

The epidemiological situation of hepatitis C in Portugal

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Estimated prevalence

Blood donors

Population studies

Patient population

Genotypes

Viremia

Liver biopsy and fibrosis

Blood donors

- Positividade para o anti-VHC em dádivas e dadores de sangue em Portugal (1991-1992).

Centro	n	Dadores/Dádivas	anti-VHC (%)	geração I/II
I. Mota (H. Matosinhos)	487	—	1,6	—
M. Koch (H.S. João Porto)	4924	dadores	0,77	II
B. Justiça (H.S.A. Porto)	16394	dádivas	0,56	—
L. Queirez (I.P.S. Porto)	9392	dádivas	0,8	—
S. Fevereiro (H.S. Cruz)	2482	dadores	0,8	—
M. Correia (I.P.O. Lisboa)	383	—	2,87	—
F. Nascimento (I.P.S. Lisboa*)	69090	dádivas	0,85	II
I. Neves (I.P.S. Lisboa)	10096	dádivas	1,46	II
M. Pedro (H.S. Maria)	6737	—	0,54	—
I. Cunha (H.G.O. Almada)	2531	dádivas	0,71	II
M. Melo (H. Portimão)	1461	dadores	0,47	II
M. Esmael (H. Faro)	4167	dadores	1,99	I / II
F. Gargaté (F. Armadas)	2980	dadores	2,15	II

N - 131124

0,9%

North 0,68%

Lisboa 1,0%

South 1,59%

P<0,05

No conjunto das seguintes regiões geográficas: Porto 0,68, Lisboa 1,0 (excluindo os dados de F. Nascimento e F. Gargaté), Algarve 1,59, p<0,05.

* Em colaboração com 23 Hospitais da Região Sul.

Only one study

Coimbra

Total: 657 patients

Age : 42,7 ±13,1 years

Sex: 267 male; 390 female

HCV antibody positive 0,46%

IV drug use	33,3 %
Transfusion	1,8 %
Alcohol abuse	1,33 %
Previous surgery	1,0 %
HBV countries	0,65 %

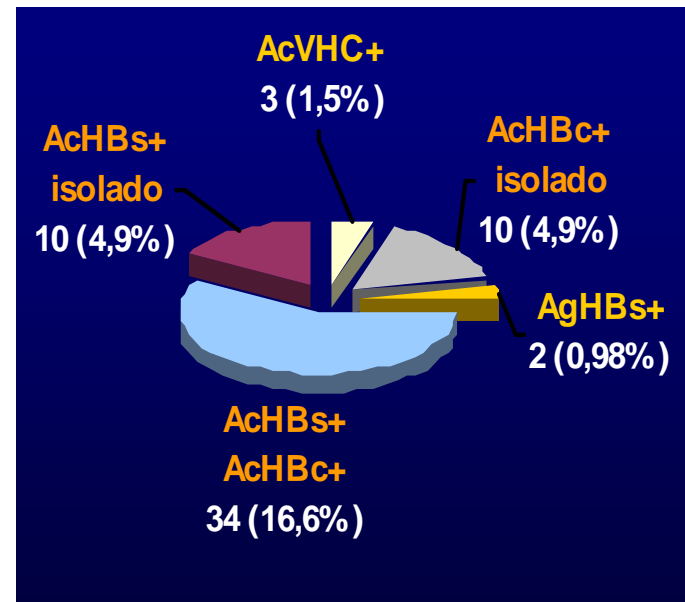
HCV prevalence

Hospital de Gaia

Total: 205 patients

Age : 57,96 ±14,85 years

Sex: 114 male; 91 female



Conclusion

The prevalence of HCV infection (1.5%) and HBV (0.98%) in this population was similar to that estimated for the population Portuguese general.

Journal of Gastroenterology and Hepatology (2001) 16, 1076–1079

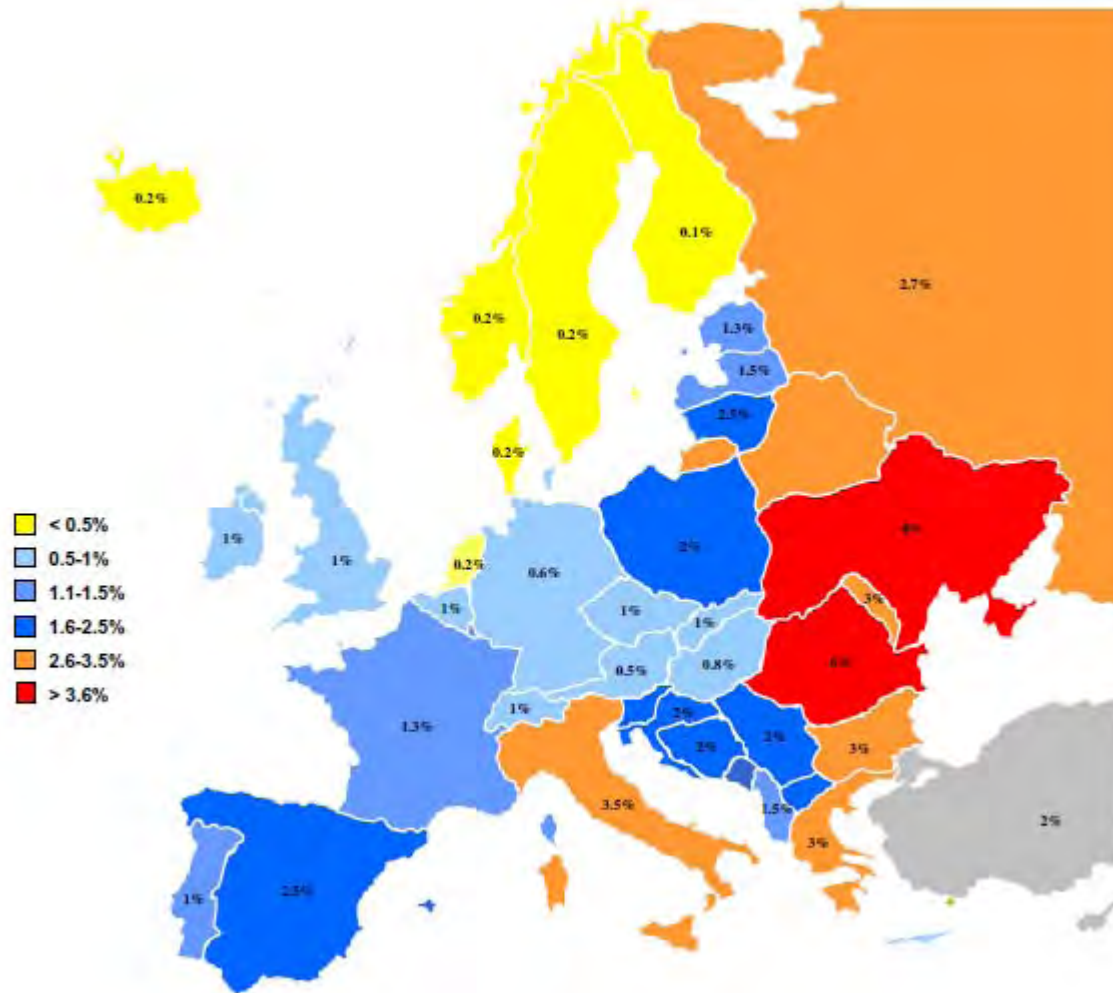
Letter to the Editor

EPIDEMIOLOGICAL ASPECTS OF HEPATITIS C IN PORTUGAL

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Paulo Ferrinho
Ministry of Health
Al. D. Afonso Henriques, 45
Lisboa, Portugal*

In conclusion, hepatitis C virus is a serious problem in Portugal, and it is estimated that the global prevalence must be approximately 1.5%.

Prevalence VHC



Reported cases

Número de casos

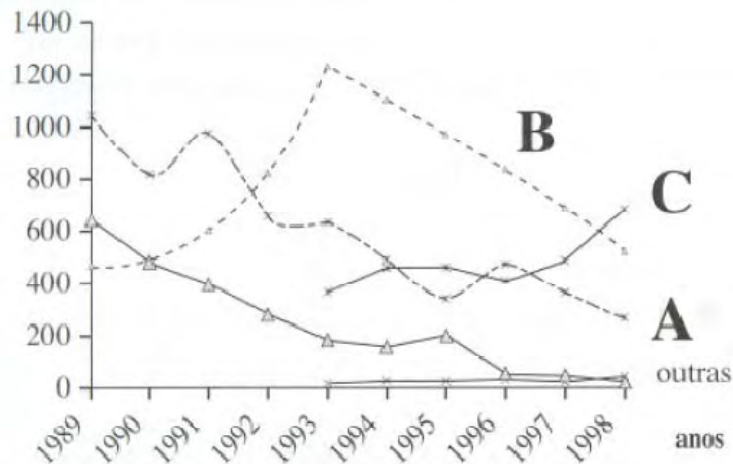


Figura 1 - Casos notificados de hepatite vírica de 1989 a 1998. Fonte: Direcção-Geral da Saúde, Divisão de Epidemiologia.

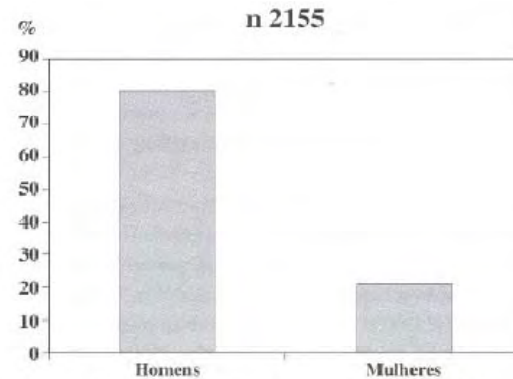


Figura 3 - Percentagem relativa por sexos dos casos notificados de hepatite C de 1993-1997. Fonte: Direcção-Geral da Saúde, Divisão de Epidemiologia.

Casos notificados

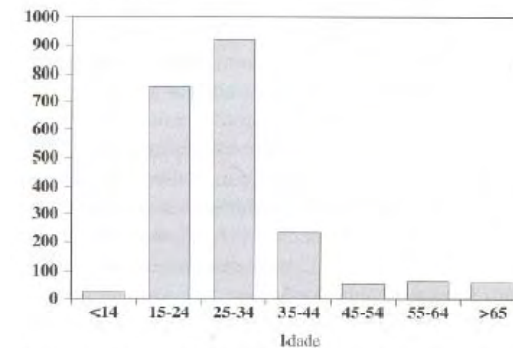


Figura 4 - Distribuição por grupos etários dos casos notificados de hepatite C de 1993-1997. Fonte: Direcção-Geral da Saúde, Divisão de Epidemiologia.

Reported cases

N.º de notificações e taxa de incidência (/10⁵), 2006

Doenças de Declaração Obrigatória (DDO) CID – 10

2003-2005 2002 2006

B15 – B19	Hepatite viral				
B15	hepatite por vírus A	154	64	45	0,43
B16	hepatite por vírus B	104	155	42	0,40
B17.1	hepatite por vírus C	111	205	88	0,83
B17	hepatite por outros vírus especificados (exclui hepatite C, B17.1)	2	4	1	0,01
B19	hepatite por vírus não especificados	4	6	4	0,04

Caracterização epidemiológica da Hepatite Crónica C em Portugal.
Estudo prospectivo multicêntrico (2001)

Jorge Areias et al
7ª Reunião Anual da APEF

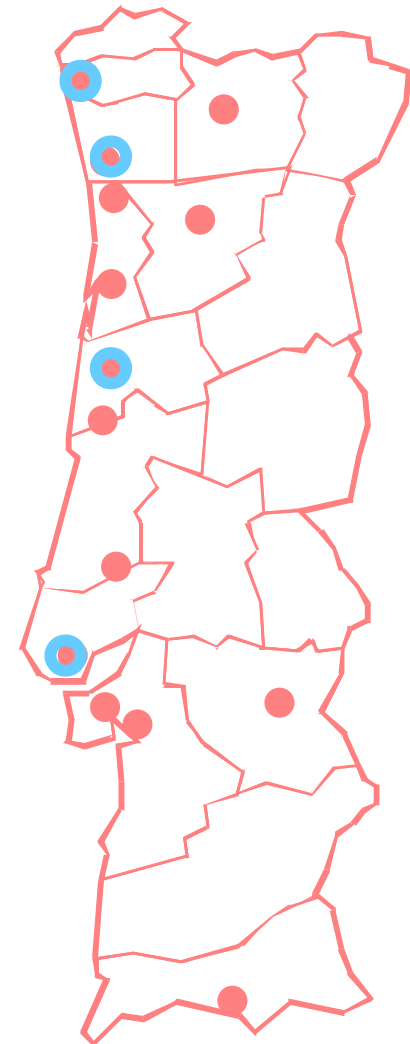
Virological and Histological Profile of Chronic Hepatitis C Patients
Treated with Peginterferon alfa plus Ribavirin in Clinical Practice in
Tertiary Centres in Portugal (2009)

(Revisão retrospectiva (2003-2008) Doentes seguidos em consulta externa)
José Velosa et al
(submitted)

Centros participantes

Centro Hospitalar de Coimbra (Doenças Infecciosas)
Centro Hospitalar de Vila Nova de Gaia (Gastroenterologia)
Centro Hospitalar de Vila Nova de Gaia (Medicina Interna)
Hospitais da Universidade de Coimbra (Infecciosas)
Hospitais da Universidade de Coimbra (Medicina III)
Hospital Curry Cabral (Unidade de transplatação)
Hospital de Braga (Gastroenterologia)
Hospital de Castelo Branco
Hospital de Faro (Gastroenterologia)
Hospital de Leiria (Medicina II)
Hospital de S. Teotónio - Viseu (Gastroenterologia)
Hospital de S. Teotónio - Viseu (Infecciosas)
Hospital de Santa Cruz (Medicina Interna)
Hospital de Santarém (Medicina I)
Hospital de São João (Gastroenterologia)
Hospital de Setúbal (Gastroenterologia)
Hospital de Sto. António (Gastroenterologia)
Hospital de Sto. António dos Capuchos (Gastroenterologia)
Hospital de Vila Real (Gastroenterologia)
Hospital de Vila Real (Medicina Interna)
Hospital do Barreiro (Medicina I)
Hospital do SAMS (Gastroenterologia)
Hospital Egas Moniz (Gastroenterologia)
Hospital Espírito Santo - Évora
Hospital Fernando da Fonseca
Hospital Garcia da Orta (Infecciologia)
Hospital Infante D. Pedro - Aveiro (Infecciosas)
Hospital Infante D. Pedro - Aveiro (Medicina 2)
Hospital Pulido Valente (Medicina III)
Hospital Santa Maria
Hospital Santa Maria (Medicina 2)
Hospital São João (Doenças Infecciosas)

2001 ●
2009 ●

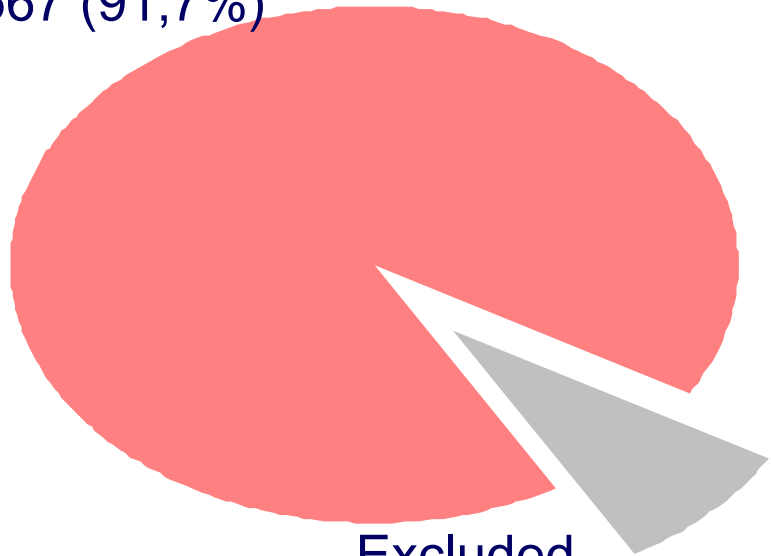


Patients

2001

Total 618 (100%)

Evaluable
567 (91,7%)



Excluded
51 (8,3%)

2009

Total 1907

north 249

center 157

south 1193

Demographics

Sex 2001



Sex 2009

male 1274 (66,8%)

Race

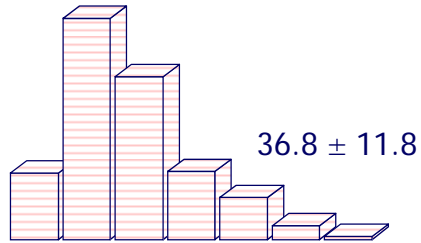
Caucasian 537 (94%)

African 10 (2%)

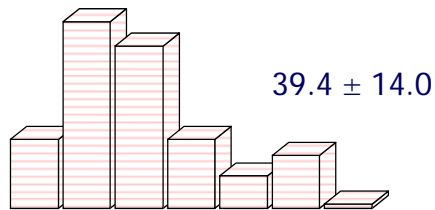
unknown 20 (4%)

Demographics

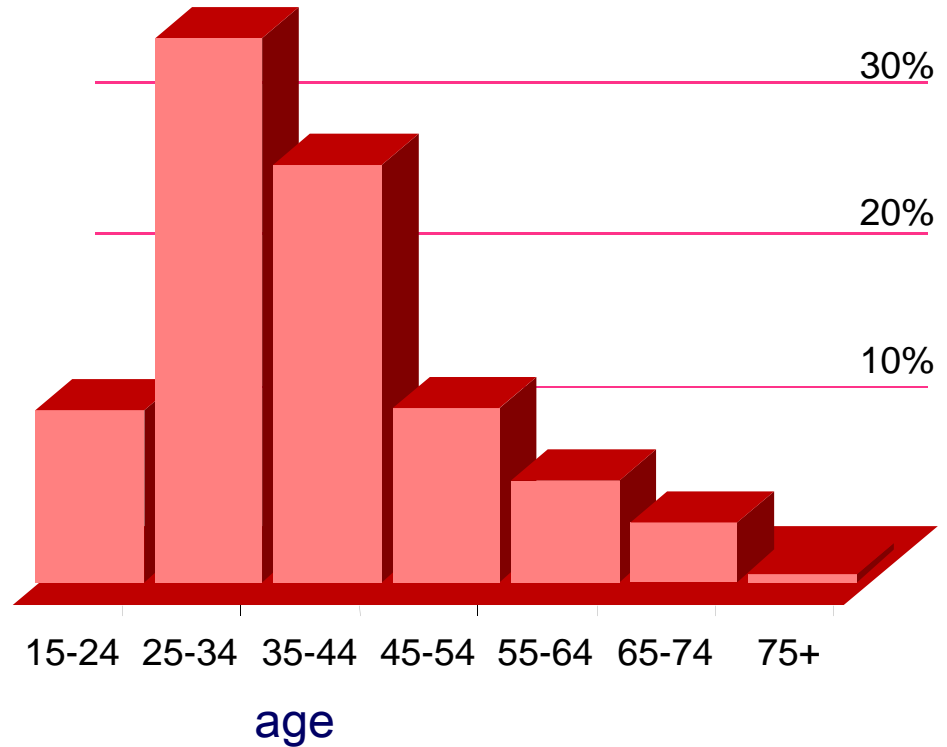
Age 2001



male



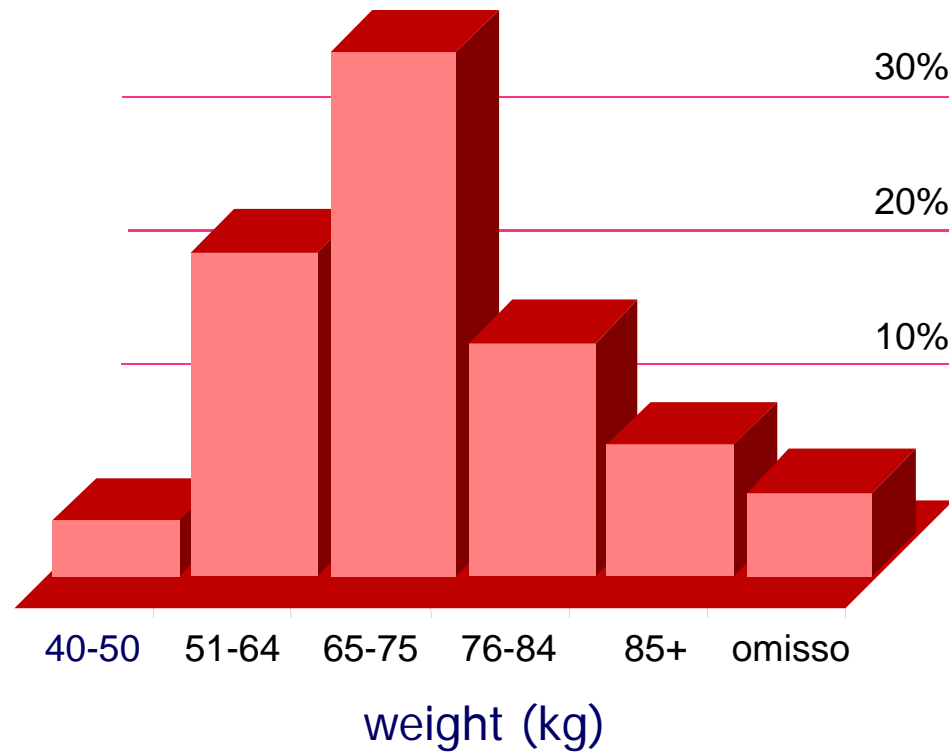
female



Age 2009

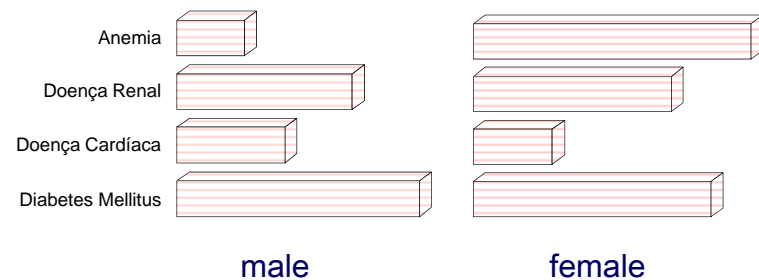
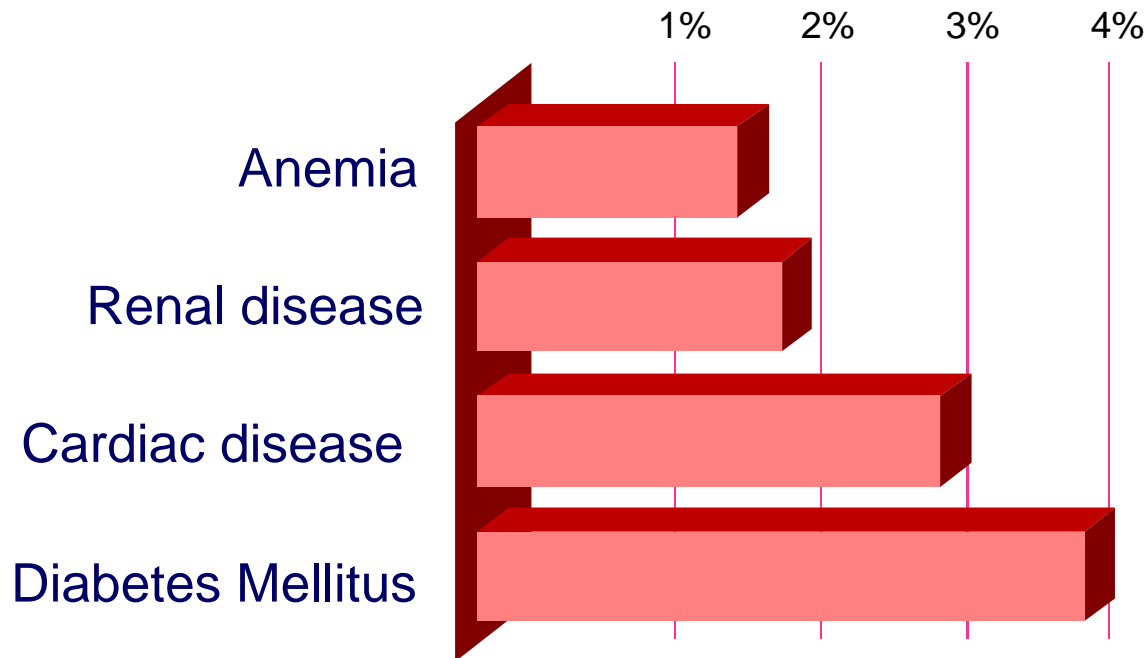
41,1 years (17 years - 91 years)

Weight 2001



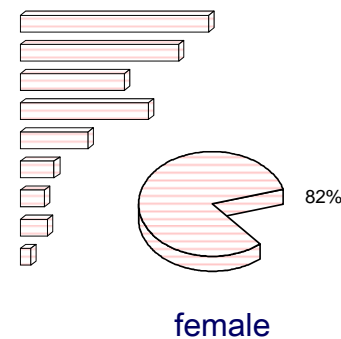
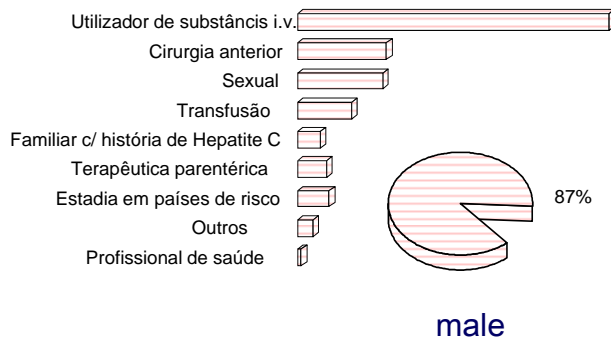
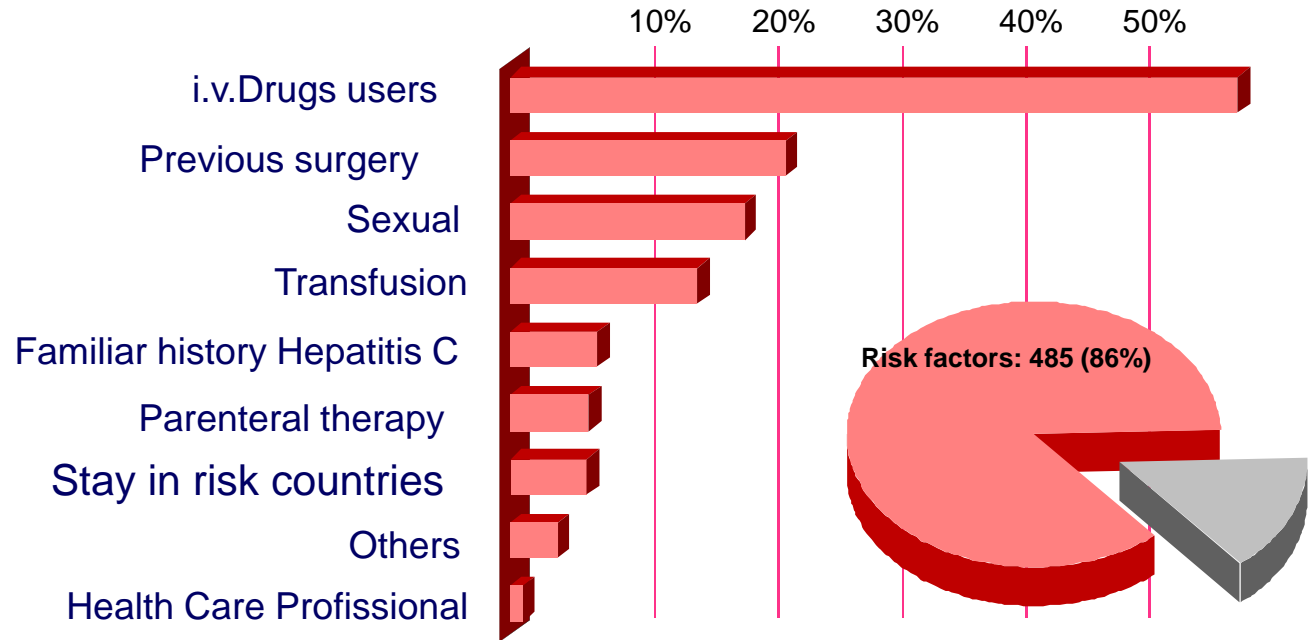
Associated diseases

2001



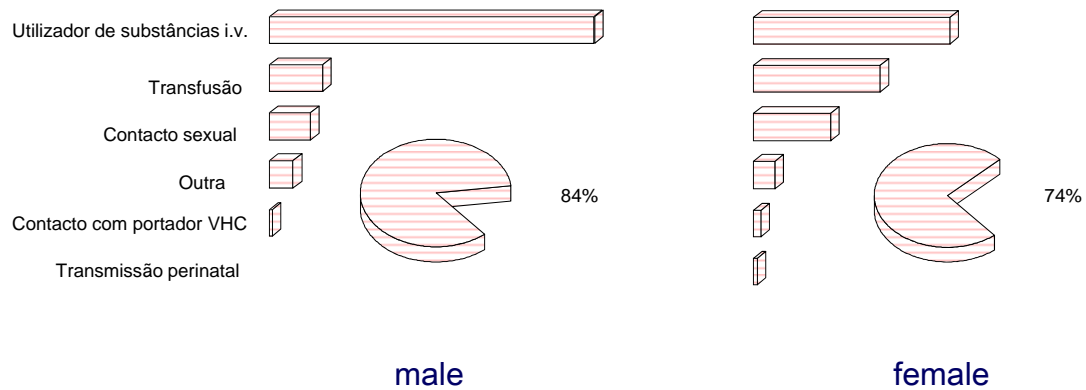
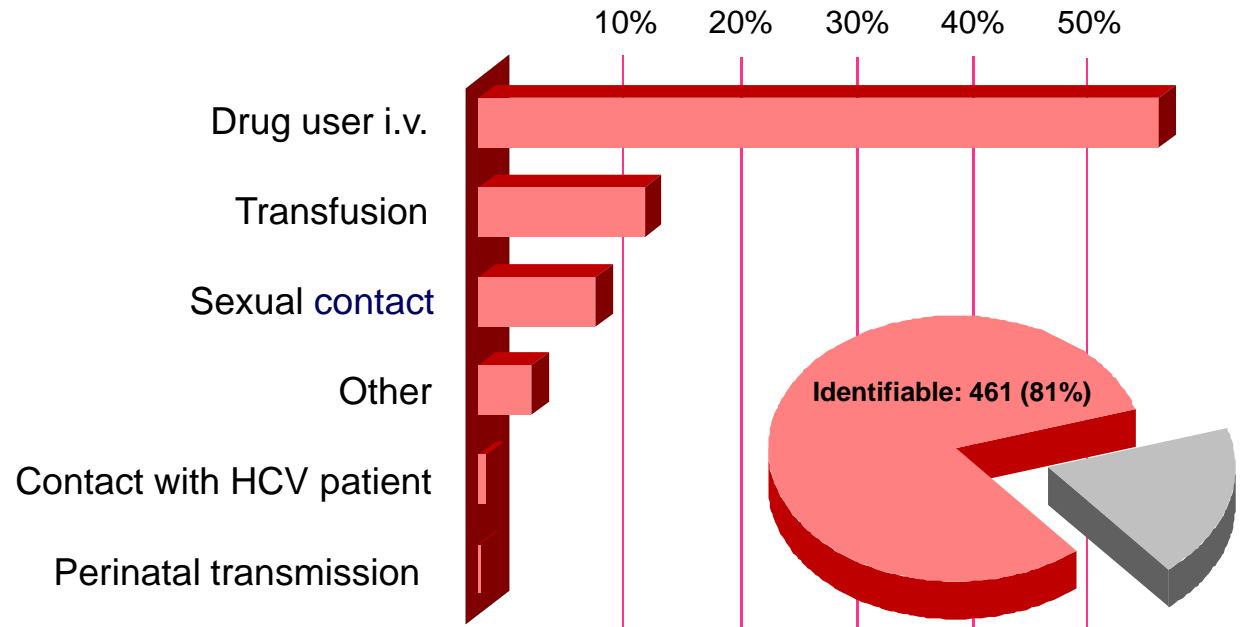
Risk factors

2001



Probable route of infection

2001



Infectious disease in drugs users

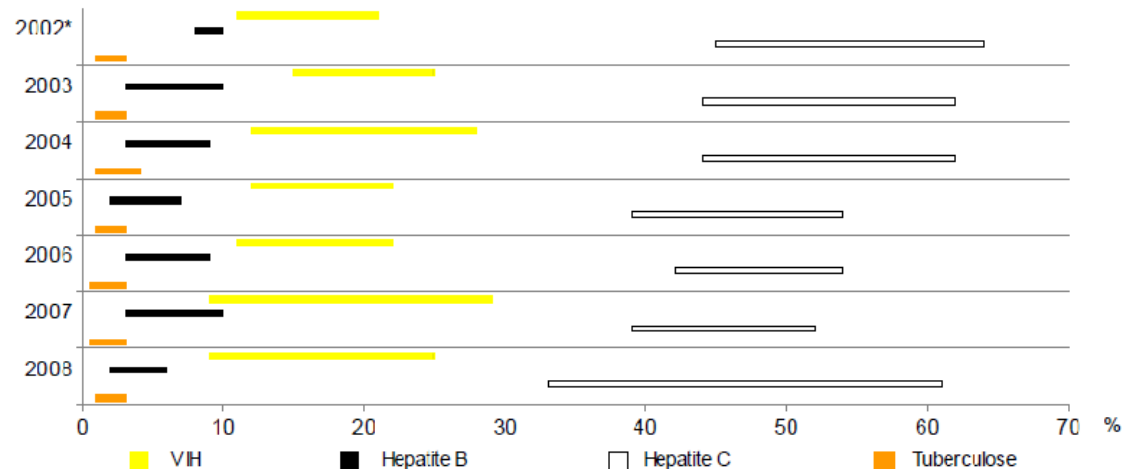
- Prevalência do anti-VHC nos toxicod dependentes IV.

Fonte	Ano	n	Prevalência VHC (%)
J. Serra (12)	1991	65	75
H. Glória (13)	1991	135	83
A. Silva Graça (10)	1993	68	70
OEDT (9)	1996	—	85
OEDT* (14)	1998	—	74
E. Silva (15)	1999	194	82
J. Areias†	1999	448	76
J. Godinho (16)	1999	238	92

* Observatório Europeu da Droga e da Toxicodependência

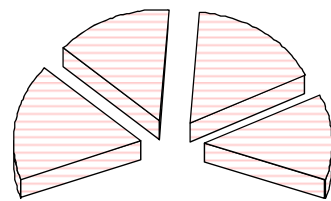
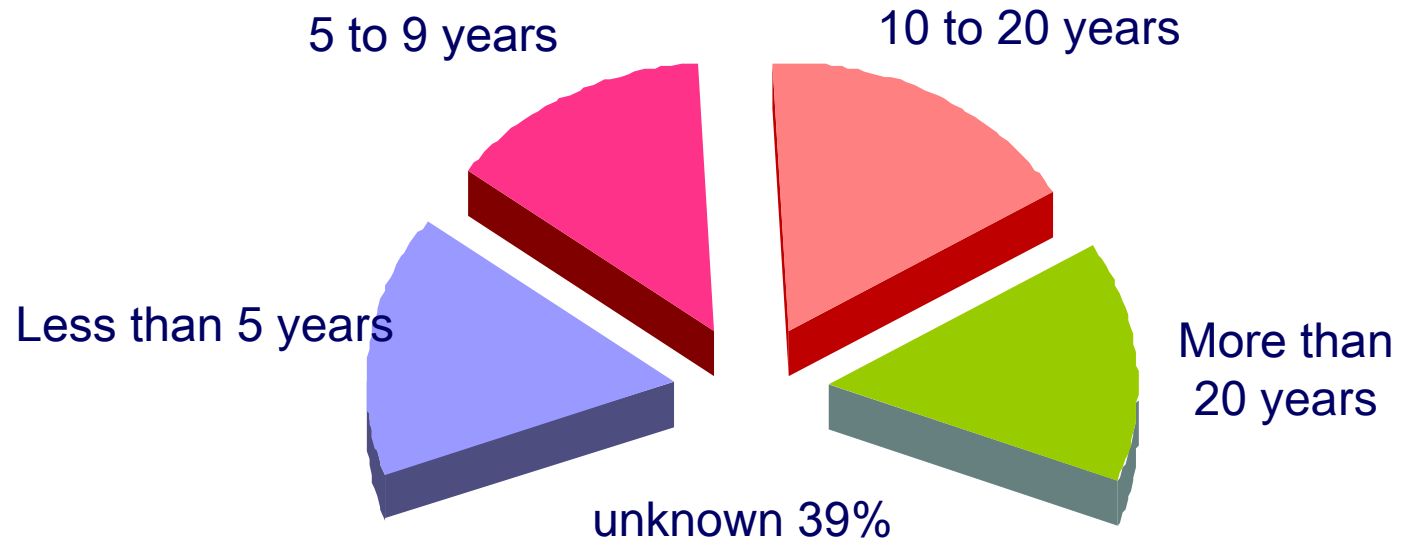
† Comunicação pessoal

Marinho R. GE 2000, 7: 72-79

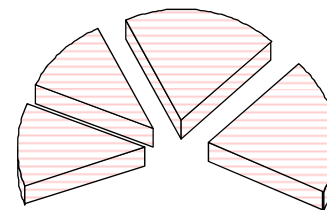


Time of disease estimated

2001



Male

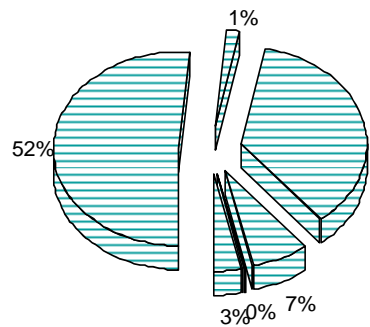
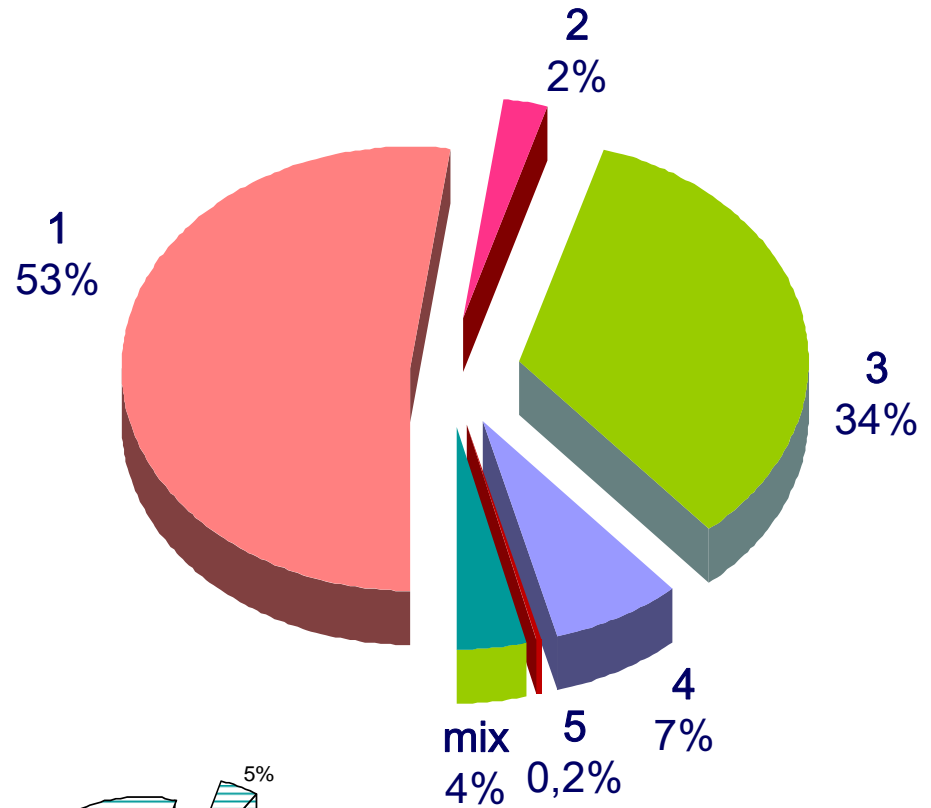


Female

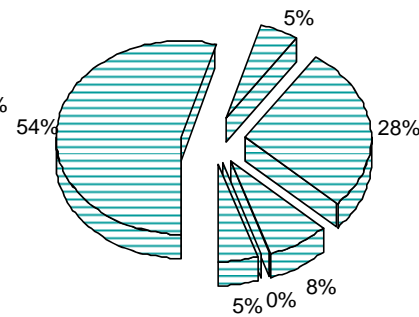
Genotypes

2001

n=542
95,6%



homens



mulheres

Genotypes

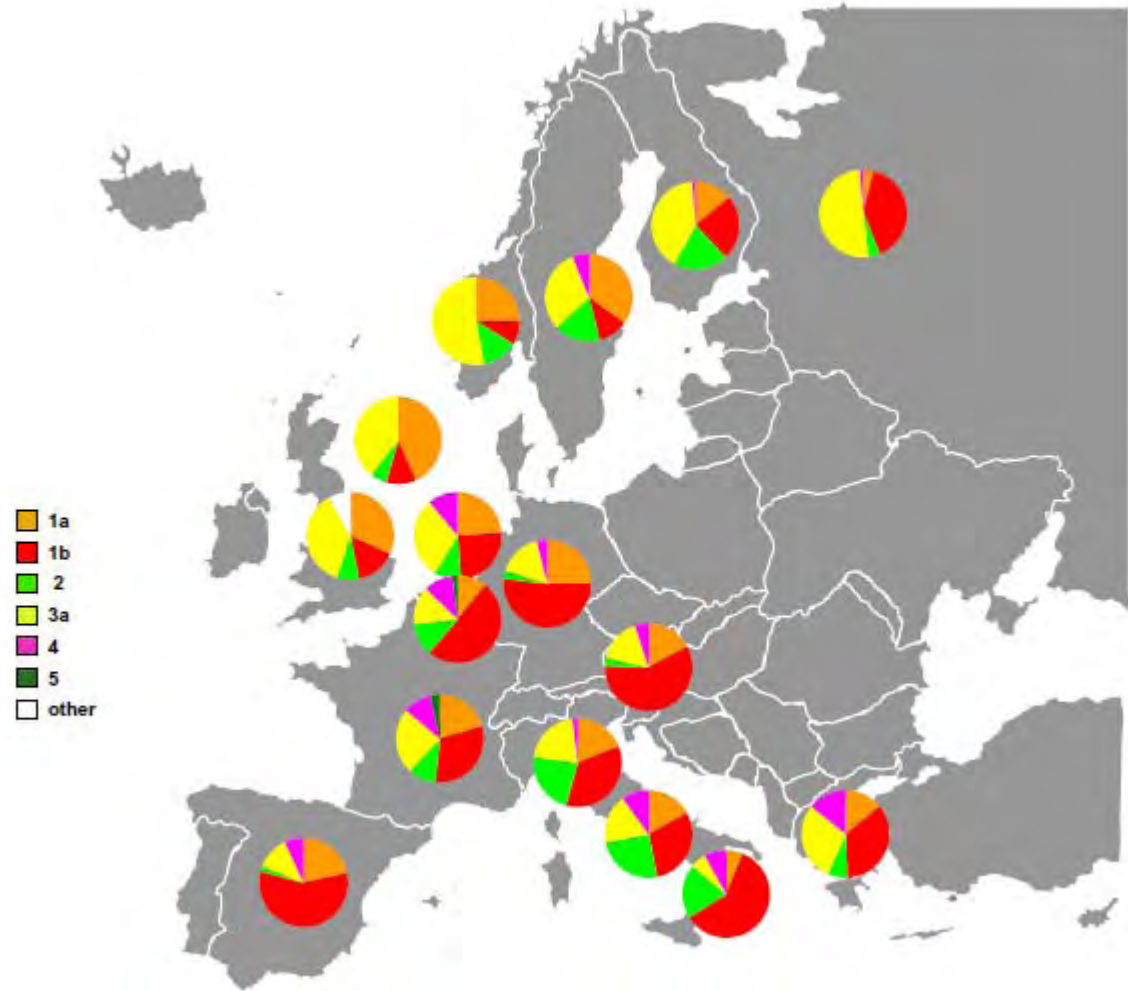
AUTOR	GENOTIPOS	(%)
Calinas	1b, 3a	45, 27
Macedo	1b, 3a	56, 12
Arcias	1b, 3a	52, 26
Peixe	1b, 1a	47, 24
Lebre	2, 1a	38, 28
Rodrigues	1b, 1a	50, 38
Ramalho	1b, 2c	59, 34
Sarmento	1b, 3a	54, 20
Augusto	1a, 1b, 3a	35, 64, 30

Genotypes

2009



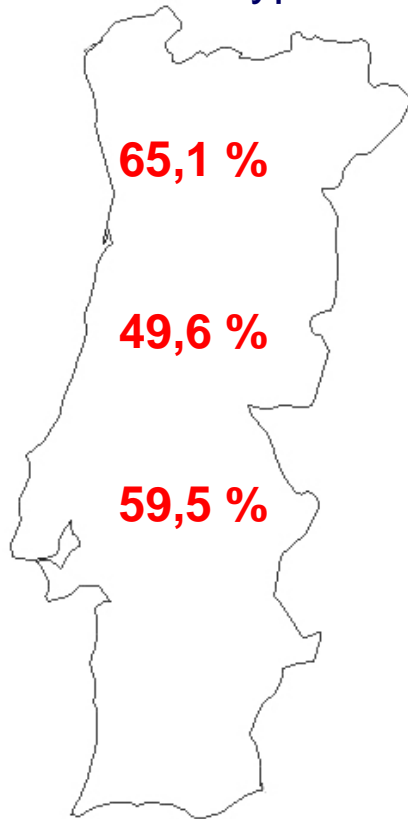
1	60,2%
2	2%
3	24,7%
4	9,4%
5	3,2%
outros	3,2%



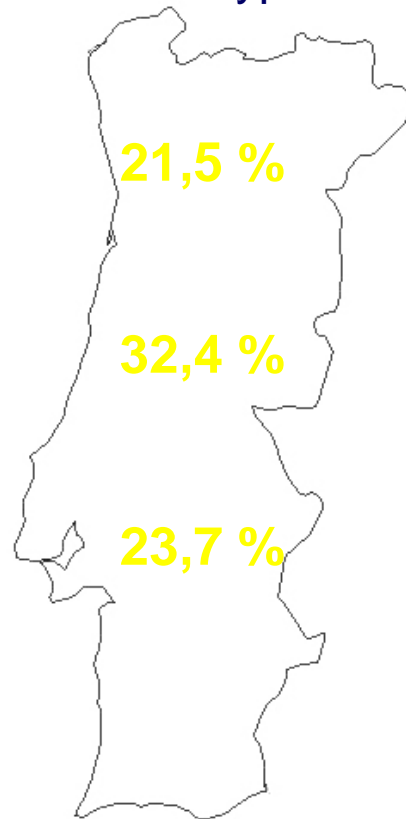
Genotypes

2009

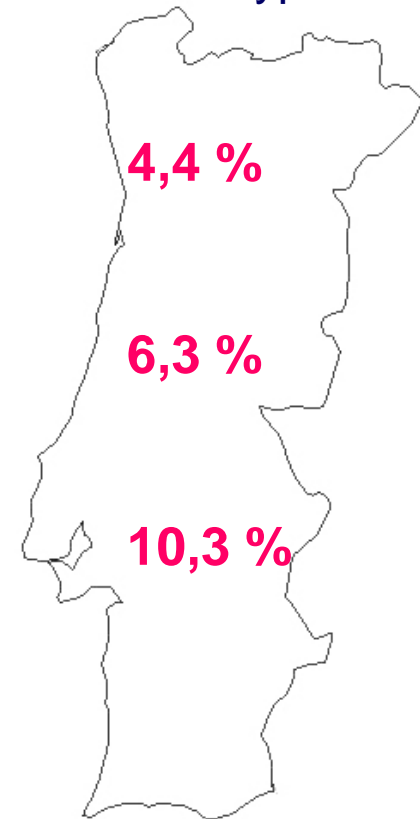
Genotype 1



Genotype 3



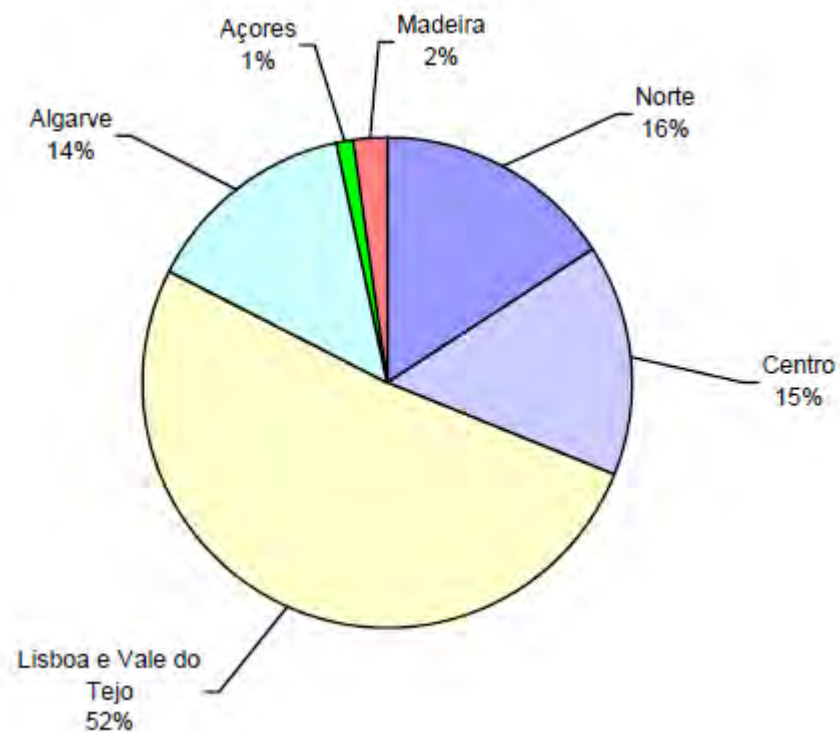
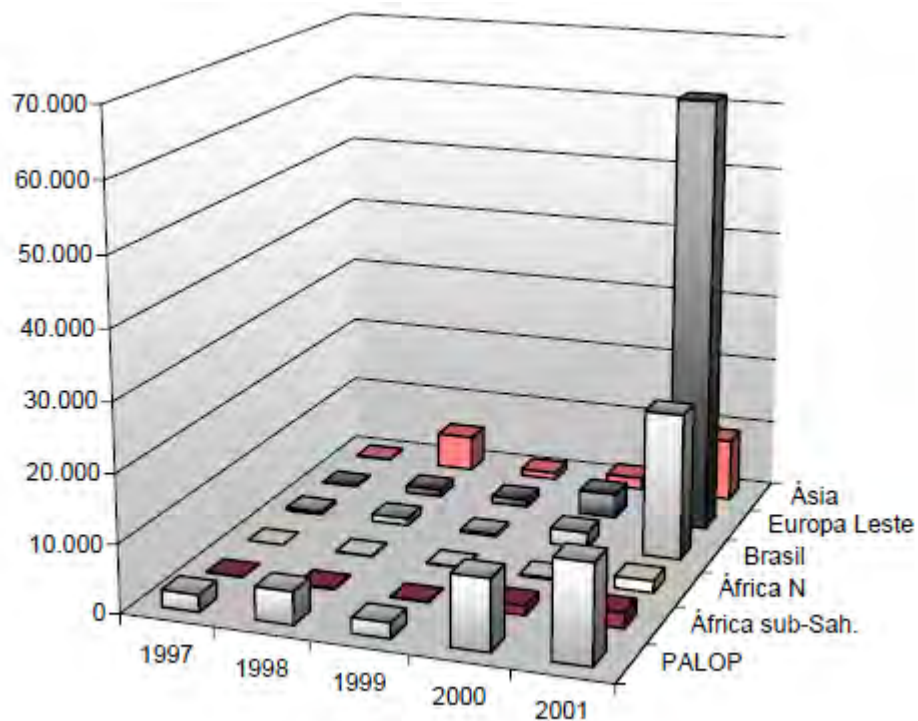
Genotype 4



N= 1500

Immigration 2002

SEF



Arch Virol (2009) 154:127–132
DOI 10.1007/s00705-008-0270-z

BRIEF REPORT

Full genome sequence of three isolates of hepatitis C virus subtype 4b from Portugal

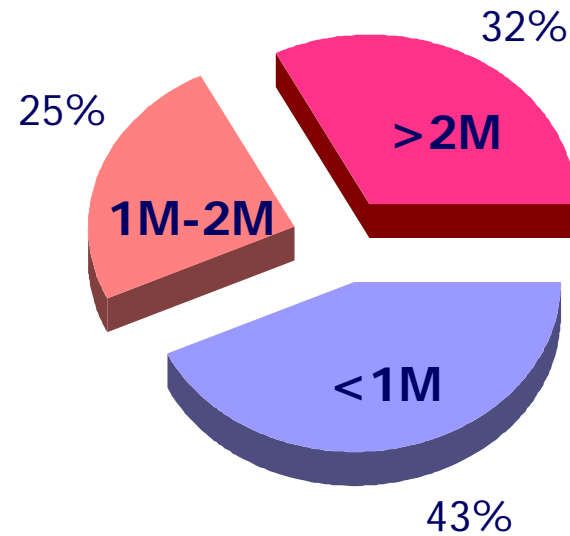
Diana Koletzki · Stéphanie Dumont · Hans Vermeiren ·
Paula Peixe · Jaime Nina · Ricardo J. Camacho ·
Lieven J. Stuyver

Viral load

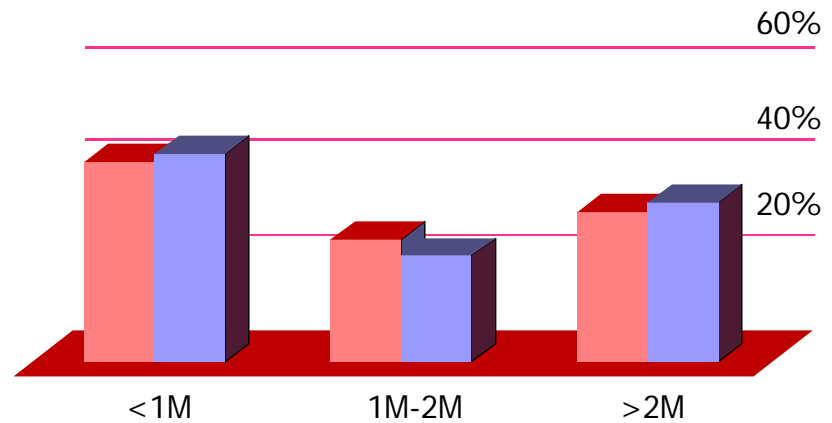
2001

copies/mL
n=314

Genotype 1=186
Genotype 3=125



Genotype 1
Genotype 3



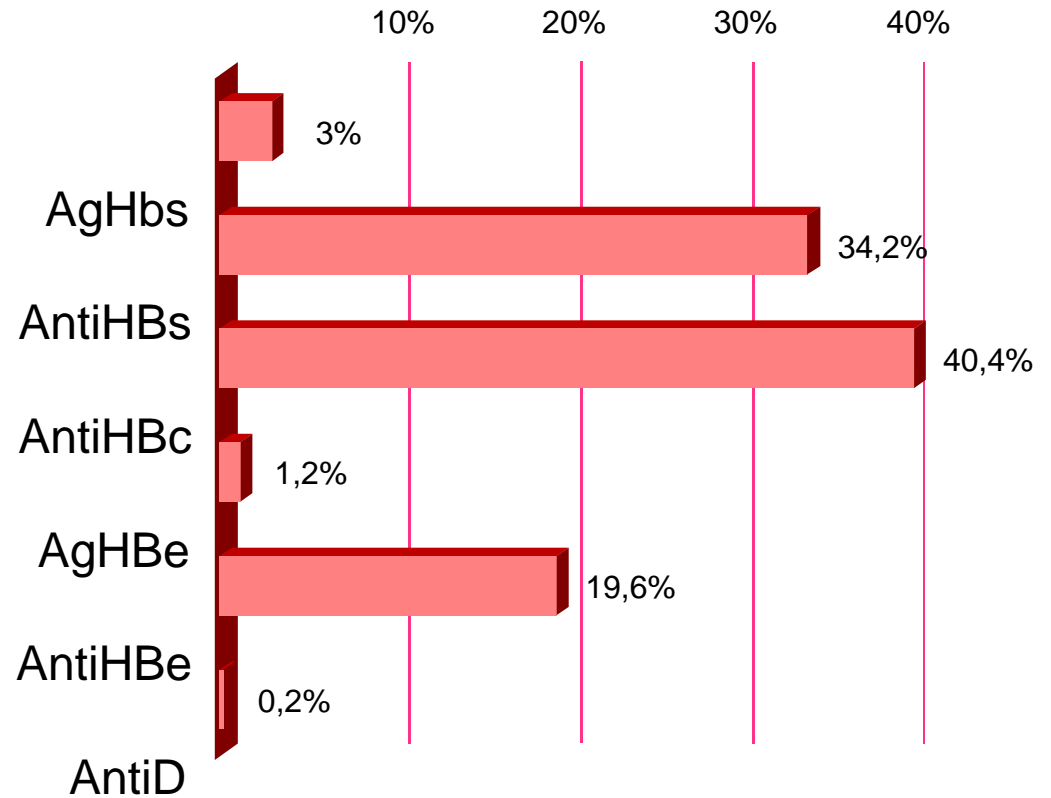
Viremia According to Genotype and Region of the Country

Region	Genotype 1			Genotype 2/3			Genotype 4		
	HCV RNA (UI/mL)			HCV RNA (UI/mL)			HCV RNA (UI/mL)		
	>800,000 N (%)	400,000- 800,000 N (%)	<400,000 N (%)	>800,000 N (%)	400,000- 800,000 N (%)	<400,000 N (%)	>800,000 N (%)	400,000- 800,000 N (%)	<400,000 N (%)
North	55 (47)	29 (24)	34 (29)	9 (23)	6 (15)	25 (63)	1 (13)	2 (25)	5 (63)
Center	35 (49)	13 (18)	23 (32)	24 (44)	6 (11)	24 (44)	3 (30)	2 (20)	5 (50)
South	26 (50)	108 (20)	155 (29)	106 (42)	59 (24)	85 (34)	35 (39)	10 (11)	45 (50)
Total	35 (50)	150 (21)	212 (29)	139 (40)	71 (21)	134 (39)	39 (36)	14 (13)	55 (51)

N= 1213 >800000 – 551 (45,4%)
 <400000 – 420 (34,6%)
 >400000 <800000 – 242 (19,9%)

VHB and VIH

2001



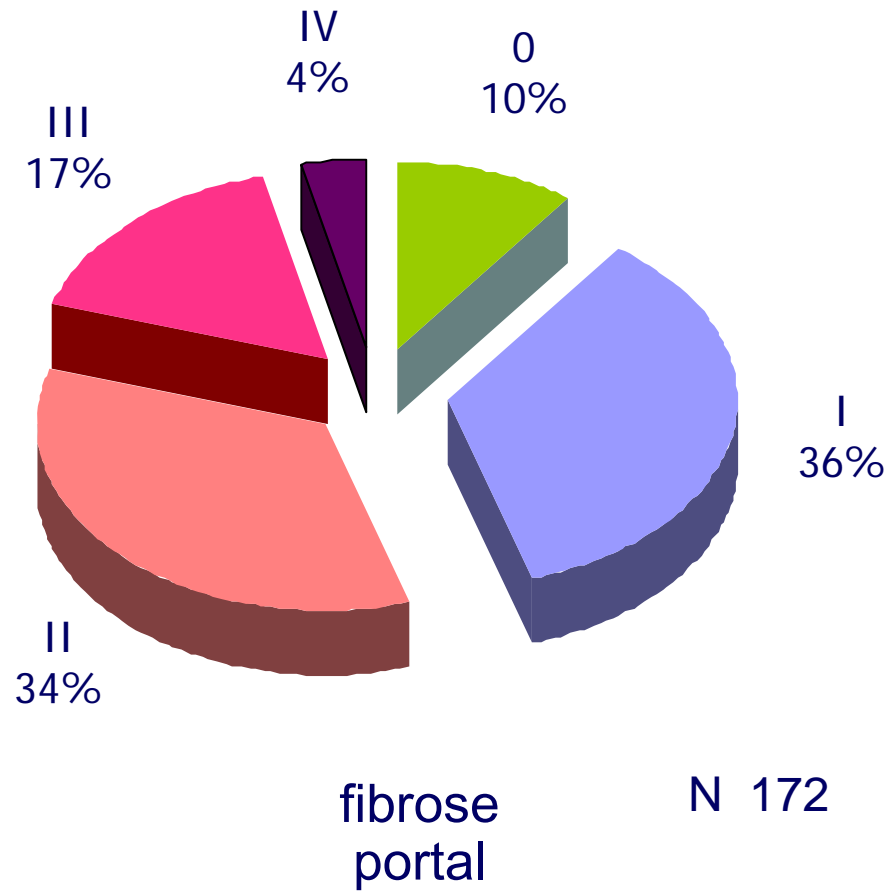
Hepatitis B: 1,05%

HBV carrier: 1,41%

HIV positive > 10%

Liver biopsy

2001



2009

Liver biopsy 614 patients

Metavir classification

F1	227	(38,7%)		
F2	192	(32,7%)	F1/F2	440 (71,7%)
F3	65	(11,1%)		
F4	102	(38,%)	F3/F4	174 (28,3%)

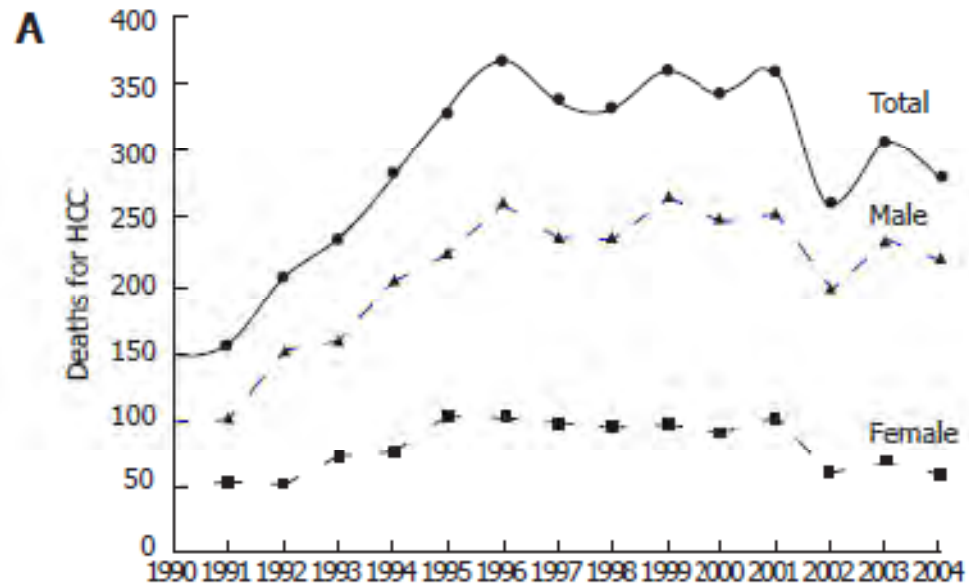
Without genotype association

Low prevalence of cirrhosis

genotype 3
genotype 1

North
Center

Hepatocellular carcinoma



HCV prevalence 0,9% - 1.5%

Genotypes predominance 1, 3 and 4

High viral load in genotype 1 and low in genotype 4

Liver biopsy 71.7% of patients with F1/F2

Hepatocellular carcinoma is increasing