

# HIV/HCV Coinfection in Spain: elimination is a stone's throw away

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# Presenter Disclosure Information

In compliance with the Conflict of Interest Policies, the European AIDS Clinical Society (EACS) requires the following disclosure from the presenters:

## **JUAN BERENGUER**

**Research Support:** Abbvie, Gilead, MSD, ViiV Healthcare

**Speaker's Bureau:** Abbvie, Gilead, MSD, ViiV Healthcare

**Advisory Panel:** Abbvie, Gilead, Janssen, MSD, ViiV Healthcare

# Background

- Factors that determine the epidemiology of HIV/HCV coinfection in countries like Spain are changing
  - ✓ Decline in IDU as a mechanism of transmission of HIV
  - ✓ Acute HCV infections among MSM
  - ✓ Availability of DAAs against HCV
  - ✓ Higher mortality among coinfected patients than in HIV-mono infected patients
- These findings provide strong arguments in favor of actively monitoring the burden of HIV/HCV coinfection

**IDU**, injection drug use; **MSM**, men who have sex with men; **DAAs**, direct acting antivirals

# Aims

- To assess the prevalence of HIV/HCV-coinfection in Spain in 2016
- To define the clinical characteristics of HIV/HCV-coinfected patients
- To compare the results with 3 similar studies done in 2002, 2009 and 2015<sup>1-3</sup>

1. González J, et al Enferm Infect Microbiol Clin 2005; 23:340–8.

2. González J, et al. IV Congreso Nacional de GeSIDA; 2012. Abstract # PO-41

3. Berenguer J et al. Open Forum Infect Dis 2016;3:ofw059

# Methods

<b>Design</b>	<ul style="list-style-type: none"><li>• Nationwide cross-sectional study</li></ul>
<b>Study period</b>	<ul style="list-style-type: none"><li>• October-November 2016</li></ul>
<b>Reference population</b>	<ul style="list-style-type: none"><li>• All HIV+ patients in active follow-up in the participating centers*</li></ul>
<b>Sample size estimation</b>	<ul style="list-style-type: none"><li>• Confidence level 95%</li><li>• Design effect 1.0</li><li>• Accuracy of 2.0%</li></ul>
<b>Patient selection</b>	<ul style="list-style-type: none"><li>• Number of patients from each hospital determined by proportional allocation</li><li>• Patients were selected using simple random sampling</li></ul>
<b>Data recording</b>	<ul style="list-style-type: none"><li>• Online CRF</li></ul>

\*Active follow-up = at least 1 visit in the previous 12 months

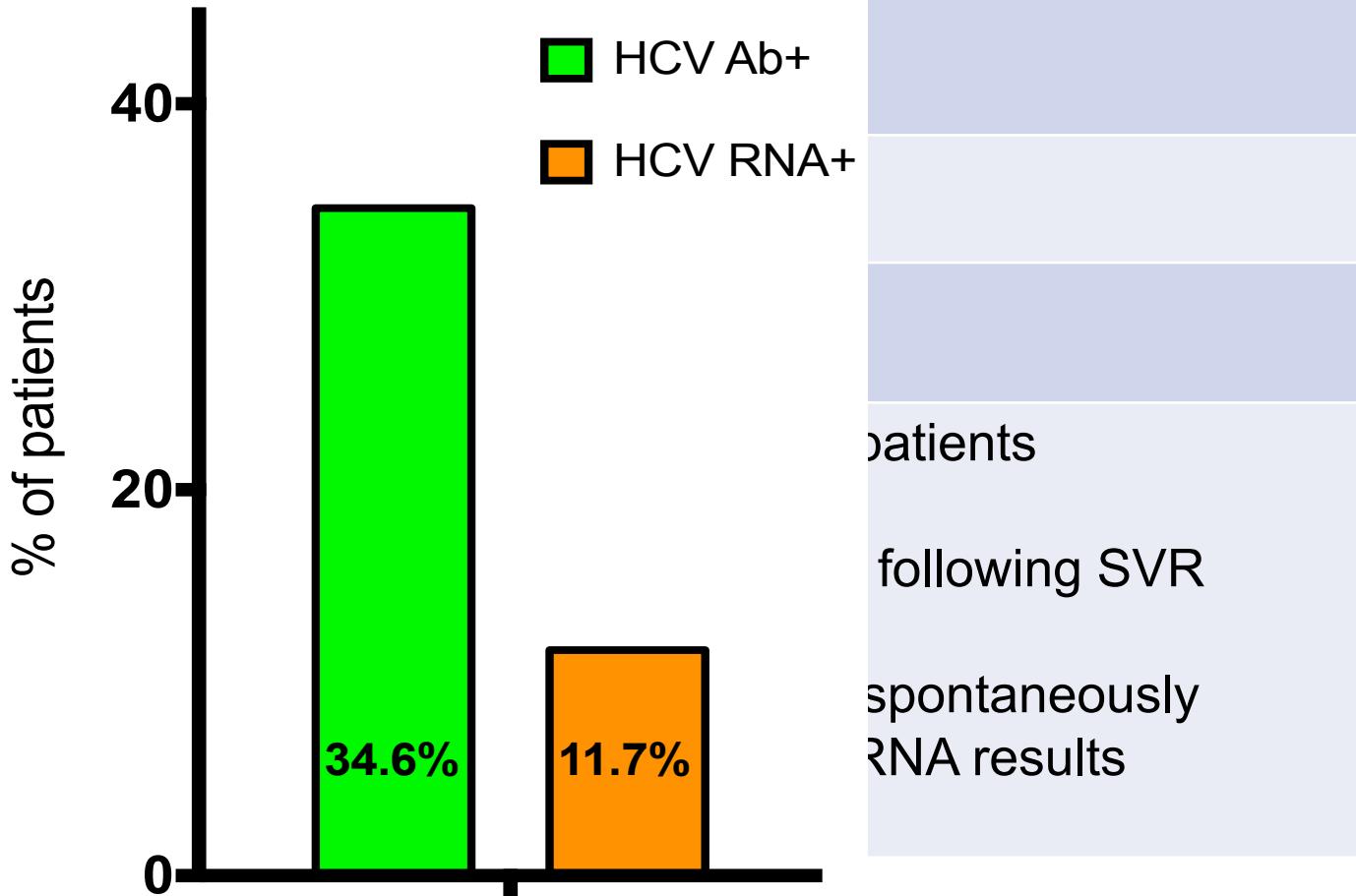
# Summary of findings

<b>Centers</b>	<ul style="list-style-type: none"><li>• 43 centers</li></ul>
<b>Reference population</b>	<ul style="list-style-type: none"><li>• 38,904 HIV+ patients</li></ul>
<b>Sample Size</b>	<ul style="list-style-type: none"><li>• 1,588 HIV+ patients</li></ul>
<b>HCV serology</b>	<ul style="list-style-type: none"><li>• Known in 1,585 (99.8%) patients</li><li>• 548 patients were HCV Ab+<ul style="list-style-type: none"><li>• 292 were HCV-RNA<sup>(-)</sup> following SVR</li><li>• 186 were HCV-RNA<sup>(+)</sup></li><li>• 68 cleared HCV-RNA spontaneously</li><li>• 2 had unknown HCV-RNA results</li></ul></li></ul>

# Summary of findings

Centers
Reference popu
Sample Size
HCV serology

Prevalence of HCV infection

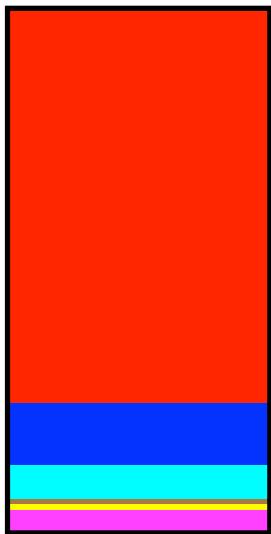


# Anti-HCV exposure in patients with active HCV infection (HCV RNA +)

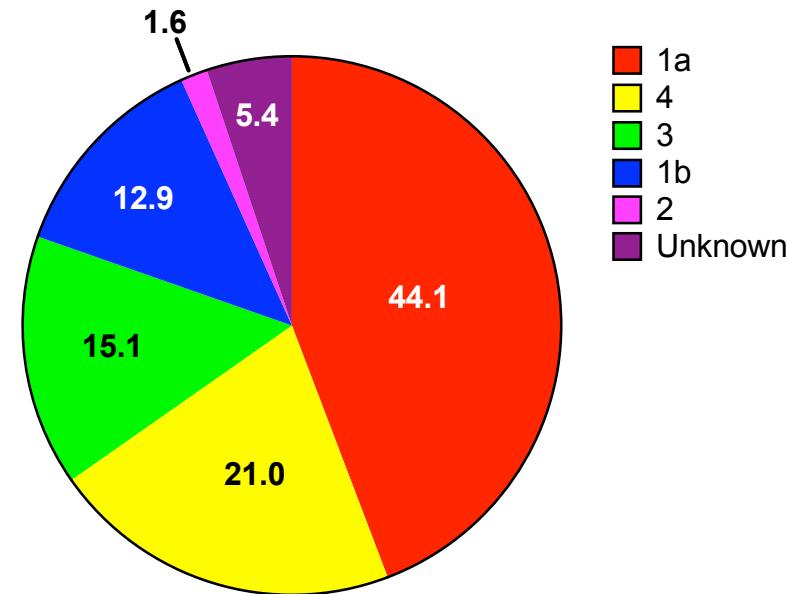
Anti-HCV therapy, n (%)	N = 186
Never	121 (65.1)
Ongoing	41 (22.0)
In the past	34 (18.3)
Null or partial response	26
Relapse	1
D/C due to adverse events	5
Sustained viral response	2

# HIV transmission categories and HCV genotypes among 186 patients with active HCV infection

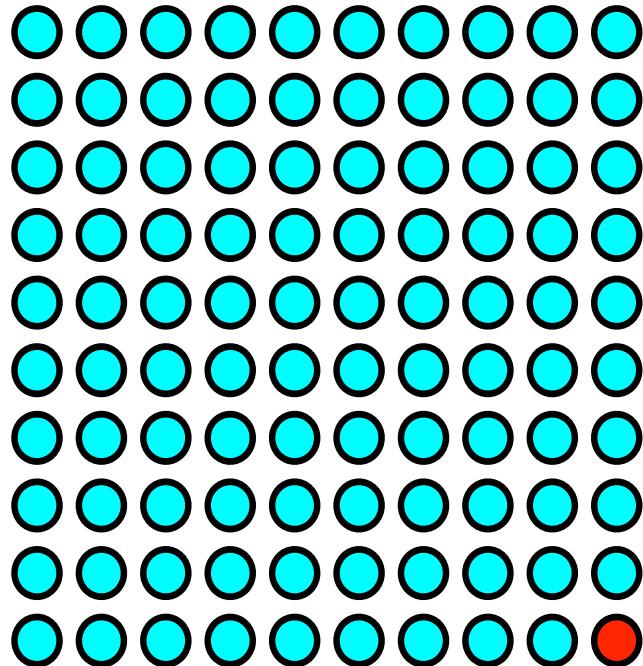
## HIV transmission categories



## Genotype distribution



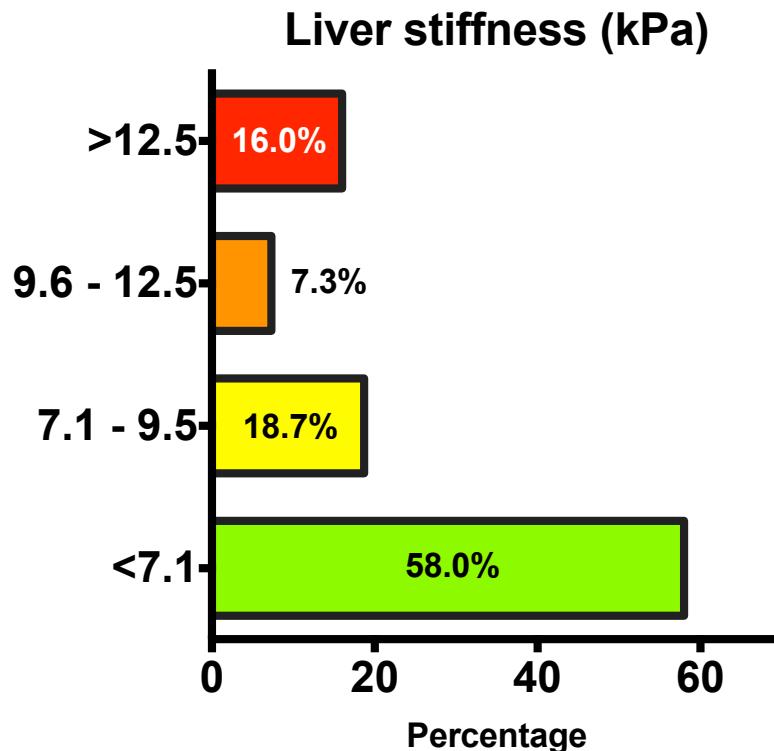
# Active HCV infections considered to be reinfections



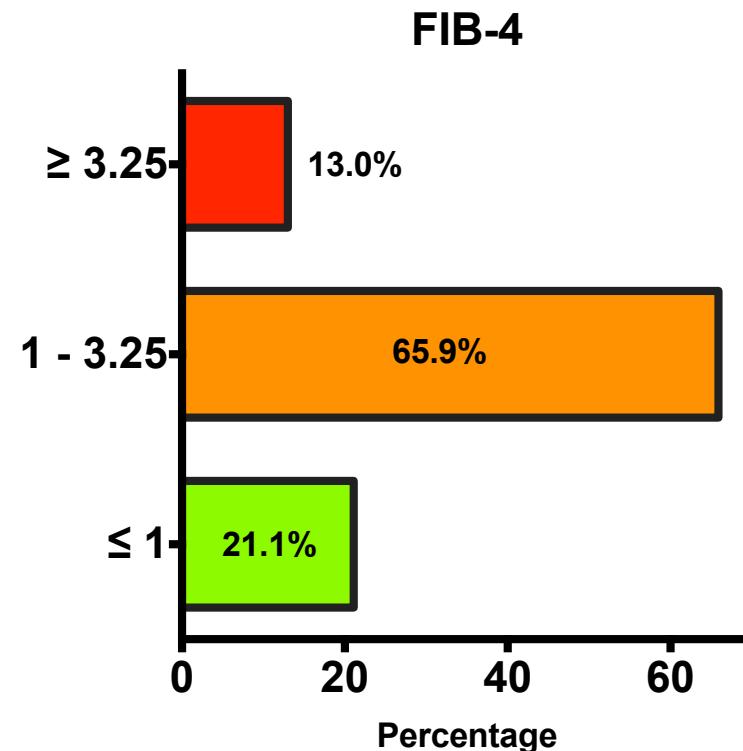
█ No reinfections = 99%  
█ Reinfections = 1%

Reinfection: active HCV infection with a previous history of SVR

# Fibrosis staging in 186 patients with active HCV infection



Patients with TE = 150 (80.6%)  
TE value, median (IQR) = 6.6 (5.4 - 9.1)



Patients with FIB-4 = 185 (99.5%)  
FIB-4 value, median (IQR) = 1.5 (1.1 - 2.2)

# **Characteristics of patients with active HCV infection and of those who cleared HCV following anti-HCV therapy (SVR)**

The Burden of HCV-Related Cirrhosis Among HIV/HCV Coinfected Individuals in Spain in the DAA Era: What will the battlefield look like once the battle is over ?

**Poster # PE16/14**

Juan González and GeSIDA 8514 Study Group

# HIV/HCV coinfection in Spain 2002 - 2016

## GeSIDA prevalence studies

	<b>Centers</b>	<b>Reference Population</b>
<b>2002 <sup>1</sup></b>	39	31,800
<b>2009 <sup>2</sup></b>	43	29,559
<b>2015 <sup>3</sup></b>	41	35,791
<b>2016 <sup>4</sup></b>	43	38,904



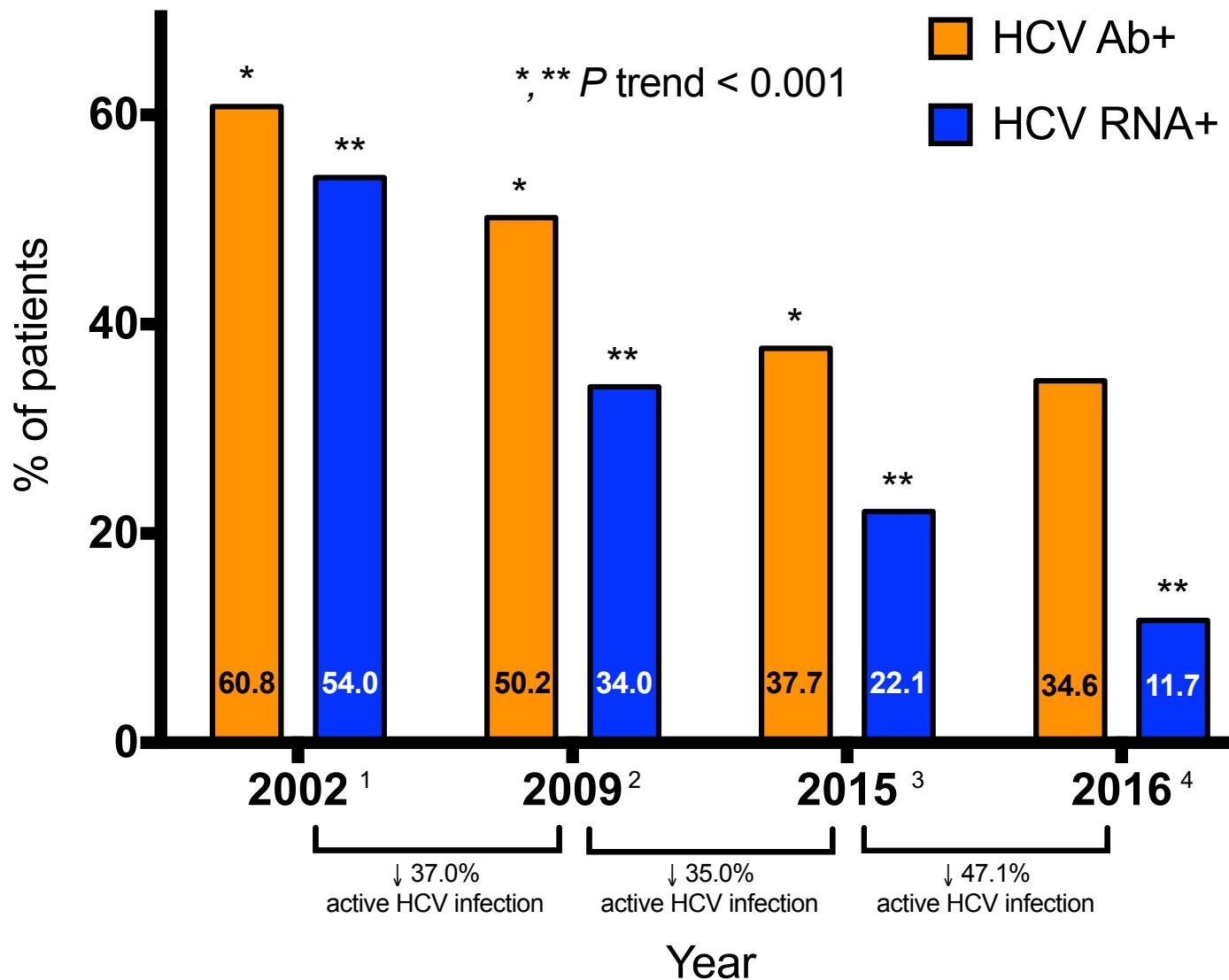
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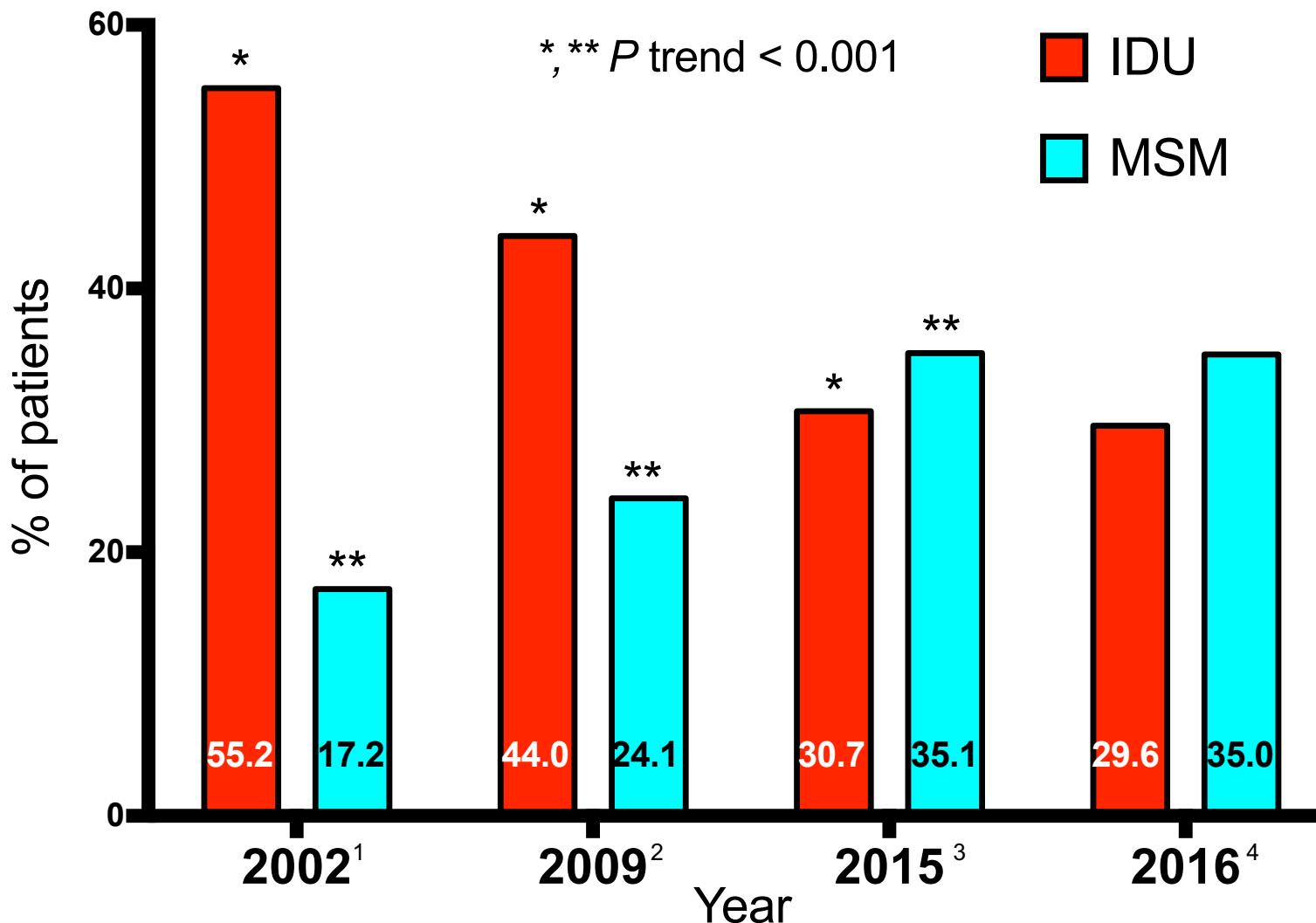
# Prevalence of HCV infection 2002 - 2016



1) González J, et al Enferm Infect Microbiol Clin 2005; 23:340–8. 2) González J, et al. IV Congreso Nacional de GeSIDA; 2012. Abstract # PO-41.

3) Berenguer J et al. Open Forum Infect Dis 2016;3:ofw059. 4) Berenguer J, et al. EACS 2017; Abstract # PS9/3

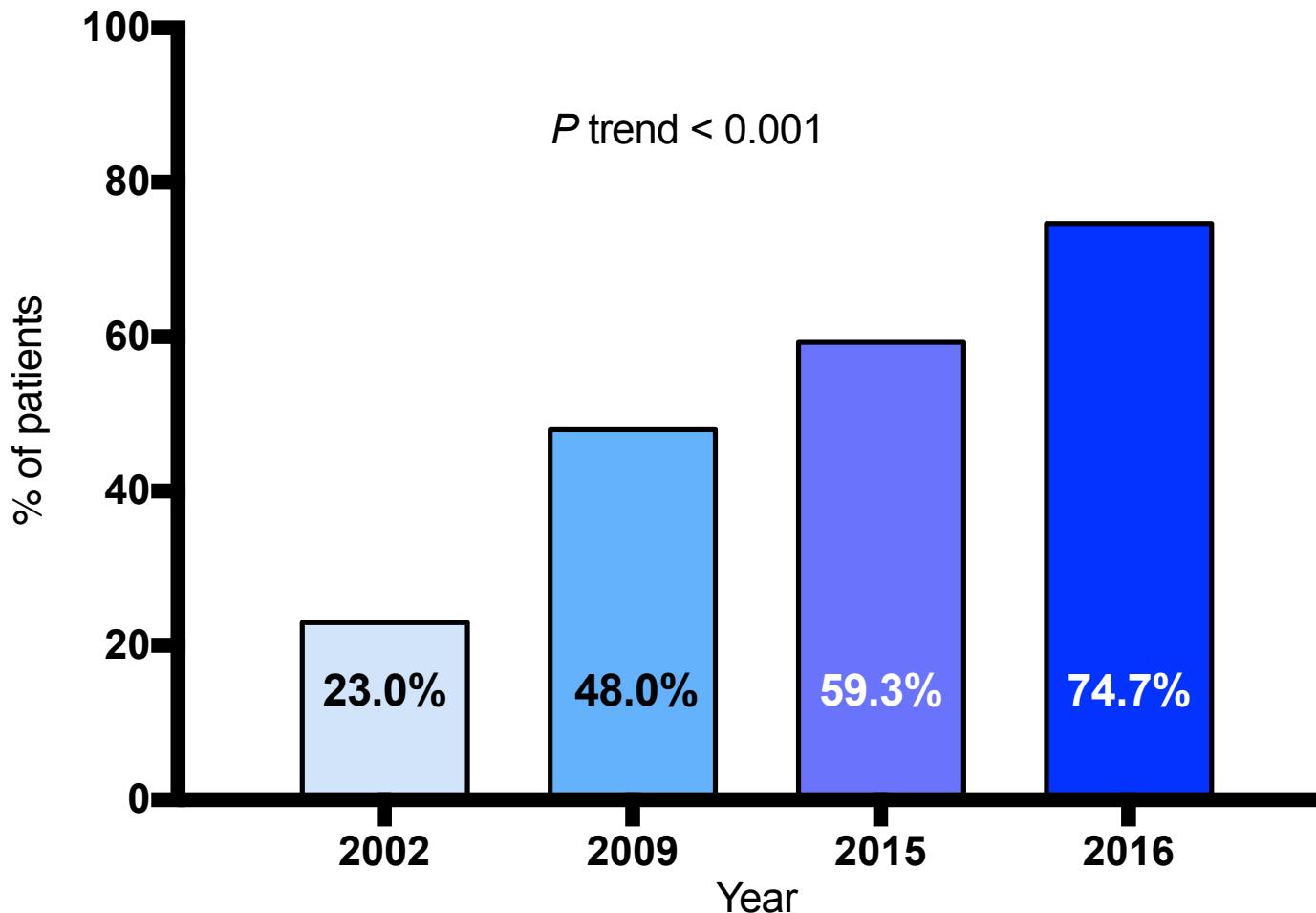
# Mechanisms of HIV transmission 2002 - 2016



<sup>1</sup>) González J, et al Enferm Infect Microbiol Clin 2005; 23:340–8. <sup>2</sup>) González J, et al. IV Congreso Nacional de GeSIDA; 2012. Abstract # PO-41.

<sup>3</sup>) Berenguer J et al. Open Forum Infect Dis 2016;3:ofw059. <sup>4</sup>) Berenguer J, et al. EACS 2017; Abstract # PS9/3

# Anti-HCV treatment uptake 2002 - 2016



% of patients with current or past chronic HCV infection exposed to anti-HCV therapy

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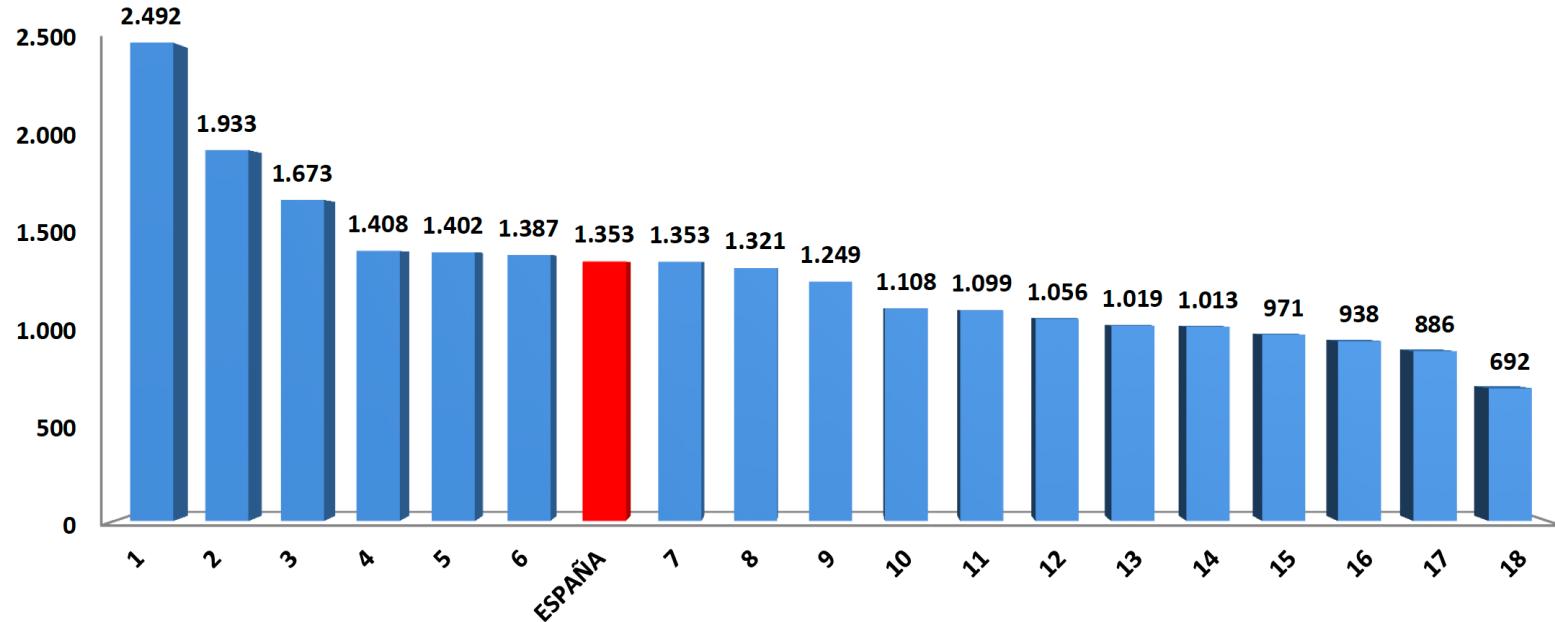
## NUMBER OF PATIENTS TREATED WITH ALL-ORAL DAAS BY REGION JANUARY 1<sup>ST</sup> 2015 TO OCTOBER 31 2016

Patients treated

**63,075**

Approximately 20% were HIV-infected

**Number of patients treated per 10<sup>6</sup> inhabitants per region (N=17)**



# On the right track toward elimination of HCV among HIV-infected individuals

- 1) Effective **preventive programs** of the National Drug Strategy <sup>1</sup>
- 2) High standard of **HCV screening** practices among HIV-infected individuals <sup>2</sup>
- 3) Universal **access to DAA therapy**

- 1) European Monitoring Centre for Drugs and Drug Addiction. Spain Country Drug Report 2017. Date accessed: July 17, 2017. <http://www.emcdda.europa.eu/system/files/publications/4525/TD0116922ENN.pdf>
- 2) Increasing emphasis on MSM who engage in high risk practices and migrants from regions with high prevalence of HCV (sub-Saharan Africa, Eastern Europe)

# Conclusions

- 1) At the end of 2016, the prevalence of active HCV infection among HIV-infected individuals in Spain was 11.7%.
  - ✓ 47.1% reduction in comparison with what was found in 2015.
  - ✓ Increased exposure to DAAs was the main reason underlying this decrease.
- 2) Most prevalent cases of active HCV-infection have been acquired by IDU. Sexual transmission of HCV (MSM) contributes little to the burden of coinfection.
- 3) The elimination of HCV among HIV-infected individuals in Spain seems achievable in the short term once the treatment is accessible to all coinfected patients.

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**Study Coordinator:** H Esteban - **Statistician:** I Jarrin

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# **Back-up slides**

# Characteristics of patients according to HCV serology

	HCV-positive (N = 548)	HCV-negative (N = 1037)	P
Male sex, n (%)	415 (75.7)	805 (77.6)	.39
Age years, mean (SD) <sup>2</sup>	51 (7)	47 (12)	<.001
IDU as HIV transmission category, n (%)	417 (76.1)	53 (5.1)	<.001
CDC clinical category C, n (%)	166 (30.3)	236 (22.8)	.001
cART, n (%)	538 (98.2)	994 (95.8)	.014
Type of cART regimen, n (%)			
2 NRTI + 1 NNRTI	136 (25.2)	376 (37.8)	
2 NRTI + 1 PI	74 (13.7)	118 (11.9)	
2 NRTI + 1 integrase inhibitor	183 (33.9)	312 (31.4)	
PI-based monotherapy	36 (6.7)	49 (4.9)	
PI-based bitherapy	53 (9.8)	56 (5.6)	
Other	57 (10.6)	83 (8.3)	
HIV-RNA copies/ml, n (%), patients on cART			
<50	488 (90.7)	924 (93.0)	
50-200	23 (4.3)	30 (3.0)	.28
>200	27 (5.0)	40 (4.0)	
CD4+ – T cells/ $\mu$ L, median (IQR), patients on cART	659 (431-886)	678 (495-910)	.039