

Prevalence of HCV-HIV co-infection among mothers of newborn babies

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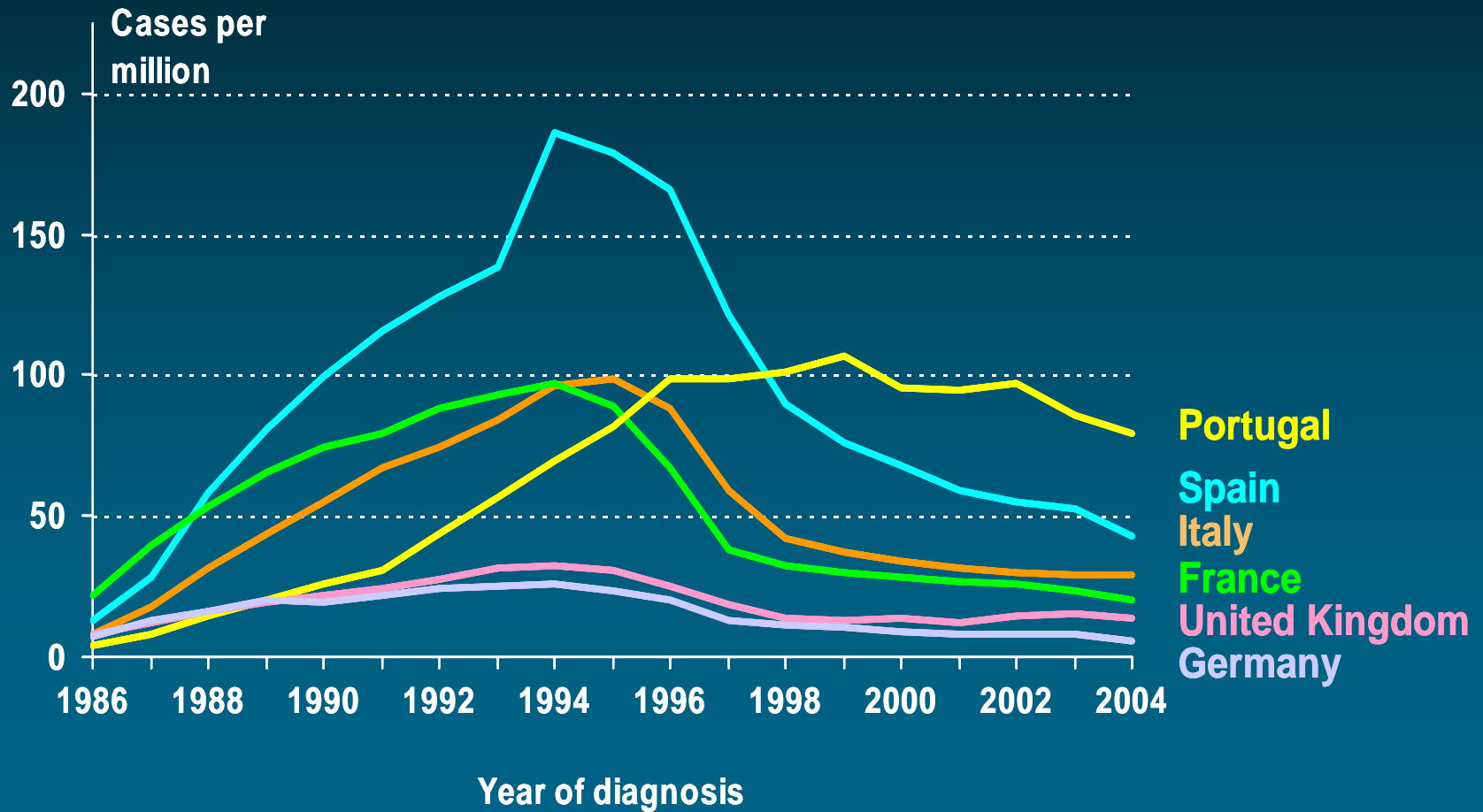
National Center of Epidemiology

Madrid, 24 November 2006

Overview

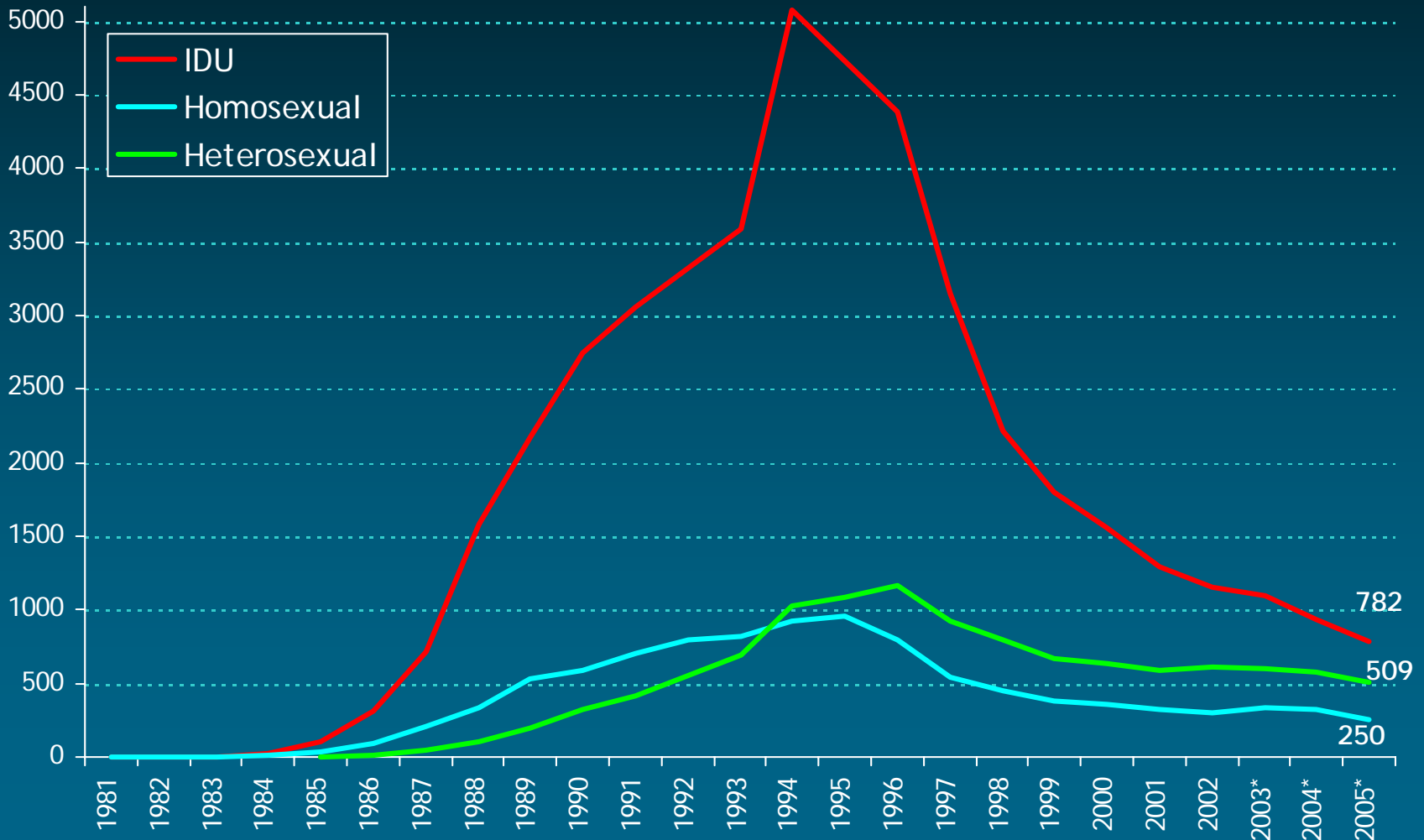
- Background
- HIV epidemic in Spain
 - Transmission patterns
 - Overlap with HCV
- Unlinked Anonymous Testing (UAT)
 - Methodology
 - Results 1998-2005
 - HIV prevalence
 - Prevalence of HCV-HIV co-infection
- Conclusions

AIDS cases per million population in selected countries, 1986-2004, western Europe

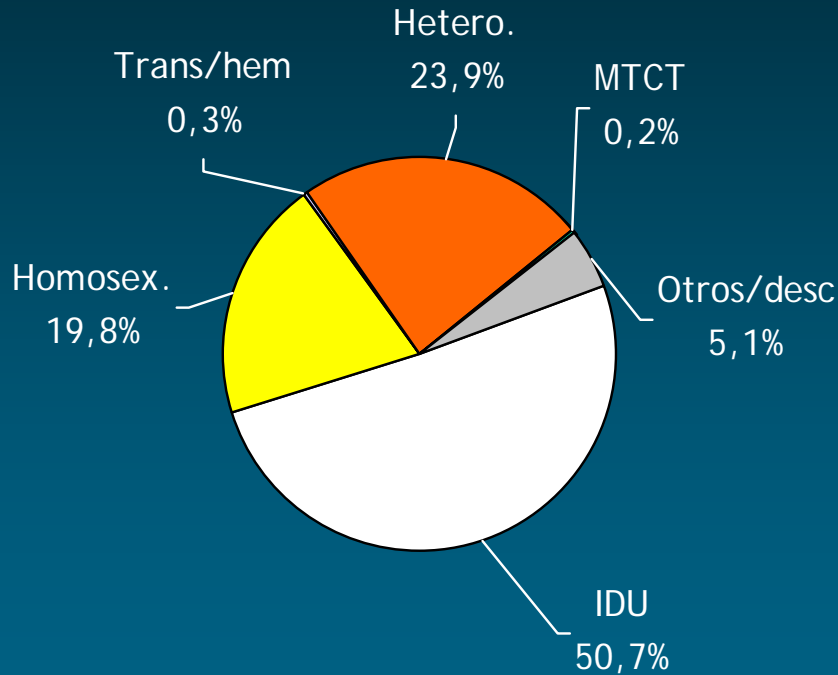


Update 30 June 2005

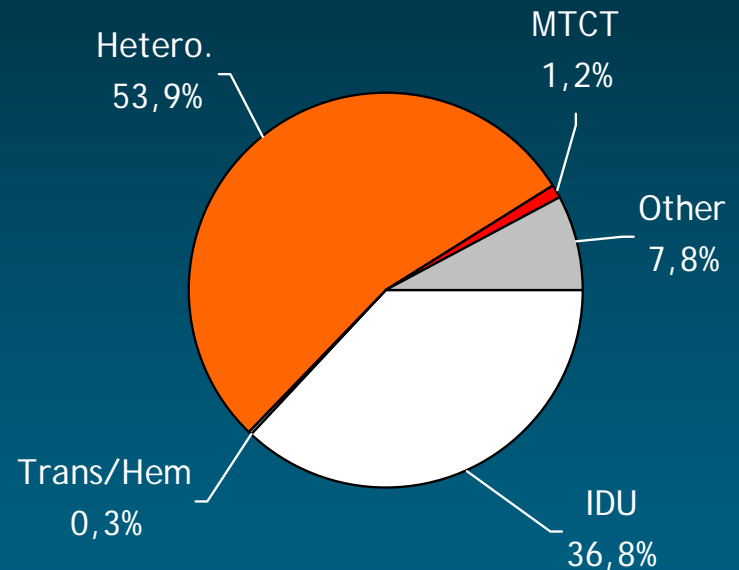
New annual AIDS cases by transmission category, adjusted for reporting delay. National AIDS Register. Updated June 30th, 2006



AIDS cases diagnosed in 2005, by sex and transmission category.
National AIDS Register. Updated June 30th, 2006

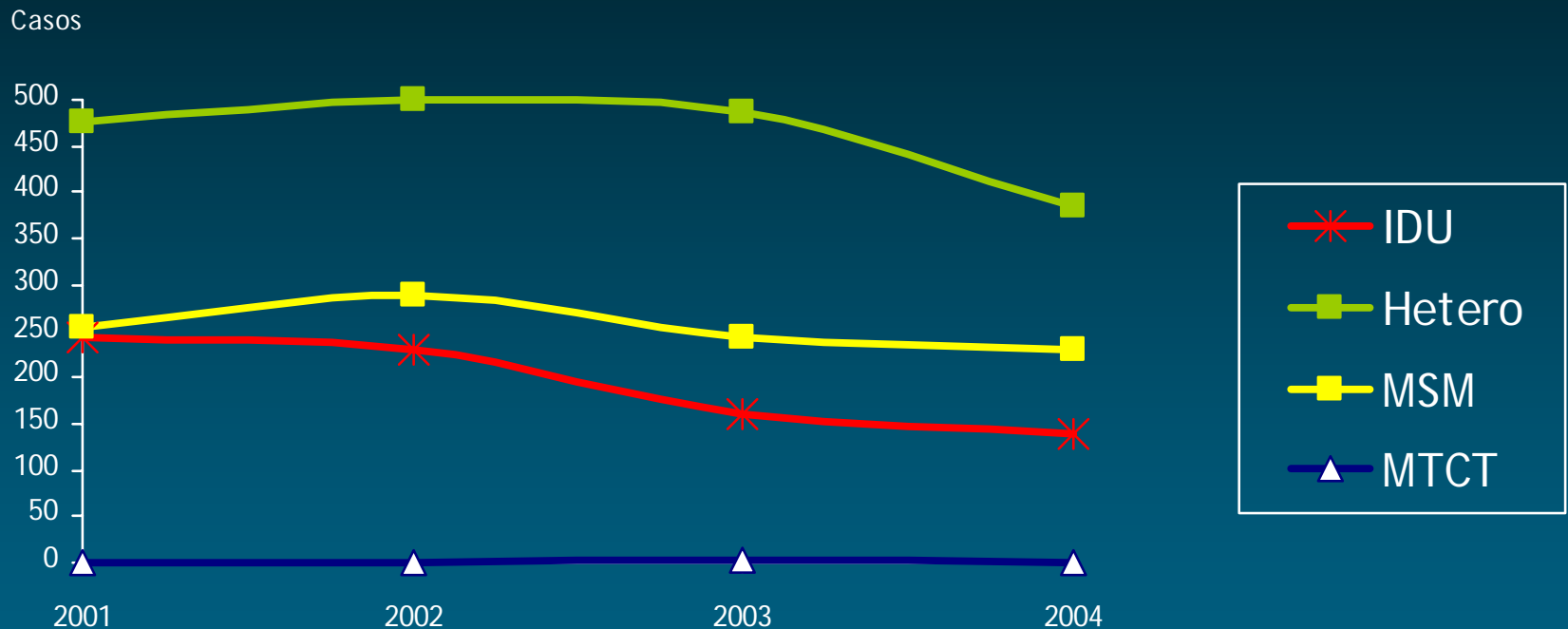


Men (n = 1134)



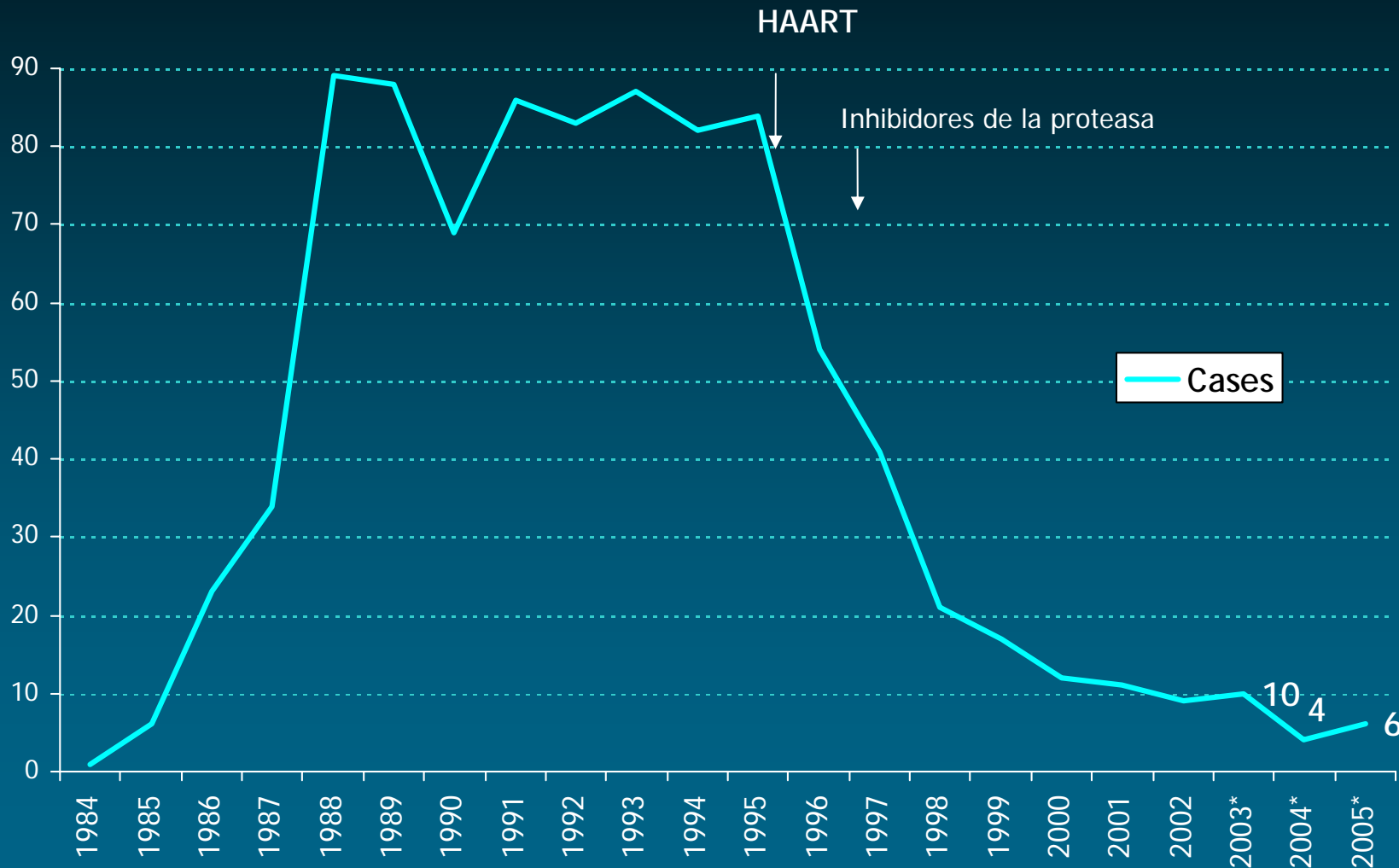
Women (n = 345)

New HIV diagnosis by transmission category Data from 7 AARR (2001-2004)

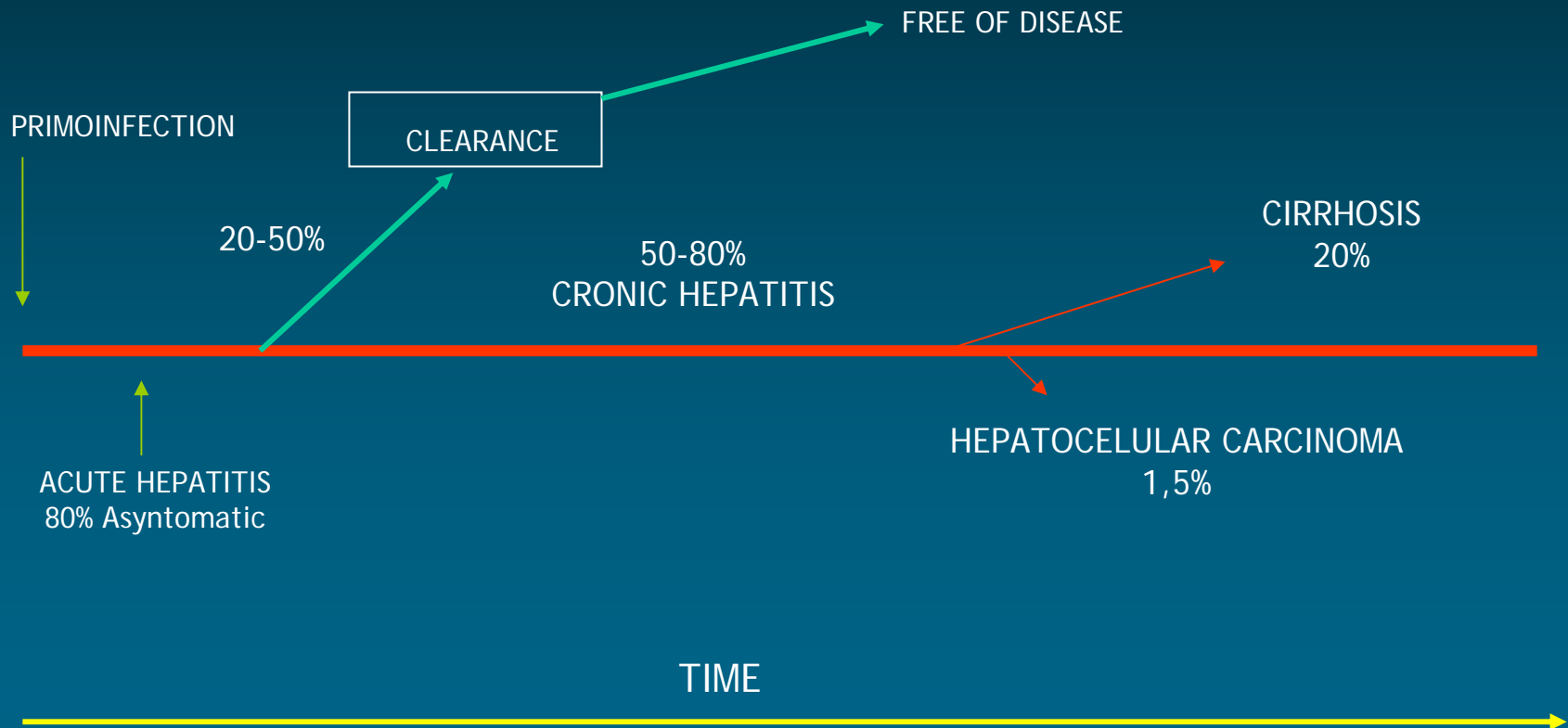


- Data: Canary Islands, Catalonia, Ceuta, Navarra, Basque Country, Extremadura and La Rioja

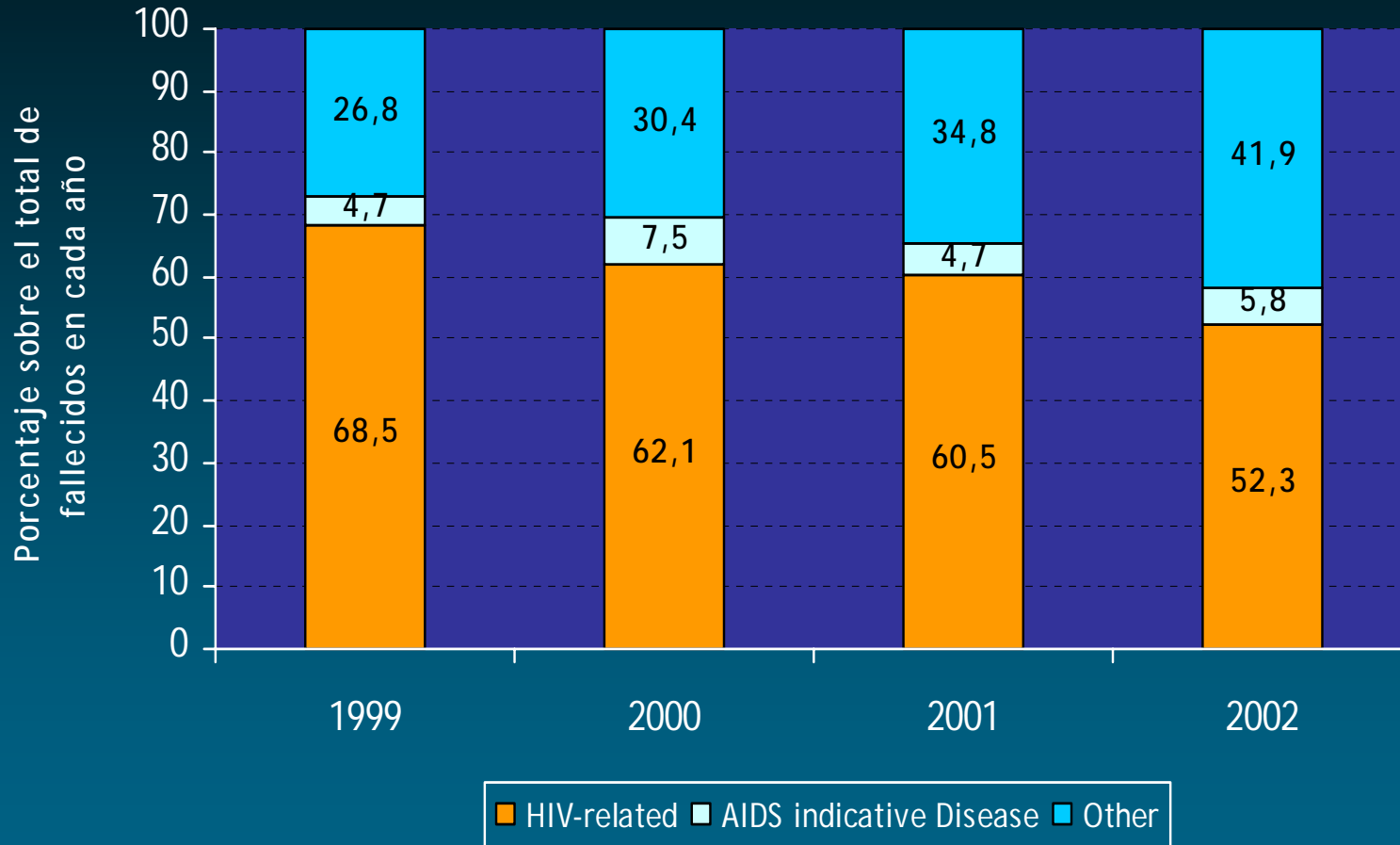
No. of AIDS cases due to mother-to-child transmission, adjusted by reporting delay
National AIDS Register. Update at June 30th, 2006



Natural History of HCV infection



Hospital Discharge Diagnosis among deceased HIV/AIDS patients, 1999-2002



χ^2 test for trend: $p < 0.05$

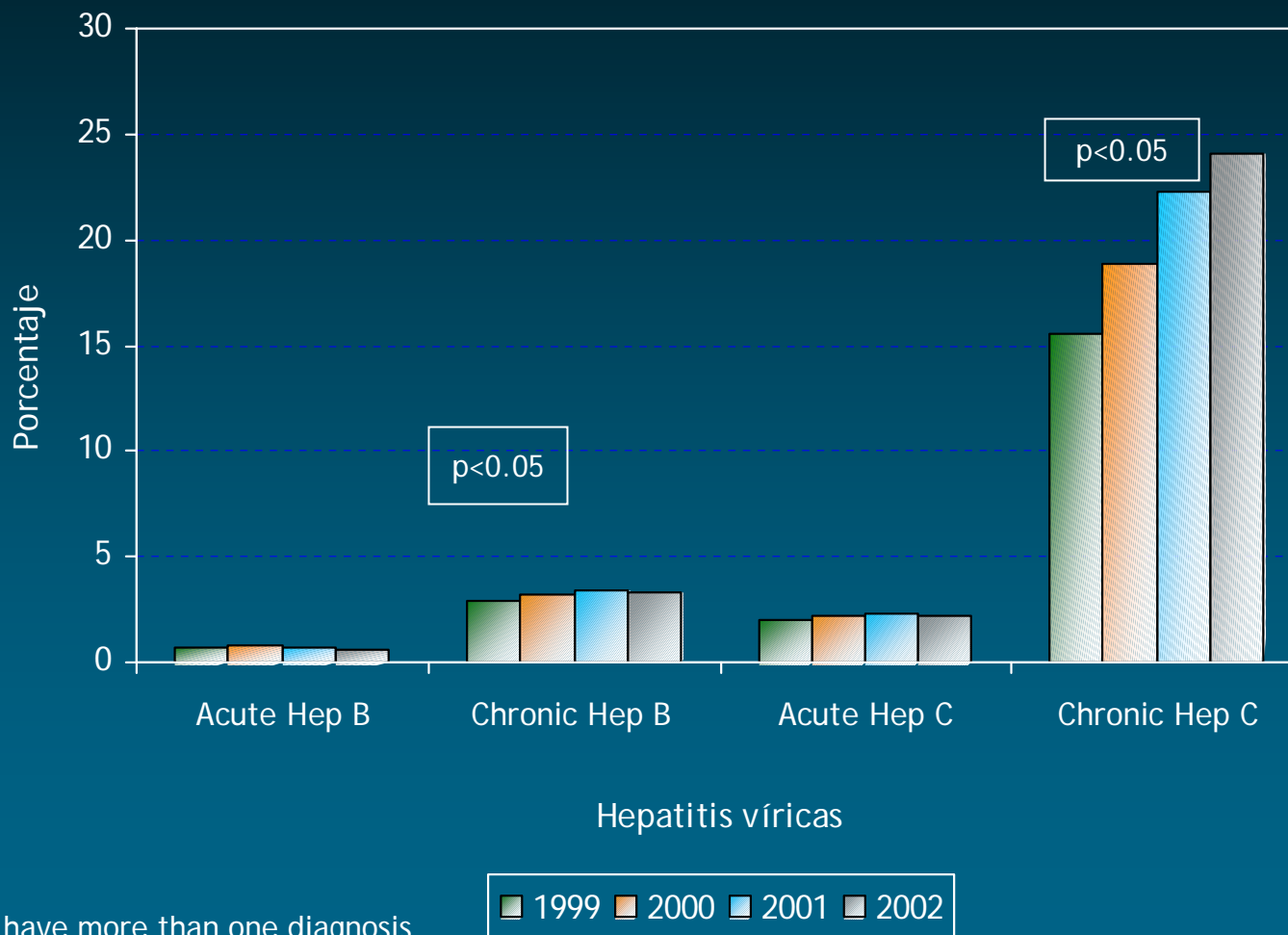
Hospitalisations (N, %) due to viral hepatitis[§] among HIV/AIDS patients, 1999-2002

	1999 N(%)	2000 N(%)	2001 N(%)	2002 N(%)
Hepatitis C*	3.733 (17,6)	4.321 (21,0)	4.916 (24,6)	5.211 (26,3)
Hepatitis B	771 (3,6)	830 (4,0)	814 (4,1)	790 (4,0)
Other viral hepatitis				
Hepatitis A	12 (0,1)	12 (0,1)	4 (0)	16 (0,1)
Hepatitis Delta (wth hep B)	14 (0,1)	15 (0,1)	20 (0,1)	16 (0,1)
Hepatitis E	5 (0)	4 (0)	3 (0)	1 (0)
Other	17 (0,1)	14 (0,1)	17 (0,1)	6 (0,1)

§ A patient can have more than one diagnosis

*p<0.05 en χ^2 test for trnd

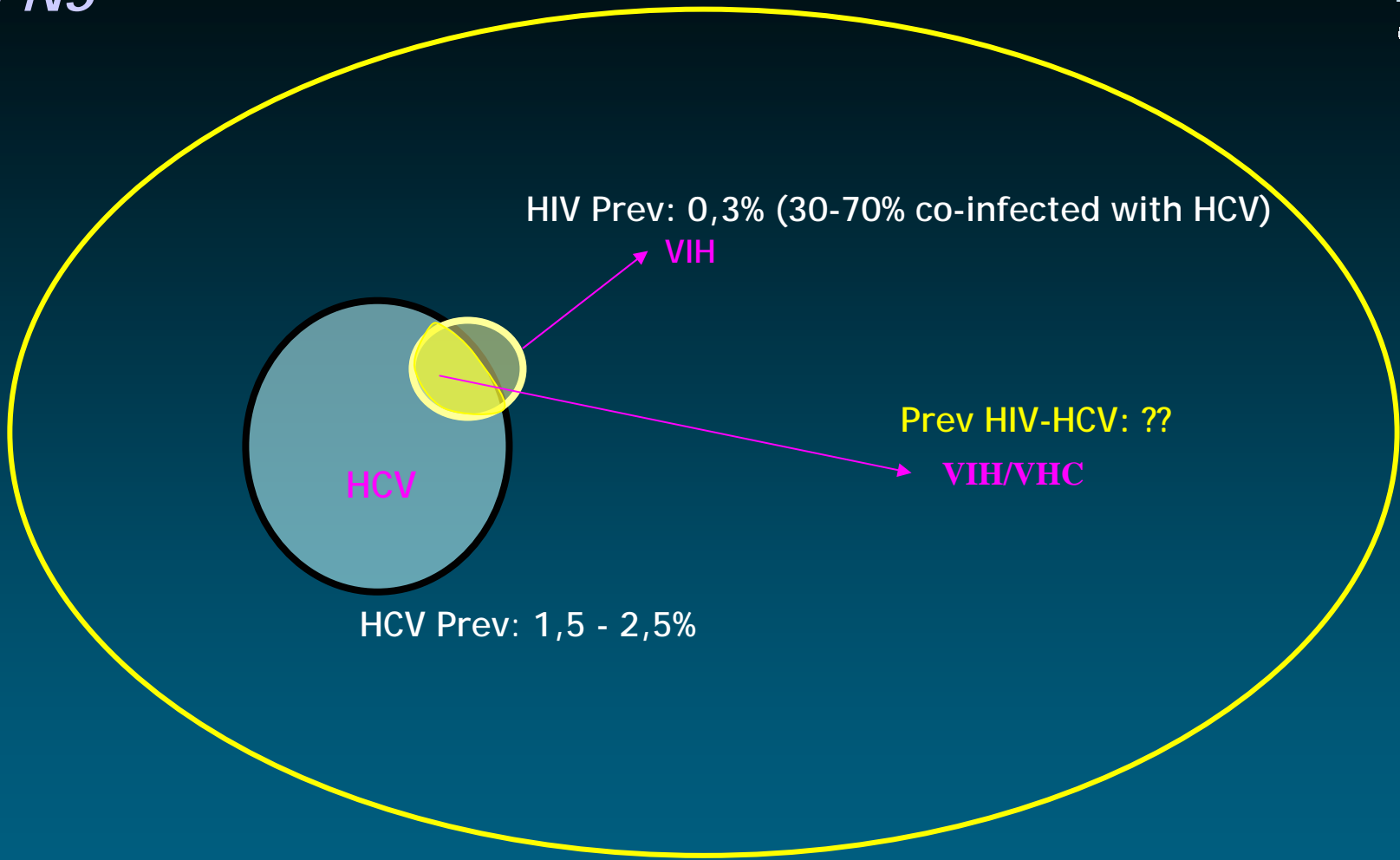
Hospitalisations (%) due to acute/chronic Hepatitis[§] B or C among HIV/AIDS patients. 1999-2002



§ A patient can have more than one diagnosis
 p: χ^2 test for trend

To sum up....

- High HIV/AIDS incidence in Spain. Many years, highest in Western Europe
- Mature concentrated epidemic
- Intravenous drug users (IDU), most commonly represented transmission category, but epidemic pattern has changed recently
- IDUs also at high risk for HCV
- Need to prevent HIV and HCV MTCT
- Need to establish information systems to know HIV & HIV-HCV prevalence in “general population”



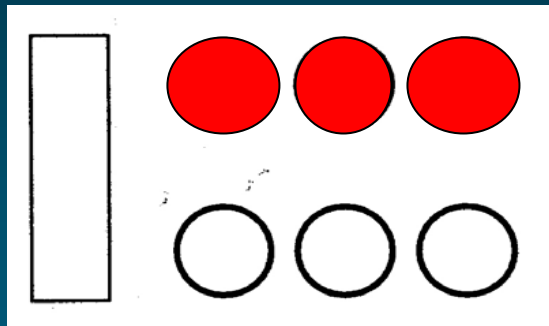
Distribution of HIV & HCV infection in the Spanish population

Wordwide Prev HCV: 3%
Source: WHO

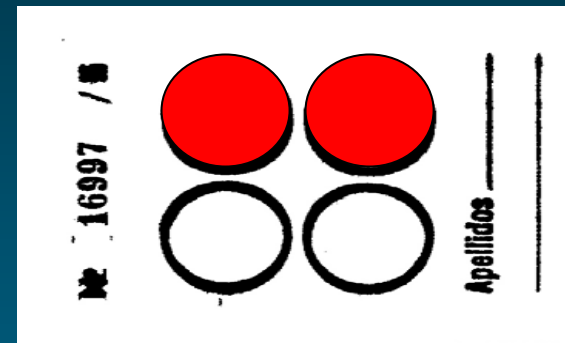
Unlinked Anonymous Testing in newborn babies

- Epidemiological information system
- initiated in 1998
- Setting: 8 Autonomous Regions
- Residual dried blood spots samples from routine neonatal screening
- Unlinked for identifiers
- Tested anonymously for HIV. All HIV-positive samples tested for Anti- HVC

Methodology- Dried blood samples



Type 1



Type 2

Objectives

- To estimate prevalence of HIV infection in mothers of newborn babies
- To estimate prevalence of HIV-HCV co-infection in mothers of newborn babies

UAT Results, 2004 (7 AR)

Autonomous Regions	Blood Samples No. Tested	HIV(+) HIV(+)/1000 women (IC95%)	Anti-HCV in HIV(+)		
			Anti-HCV (n)	Anti-HCV (%) (IC95%)	Proportion HIV-HVC+ /HIV+
CANARY ISLANDS	9.309	2,15 (1,31-3,32)	4	0,43(0,12-1,10)	20,00
CASTILLE- LEON	19.750	1,11 (0,70-1,69)	8	0,41(0,17-0,80)	36,36
CASTILLE-LA MANCHA	6.981	0,86 (0,32-1,87)	0	0	0
GALICE	17.658	1,70 (1,15-2,42)	11	0,62 (0,31-1,11)	37,93
MELILLA	1.356	0,74 (0,02-4,10)	0	0	0
MURCIA	16.191	0,80 (0,43-1,37)	4	0,25 (0,07-0,63)	36,36
C. VALENCIANA	18.747	1,81 (1,45-2,22)	18	0,37(0,22-0,58)	21,69
TOTAL	119.992	1,50 (1,29-1,74)	45	0,38 (0,27-0,50)	26,47

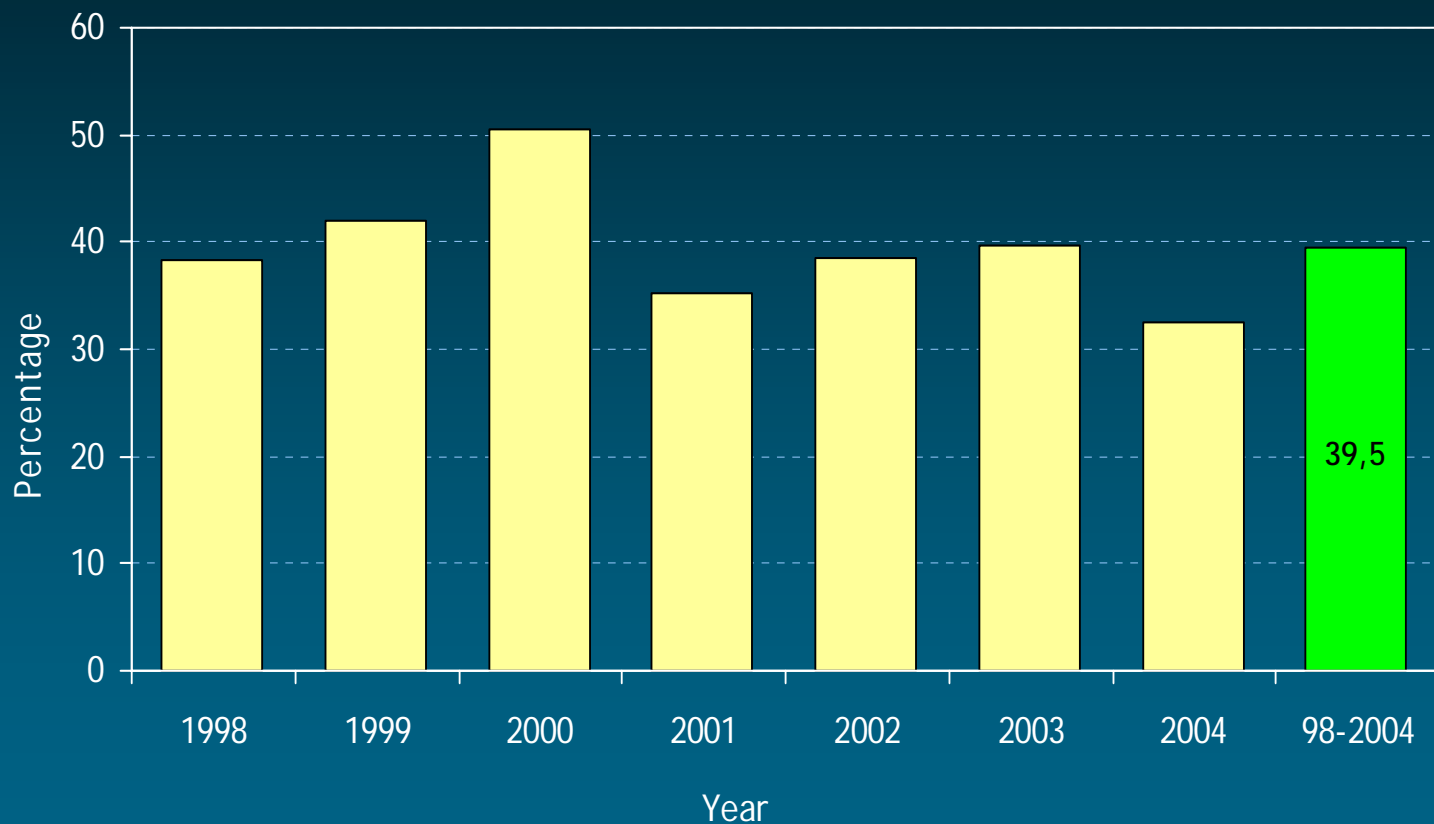
Results. Period 1998-2004 (5 AR)

Autonomous Regions	Number Tested	HIV	HCV-HIV		
		Prev.HIV +/-1000 (IC95%)	HCV + (n)	Prev.HIV-HVC +/-1000 (IC95%)	Proportion HIV-HVC+ /HIV+
CANARY ISLANDS	102,743	1.59 (1.35-1.85)	49	0.48 (0.35-0.63)	31.61
CASTILLE- LEON	106,662	1.30 (1.10-1.54)	50	0.47 (0.35-0.62)	42.74
GALICE	125,984	1.56 (1.35-1.80)	88	0.70 (0.56-0.86)	45.83
MELILLA	7,468	0.94 (0.38-1.93)	1	0.13 (0.00-0.75)	14.29
MURCIA	101,635	1.10 (0.91-1.93)	34	0.33 (0.23-0.47)	37.36
TOTAL	444,492	1.39 (1.28-1.50)	222	0.50 (0.44-0.57)	39.50

HIV + (1998-2004): 618

HCV tested HVC: 562 (90,9%)

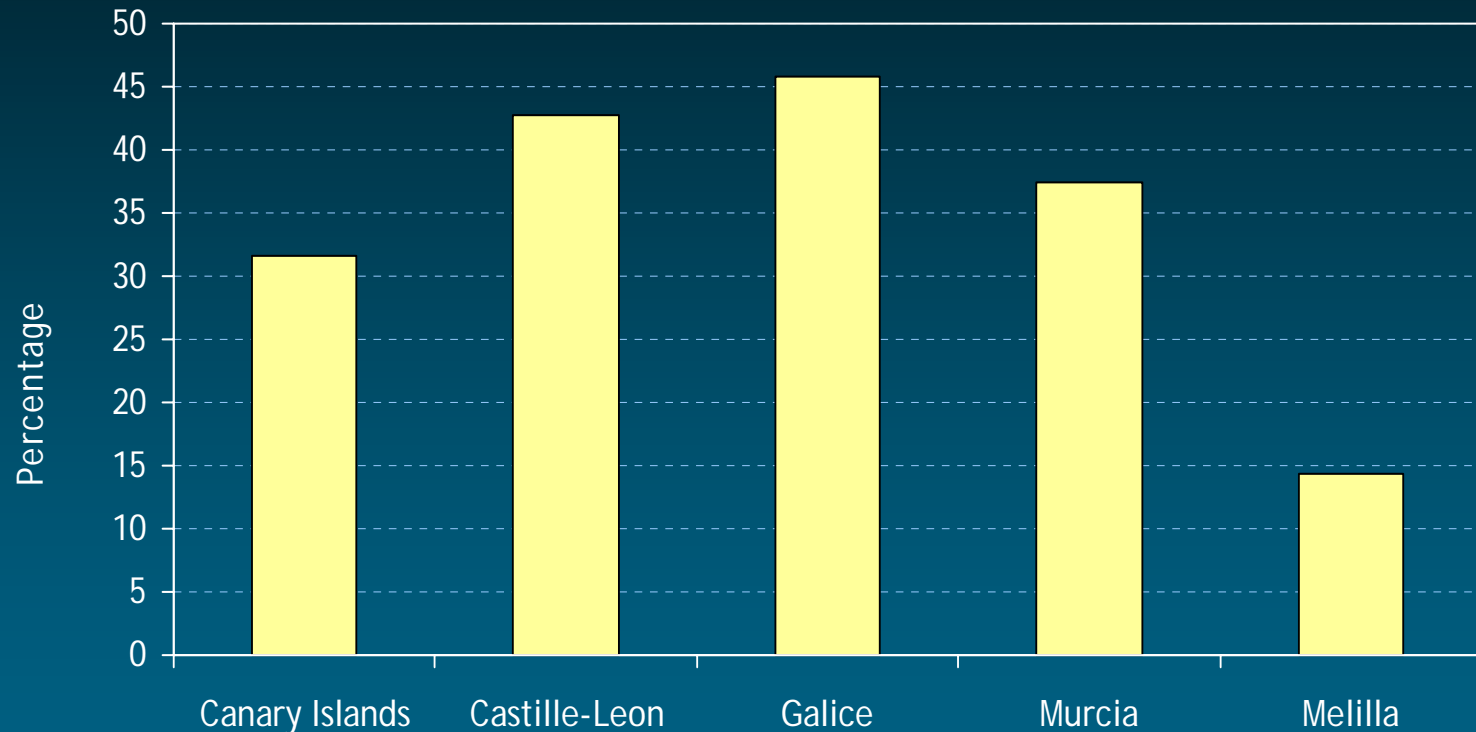
HIV(+) mothers. Proportion with Anti-HCV 1998-2004, 5 AARR



HIV + (1998-2004): 618

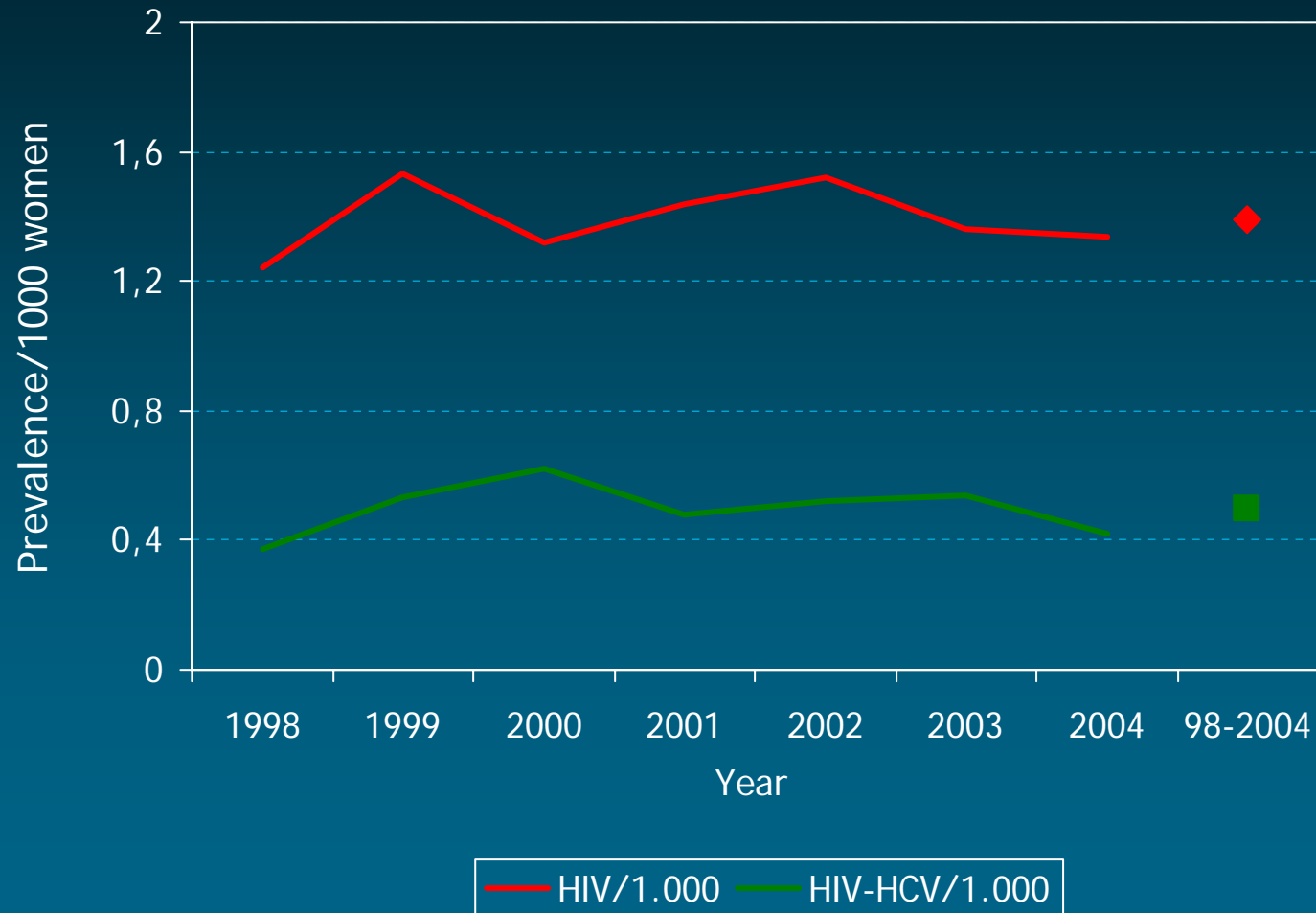
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HIV(+) mothers. Proportion with Anti-HCV by Autonomous Regions. 19988-2004



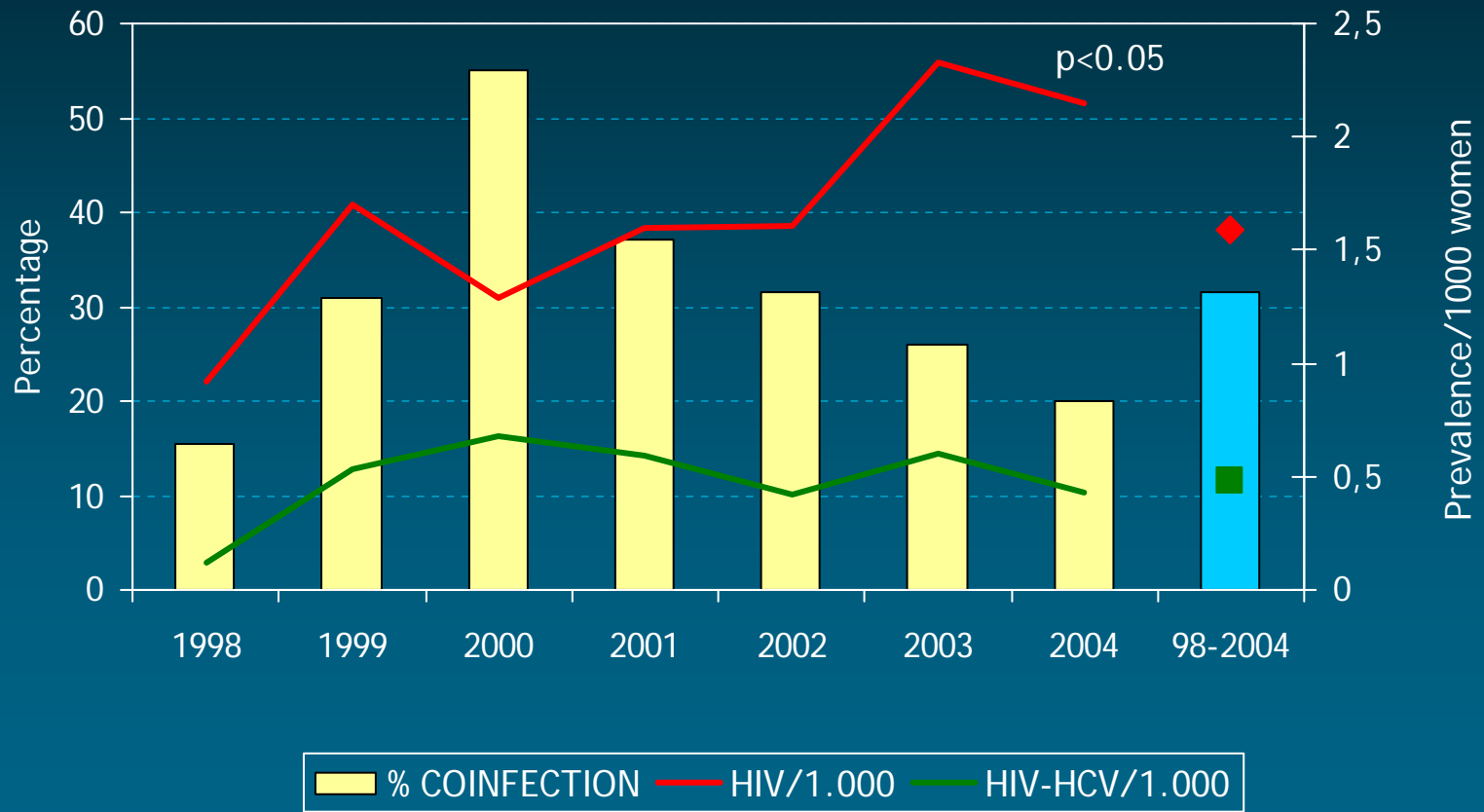
HIV + (1998-2004): 618
Tested HVC: 562 (90,9%)

Prevalence of de HIV and HIV-HCV co-infection per 1000 women (5 AARR)



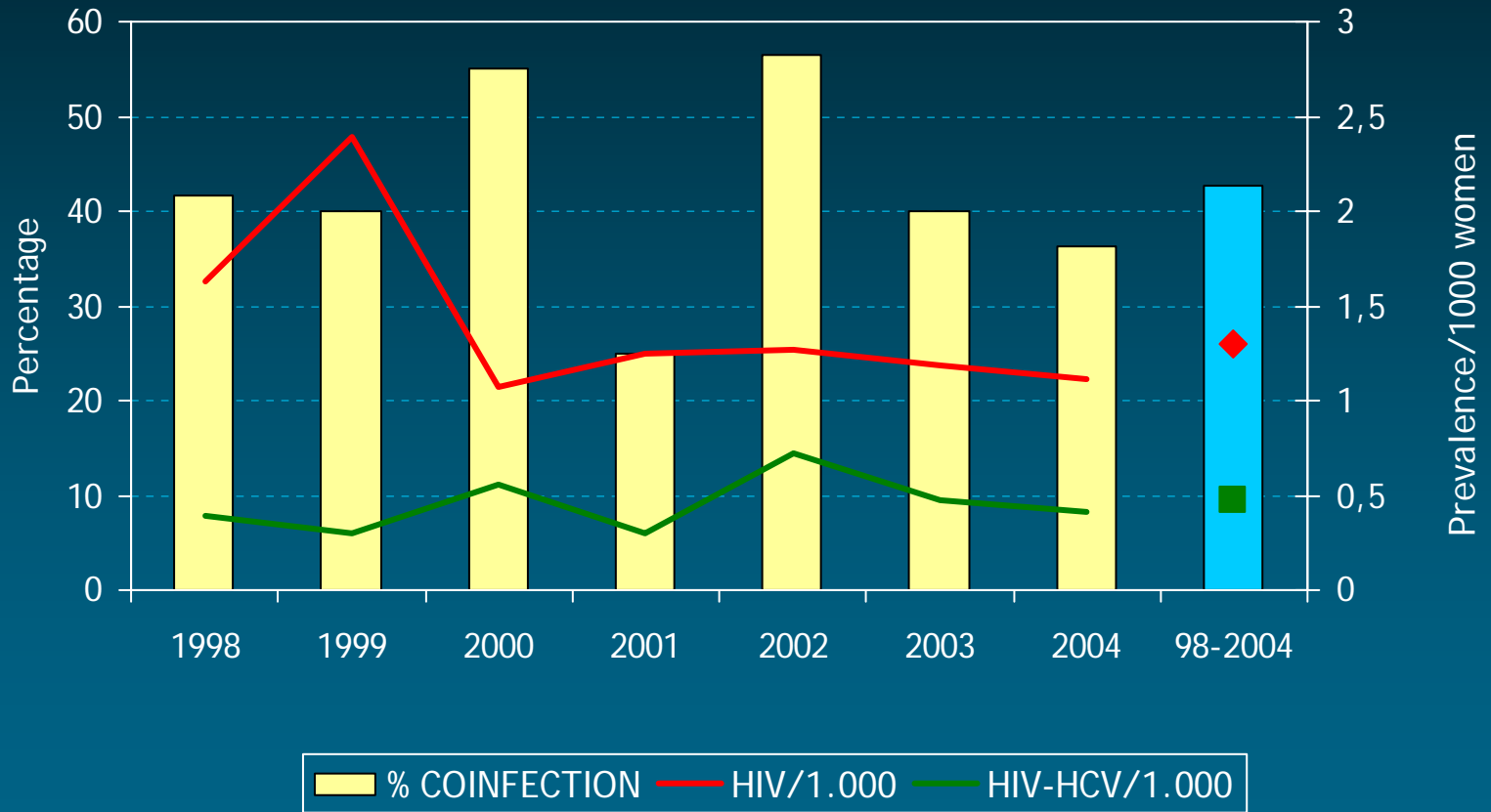
Chi- Square of tendency: NS

Prevalence of HIV and HIV-HCV co-infection per 1000 women. Canary Islands



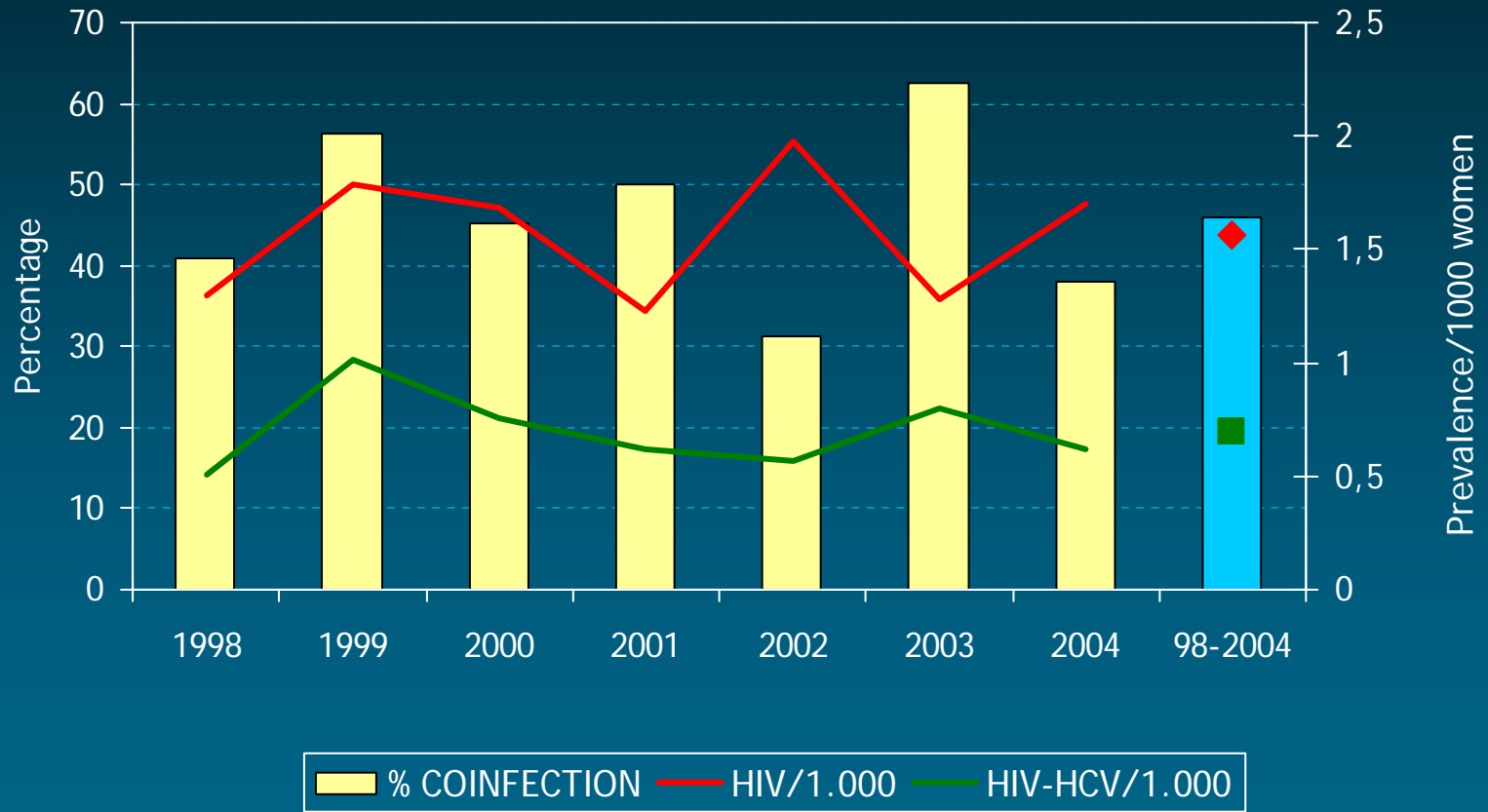
Chi- Square of tendency prevalence HIV/HCV: NS

Prevalence of HIV and HIV-HCV co-infection per 1000 women. Castille-Leon



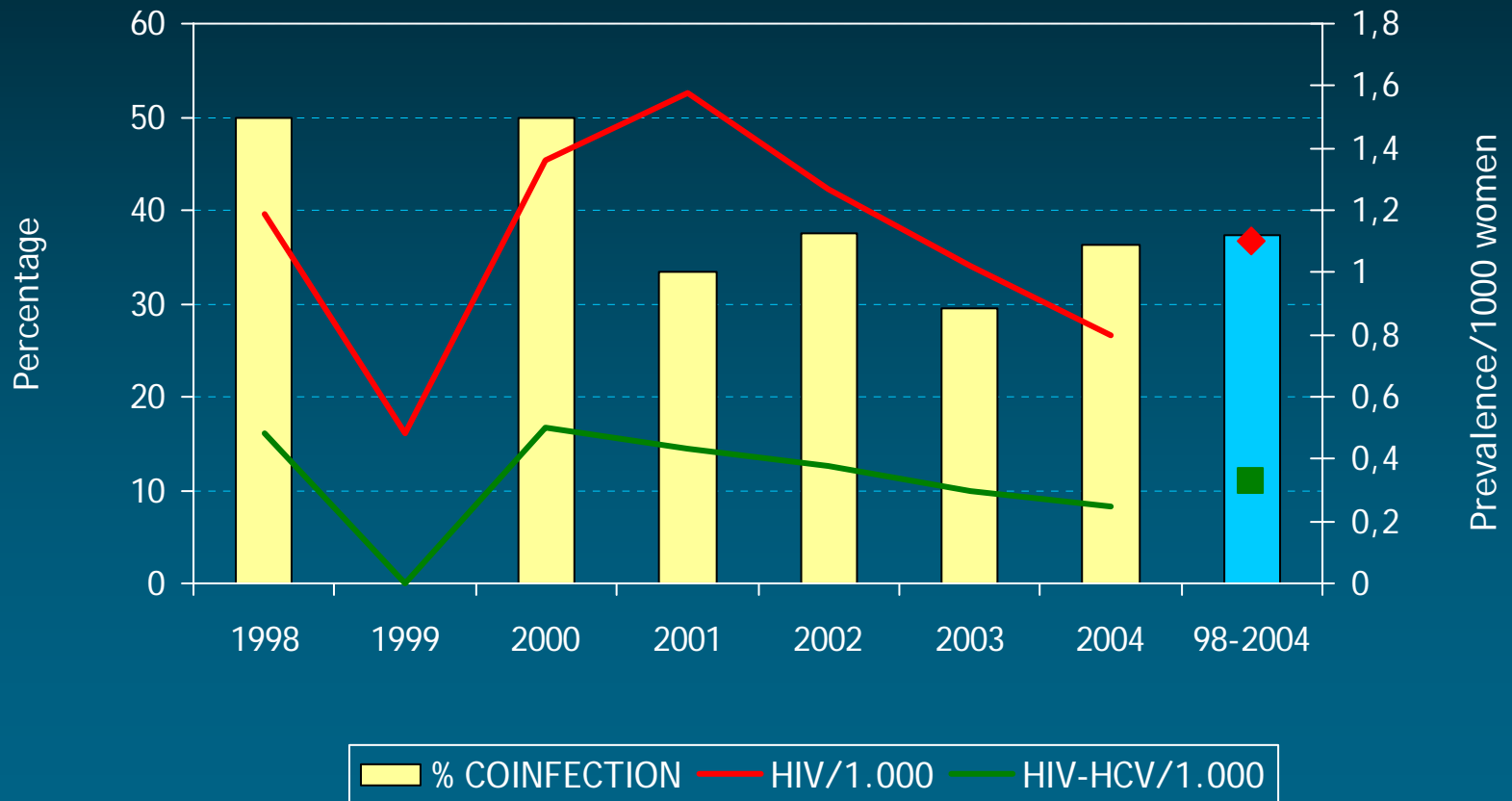
Chi- Square of tendency prevalence HIV/HCV and prevalence HIV: NS

Prevalence of HIV and HIV-HCV co-infection per 1000 women. Galice



Chi- Square of tendency prevalence HIV/HCV and prevalence HIV: NS

Prevalence of HIV and HIV-HCV co-infection per 1000 women. Murcia



Chi- Square of tendency prevalence HIV/HCV and prevalence HIV: NS

- UAT using residual dried blood spots samples from routine neonatal screening is feasible and cost-effective
- It provides important information on HIV infection and HCV-HIV co-infection trends, in “unselected” group of the Spanish population
- Prevalence of HIV-ACV is high in comparison with other European countries, and stable during 1998-2004
- HCV testing should always be done in HIV(+) pregnant women, as well as in all those with risk factors for HCV infection
- Challenges: a) extend the program to other AARR; b) add some important epidemiological variables