

FOLLOW UP OF HPV GENITAL INFECTIONS IN A COHORT STUDY OF WOMEN IN BARCELONA, SPAIN

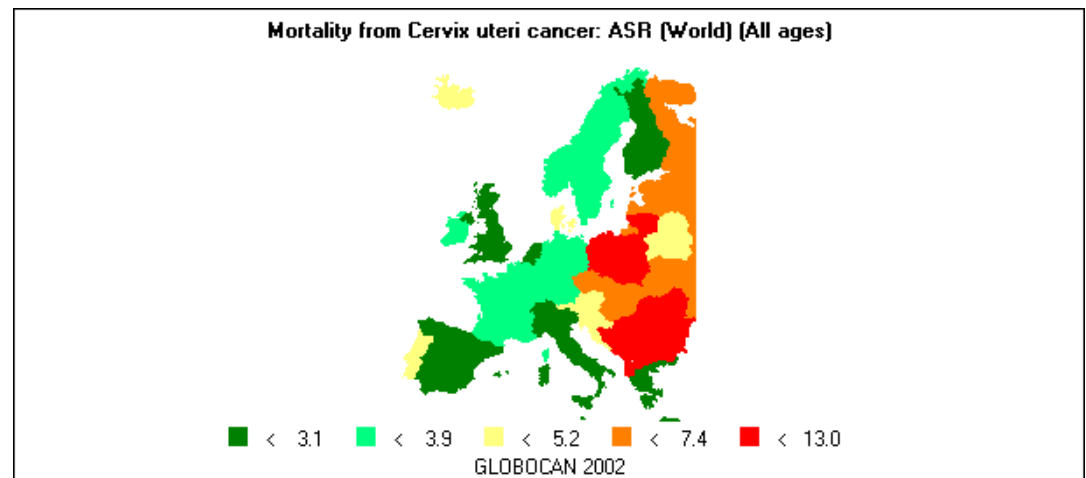
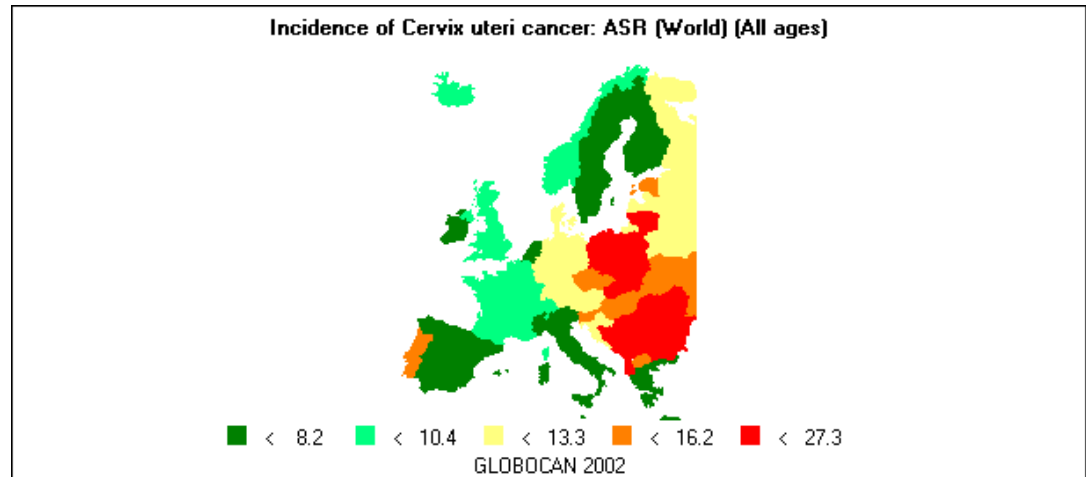
**S. De Sanjosé
B. Lloveras
Institut Català d'Oncologia
Barcelona, Spain**



Tübingen, sept 19-20 2005

INTRODUCTION

IARC Study area	Age-standardised prevalence for any HPV, % (95% CIs)
Spain	1.4 (0.5 – 2.23)
Vietnam, Hanoi	1.6 (0.7 – 2.4)
Thailand, Songkla	3.6 (1.9 – 5.35)
Thailand, Lampang	7.2 (5.3 – 9.2)
The Netherlands	7.7 (4.1 – 11.3)
Italy	9.2 (7.5 – 11.0)
Vietnam, Ho Chi Minh	10.6 (0.7 – 2.4)
Chile	11.9 (9.6 – 14.3)
Korea	13.3 (4.7 – 21.9)
Colombia	13.9 (12.09 – 15.7)
India	14.2 (12.0 – 16.4)
Argentina	16.3 (13.7 – 18.9)
Nigeria	25.6 (22.4 – 28.8)
All areas	10.5 (9.9 – 11.0)



Clifford et al. 2005
 De Sanjose et al. 2003

AIMS

- **To estimate the incidence and persistence of genital HPV infection**
- **To estimate the predictive value of women with normal cytology and negative for HR HPV at 1 and 5 years of follow up**

STUDY POPULATION / METHODS

Women from the general population and from nine family planning clinics of the metropolitan area of Barcelona were recruited during 1997-2001 and followed up for 1 and 5 years.

- A total of 2012 women were included.**
- The inclusion rate at follow up was 65.4%.**
- The HPV prevalence at entry was 4.9% and at follow up was 6.5%.**

STUDY POPULATION / METHODS

The information at the study entry and at follow up consisted of:

Personal interview

Gynaecological visit

Exfoliated cervical cells { PAP
HPV by HC2

Family planning

General population



Characteristics of women at study entry by study response

	WOMEN AT ENTRY n=2012	FOLLOWED n=1316	LOST OF FOLLOW-UP n=696
AGE	40	41	38
ABNORMAL CYTOLOGY	3,9%	2,9%	4,5%
HPV+	4,9%	4,6%	5,5%
PREVIOUS PAP	83,2%	87,2%	75,5%

Data from medical records among women lost of follow up: Cytology results

	Cytology	n
CYTO- HPV-	Negative	111
	ASCUS	3
	LSIL	2
	HSIL	2
	HISTERECTOMY	5
	NO Information	245
CYTO+ HPV-	Negative	1
	LSIL	1
	NO Information	8
CYTO- HPV+	Negative	4
	ASCUS	1
	NO Information	7
CYTO+ HPV+	Negative	1
	NO Information	3

FOLLOW-UP STUDY POPULATION

1316 Women

→ **Mean of age: 45 y.o.**

→ **HPV prevalence 6.5%**

→ **Abnormal cytology 3.8%**

FOLLOW-UP STUDY POPULATION

HPV HC2

FOLLOWED

-

+

AT ENTRY

-

+

1186
(90.1%)

69
(5.2%)

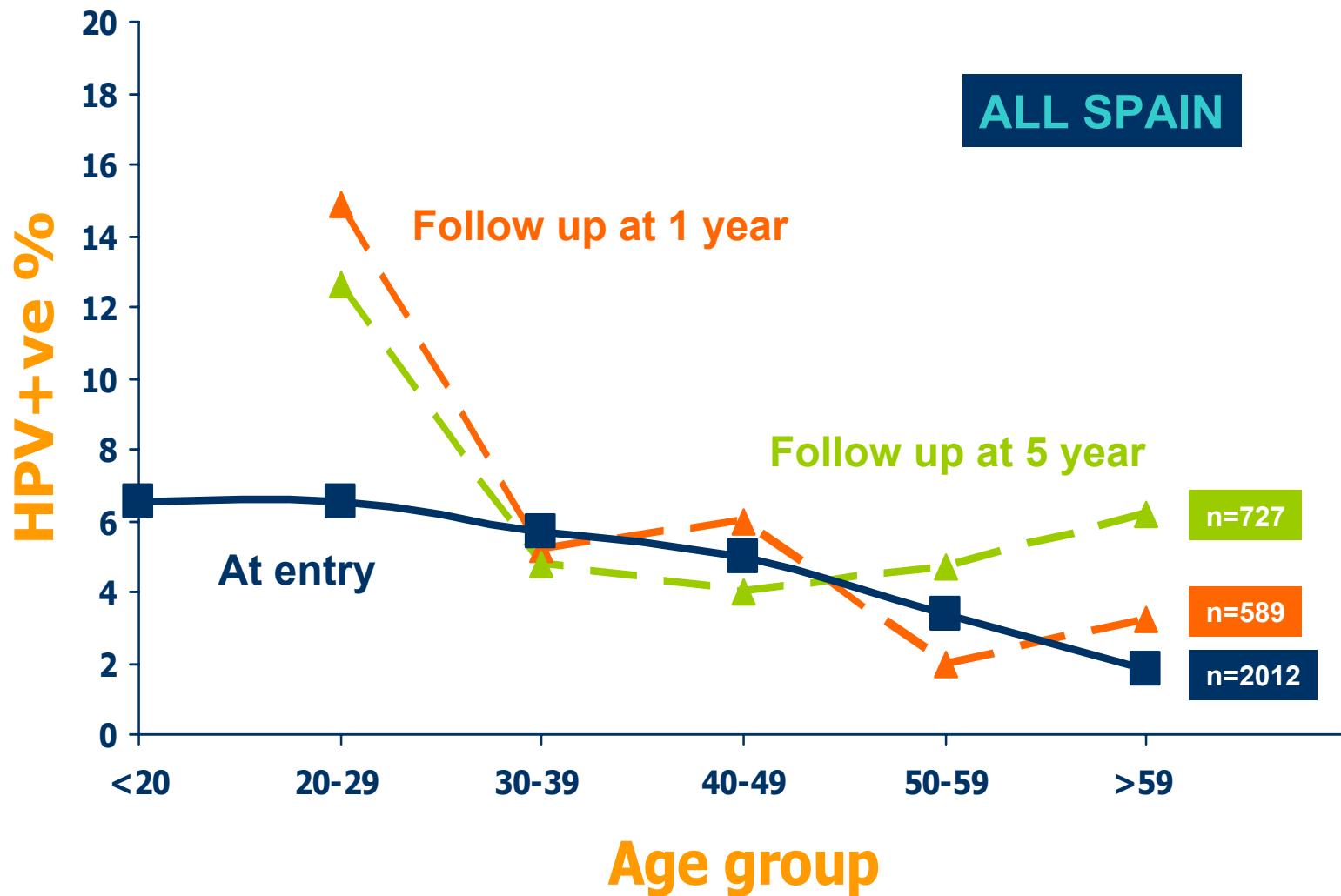
44
(3.3%)

17
(1.3%)

n=1316

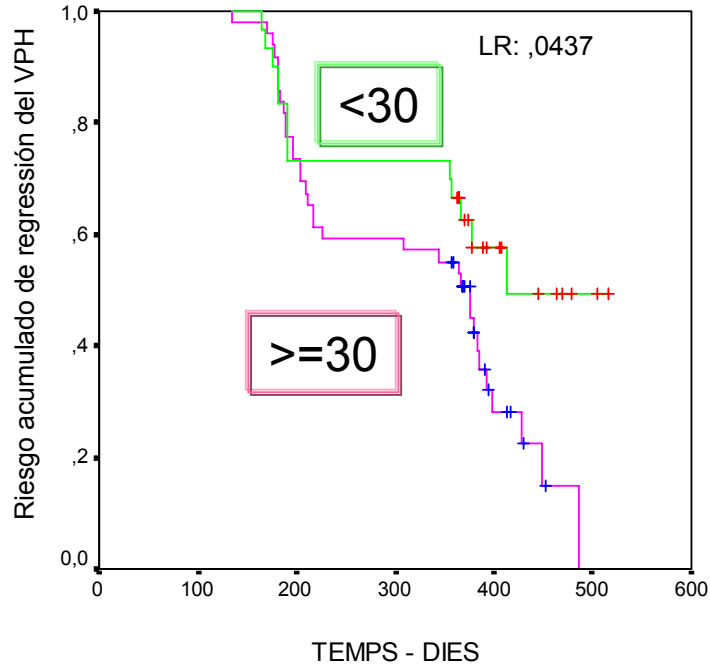
FOLLOW-UP STUDY POPULATION

HC2

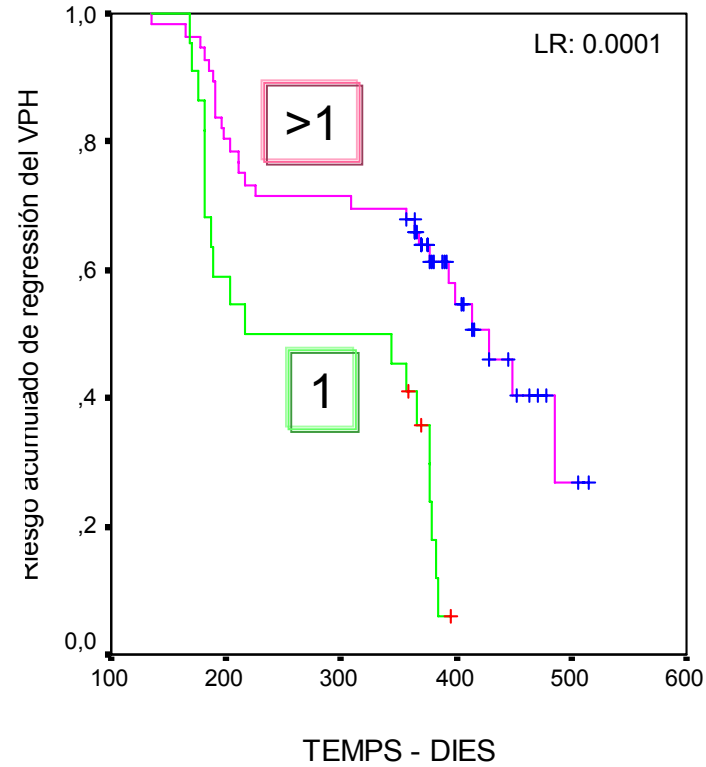


KM

HPV REGRESSION



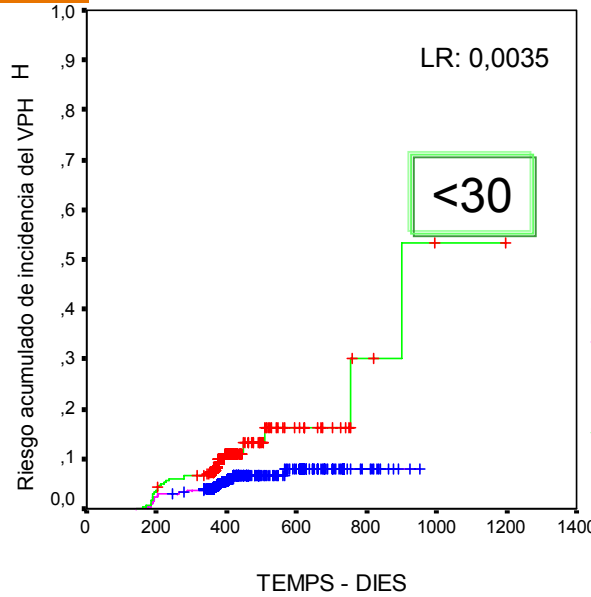
AGE



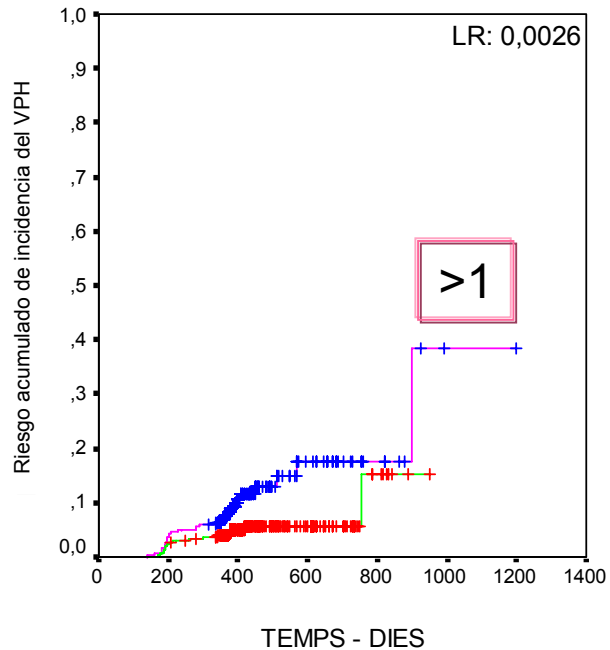
SEX PARTNERS

COX

FACTOR	OR (95% IC)		
SEXUAL ACTIVITY			
ACTIVE	1.0 (ref.)		
NON ACTIVE LAST 12	1.55	0.65	3.73
SEXUAL PARTNERS LIFETIME			
1	1.0 (ref.)		
>1	0.35	0.18	0.67
ORAL CONTRACEPTION			
YES	1.0 (ref.)		
NO	1.63	.79	3.34
AGE			
<30	1.0 (ref.)		
>=30	1.21	.59	2.48



AGE



SEX PARTNERS

CHARACTERISTICS	OR (95% IC)		
NO. SEXUAL PARTNERS			
1	1.0 (ref.)		
>1	1.78	1.04	3.05
AGE			
<30	1.0 (ref.)		
>=30	0.81	0.36	1.84
CIVIL STATUS			
MARRIED	1.0 (ref.)		
SINGLE	2.55	1.04	6.26
DIVORCED	2.70	1.15	6.34
	-	-	-
PARITY			
0	1.0 (ref.)		
1+	1.33	0.54	3.26
CYTOLOGY			
Normal	1.0 (ref.)		
ABNORMAL	4.37	1.73	11.04

Cervical lesions in PAP

CYTOLOGY

FOLLOW-UP

	NORMAL	ASCUS	LSIL	HSIL
NORMAL	1216 (96,7%)	33 (2,6%)	7 (0,6%)	1 (0,1%)
ASCUS	30 (83,3%)	5 (13,9%)	1 (2,8%)	
LSIL	16 (84,2%)	-	2 (10,5%)	
HSIL	4 (80%)	1 (20%)	-	-

AT ENTRY

n=1316

Cervical lesions in PAP

Numbers in red: Hysterectomy or cauterization BEFORE END OF FOLLOW UP

		FOLLOW-UP			
		NORMAL	ASCUS	LSIL	HSIL
AT ENTRY	NORMAL	1216/6 (96,7%)	33/1 (2,6%)	7 (0,6%)	1 (0,1%)
	ASCUS	30/3 (83,3%)	5 (13,9%)	1 (2,8%)	
	LSIL	16/3 (84,2%)	-	2 (10,5%)	
	HSIL	4/4 (80%)	1/1 (20%)	-	-

n=1316

Predictive value at the end of follow up

1 women out of 1216 HPV- and cyto negative developed CIN III within 1 year
2 women lost of complete follow up had a HSIL

Considering HSIL as a “case” and taking at entry results of total 2012 women

NPV HPV- CYTO - = $1909/1912 = 99.8\%$

CONCLUSIONS

- **Prevalence of HPV infection in Spain ranges from 1.7%-14.7%.**
- **New infections and regression are modulated by the number of sexual partners and age.**
- **The NPV of combining cytology and HR HPV testing is very high at 5 years.**



CYTOLOGY QUALITY CONTROL (set 2005)

+= ASC-US, LSIL, HSIL

1st LAB	N° slides reviewed	Discrepancy + vs. -	% discrepancy + vs. -
HUB	97	21	21%
HUGTiP	39	8	20%
HC	80	23	28%
Total	216	51	23%
pending	82		

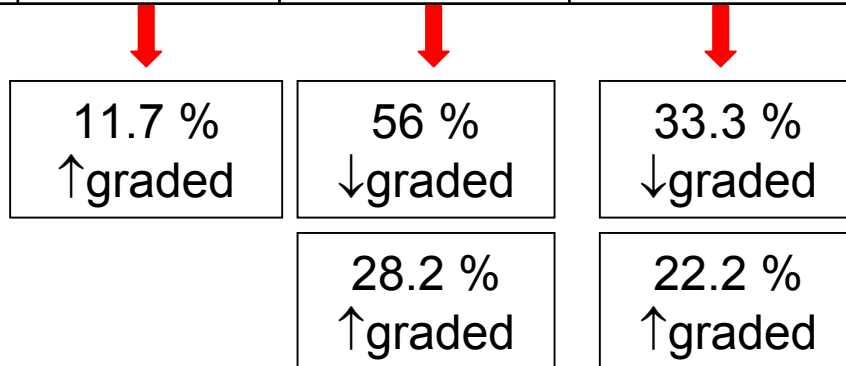
HUB: Hospital Universitari de Bellvitge

HUGTiP: Hospital Universitari Germans Trias i Pujol

HC: Hospital de Calella

CYTOLOGY QC (set 2005)

DX	LAB 1					
	NORMAL	ASC-US	LSIL	HSIL	SQ C CA	TOTAL
LAB 2						
NORMAL	105	26	3	0	0	134
ASC-US	2	7	2	0	0	11
LSIL	12	10	2	1	0	25
HSIL	0	3	2	2	0	7
SQ C CA	0	0	0	0	0	0
TOTAL	119	46	9	3	0	177



Overall agreement in exact Dx 65%

Overall agreement +/- 76%

Summary of QC

- High % of discrepancy between 1sr diagnosis and review
- No HSIL are detected among normal diagnosis