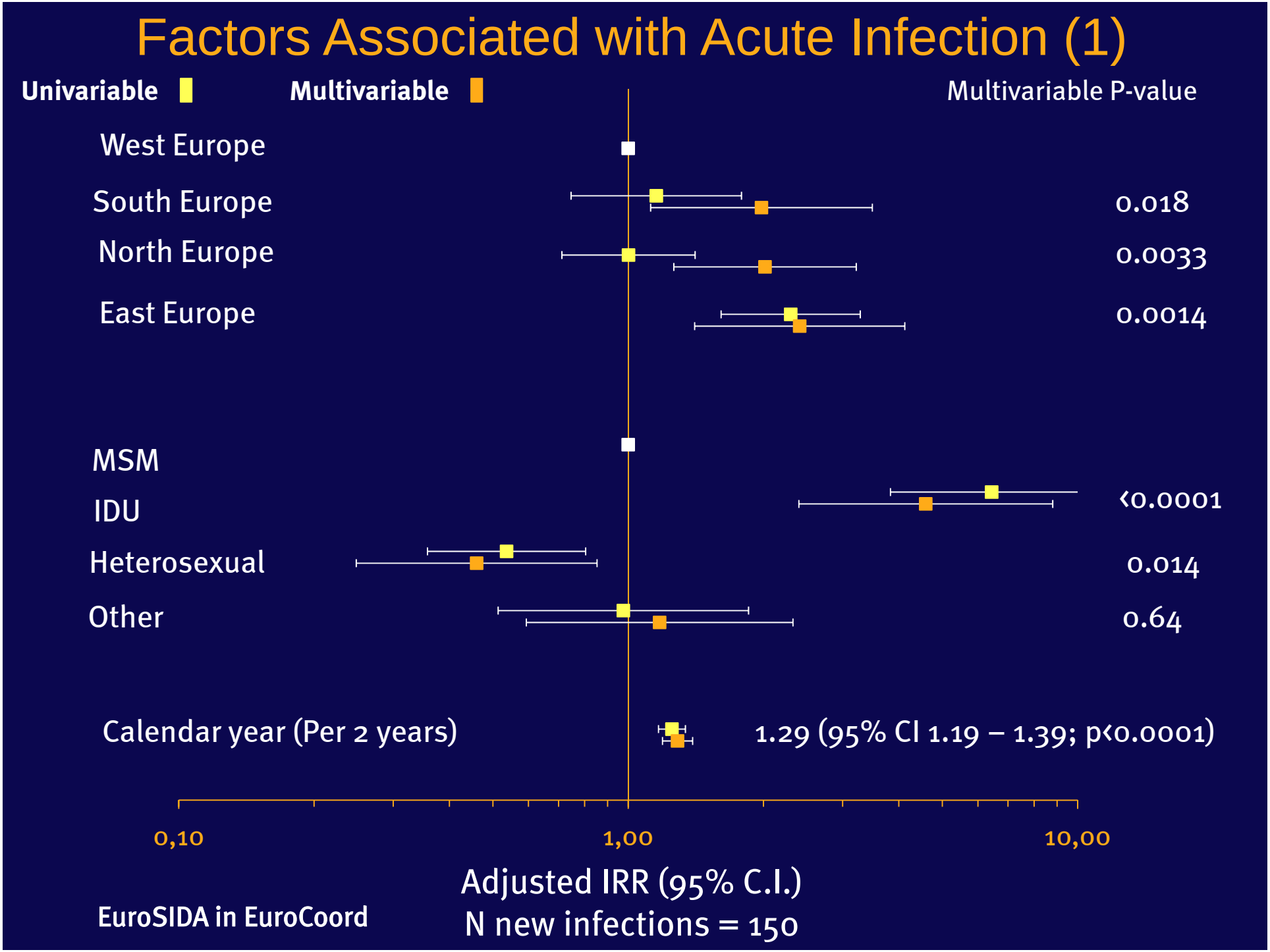
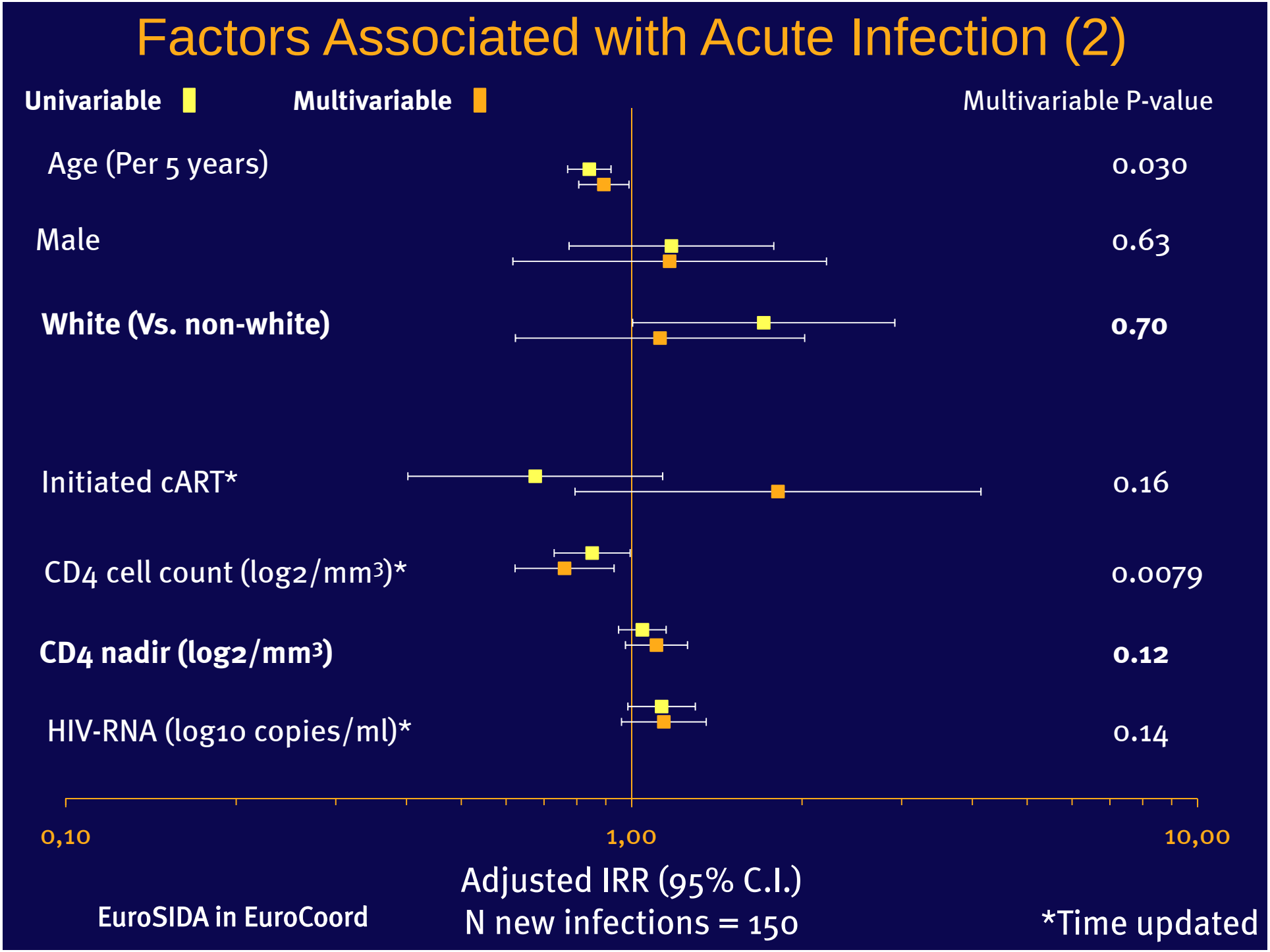
Interaction between region and year p-value=0.70

Factors Associated with Acute Infection (1)



Factors Associated with Acute Infection (2)



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N new infections = 150

*Time updated

Limitations

- Lack of detailed information on the possible mode of transmission of HCV
- Extrapolation from baseline information regarding HIV transmission mode
- Increased awareness and differences in HCV testing procedures - potential clinic/ clinician selection bias?

Summary

- Incidence of acute HCV within EuroSIDA increased over time; 29% per every 2 calendar years
- The incidence of acute HCV was 54% higher in MSM than in heterosexuals
- HIV+ IDUs - not already coinfected with HCV - had the highest incidence
- However, 2/3 of all HCV seroconversions were observed among MSMs
- Rising incidences could be found in all European regions

Perspectives

- The present results highlight the need for increased prevention efforts in all European countries
- This is particularly true for MSM and IDUs
- There is an urgent need for a better understanding of the HCV epidemiology and mode of transmission
  - Probe-C study; ClinicalTrials.gov Identifier: NCT01289652; study mail: probec@ukb.uni-bonn.de

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