

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

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# 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 coinfecting 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 Infecc 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

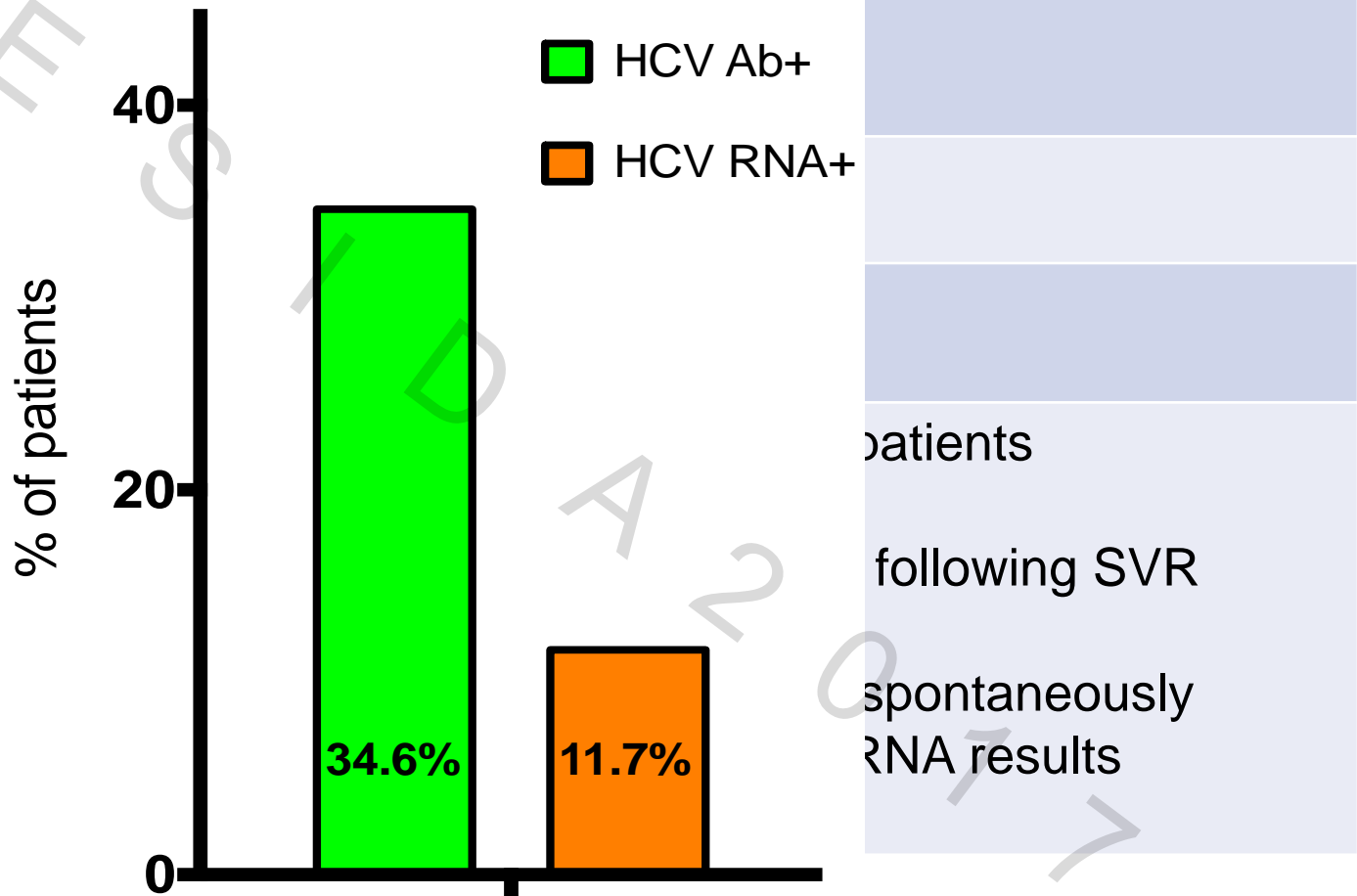
# Summary of findings

<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 population
- Sample Size
- HCV serology

## Prevalence of HCV infection

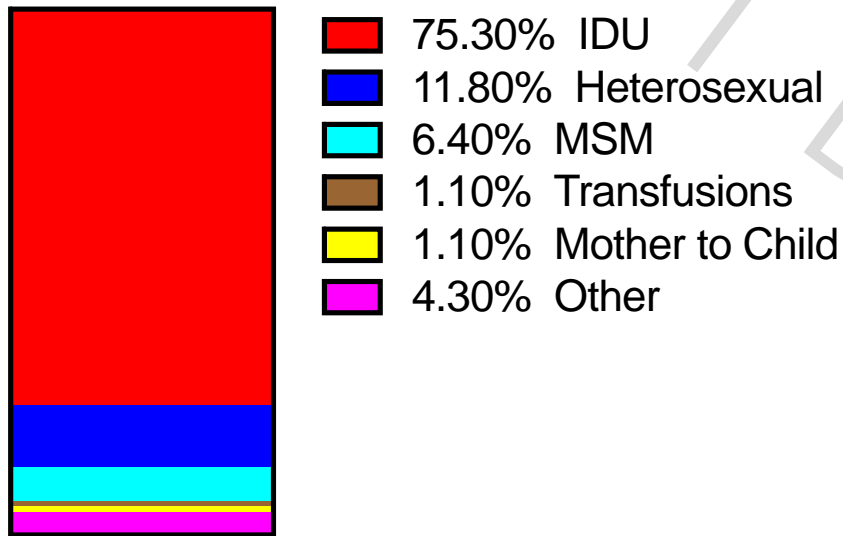


## Anti-HCV exposure in patients with active HCV infection (HCV RNA +)

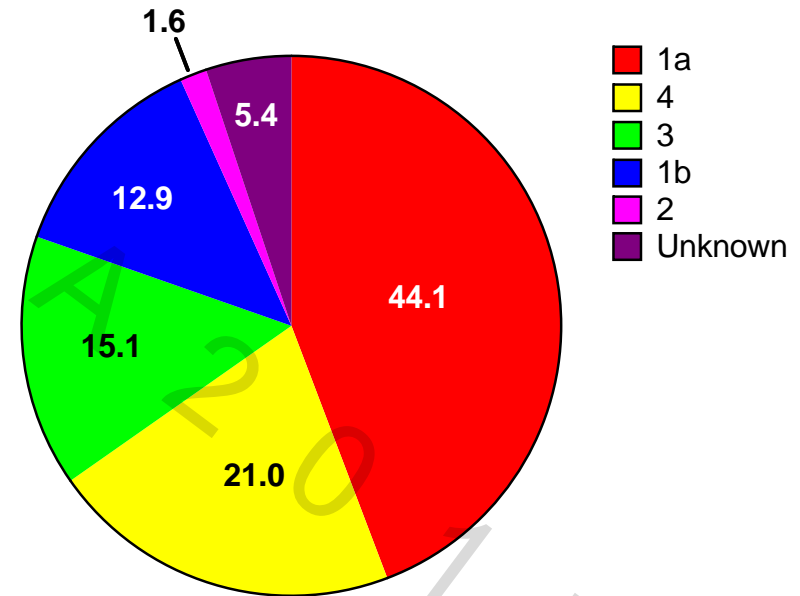
Anti-HCV therapy, n (%)	N = 186
Never	121 (65.1)
Ongoing	41 (22.0)
In the past	34 (18.3)
Null or partial response	26
Relapse	1
D/C due to adverse events	5
Sustained viral response	2

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

## HIV transmission categories

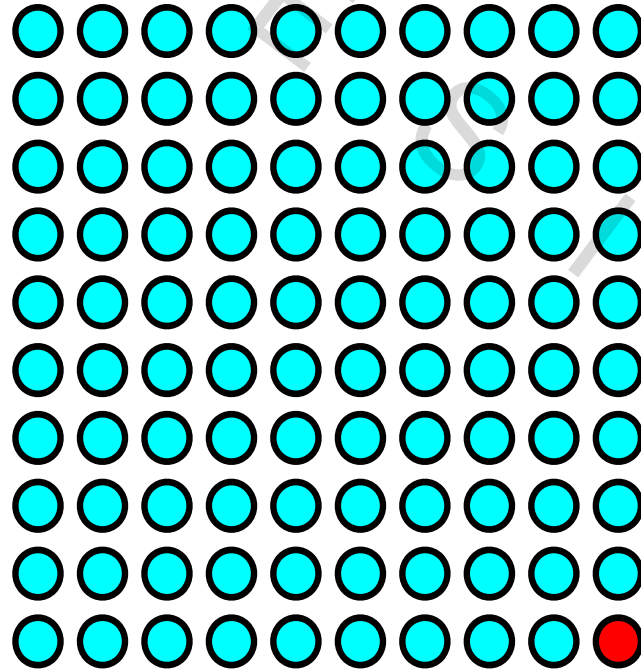


## Genotype distribution





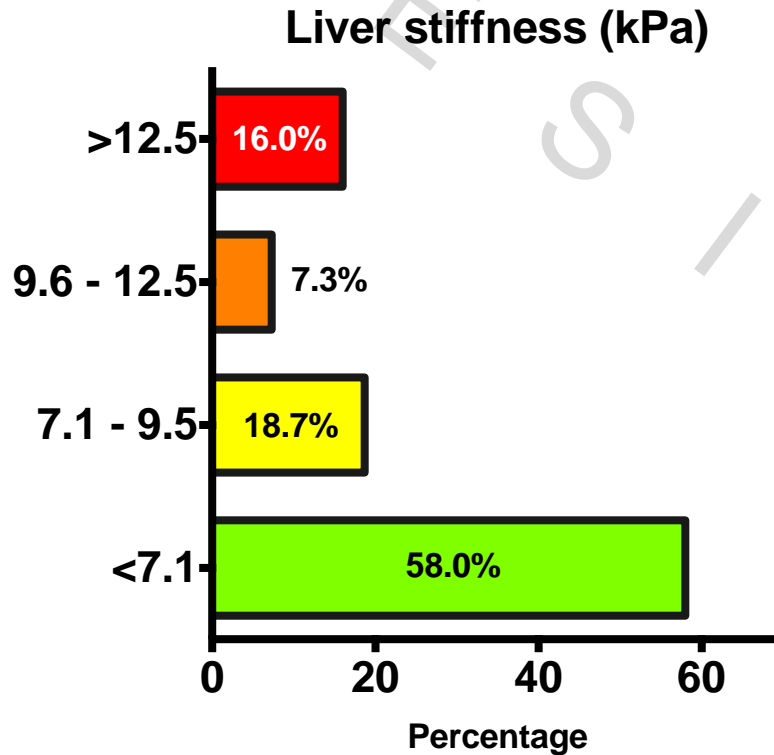
# Active HCV infections considered to be reinfections



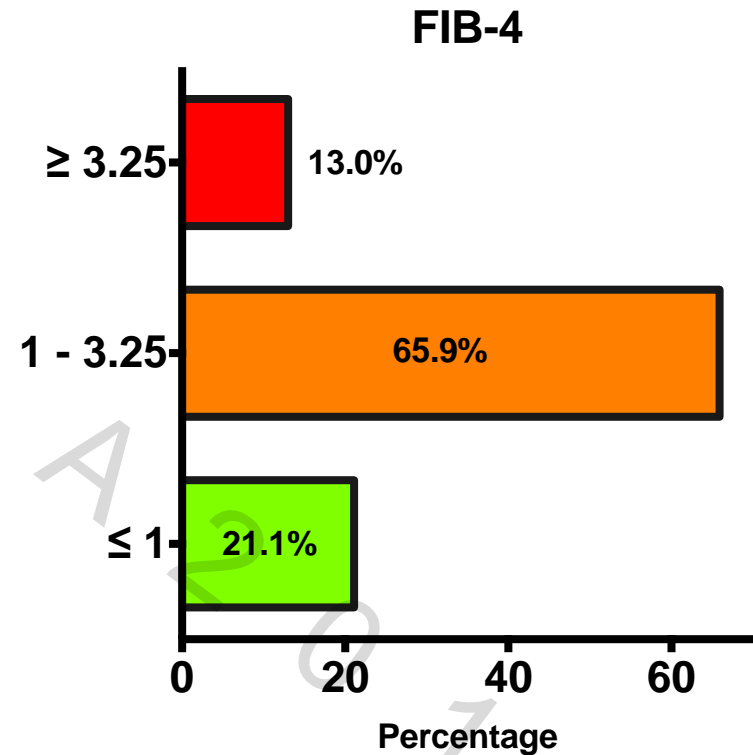
-  No reinfections = 99%
-  Reinfections = 1%

Reinfection: active HCV infection with a previous history of SVR

# Fibrosis staging in 186 patients with active HCV infection



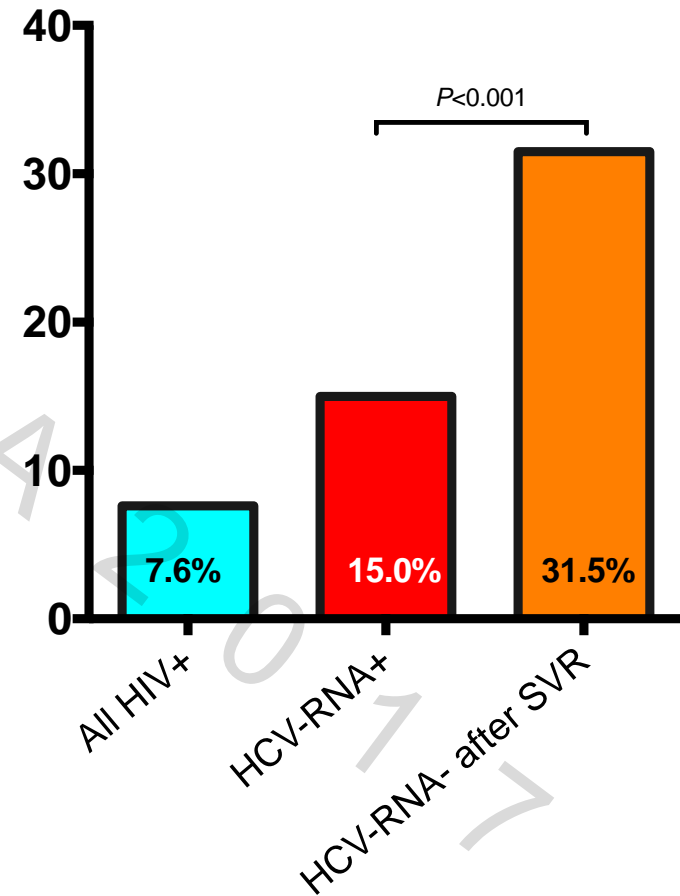
Patients with TE = 150 (80.6%)  
TE value, median (IQR) = 6.6 (5.4 - 9.1)



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

# HCV-related cirrhosis among HIV+ patients

- Presence of HCV-related cirrhosis
  - 120/1588 (7.6%) patients overall
  - 28/186 (15.0%) patients with active HCV infection
  - 92/292 (31.5%) patients who cleared HCV after SVR
- Assuming 130,000-160,000 people living with HIV in Spain
  - There are between 9,120 and 12,160 HIV-infected individuals with HCV-related cirrhosis



# HIV/HCV coinfection in Spain 2002 - 2016

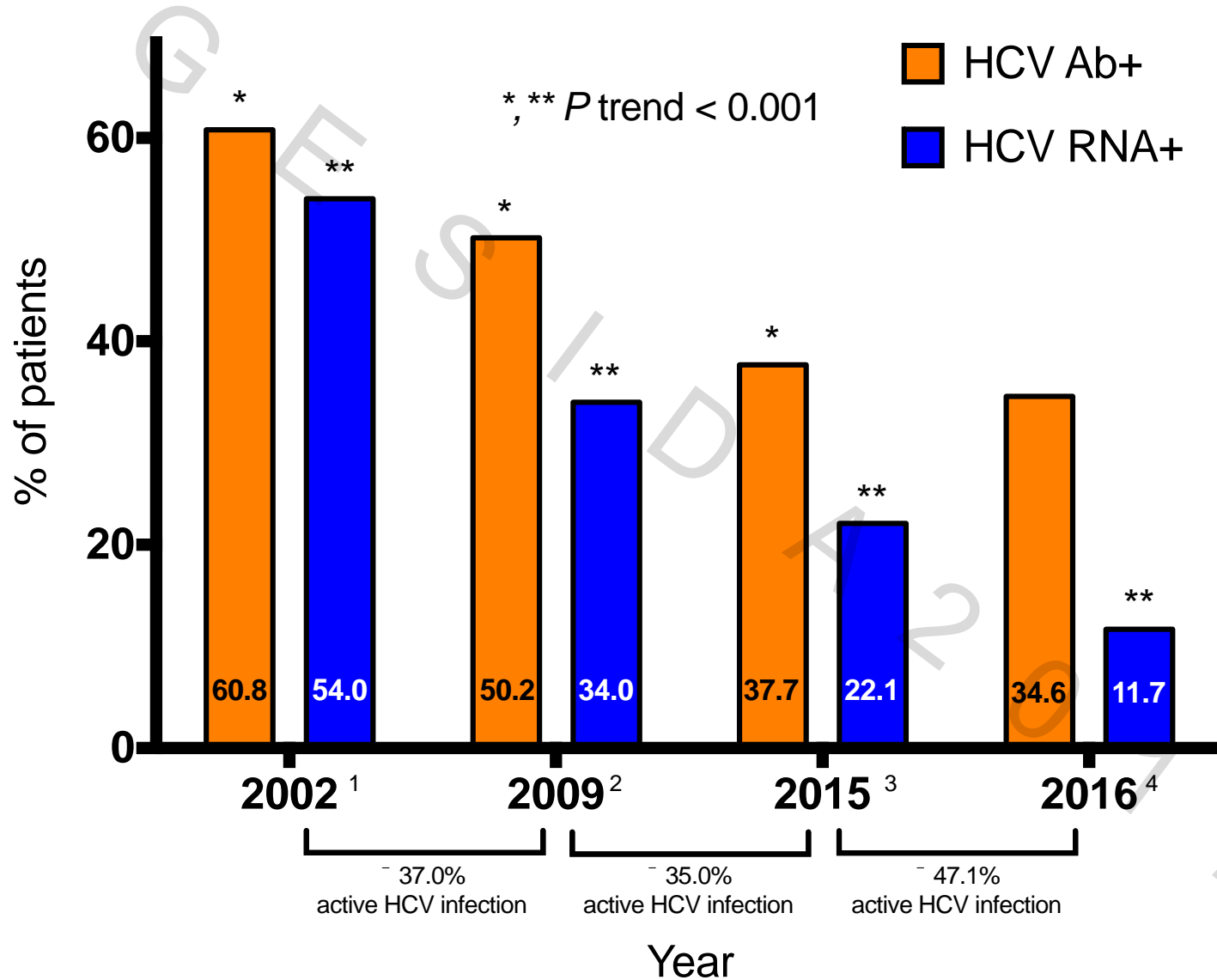
## GeSIDA prevalence studies

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



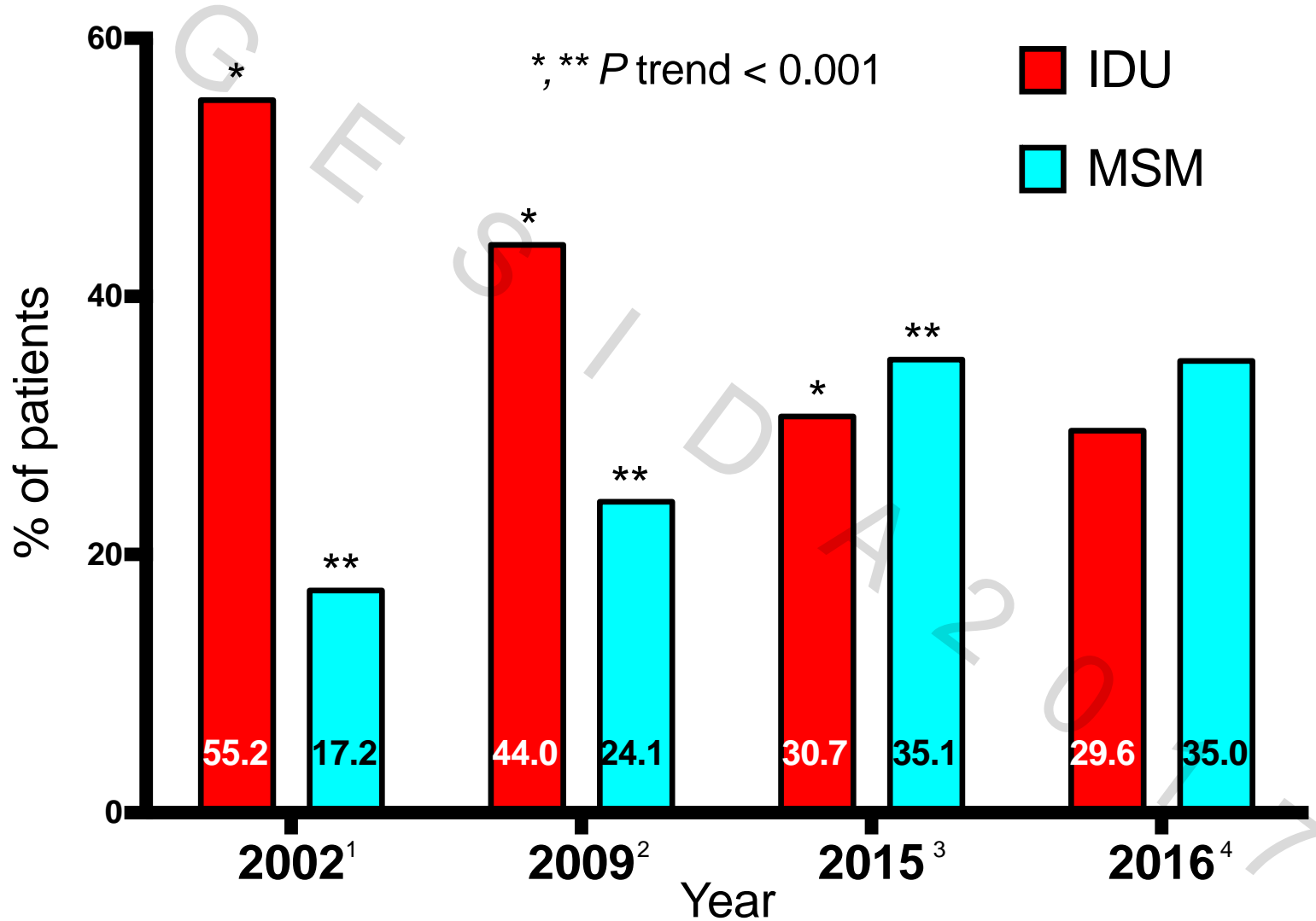
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2. González J, et al. IV Congreso GeSIDA; 2012. Abstract # PO-41
3. Berenguer J et al. *Open Forum Infect Dis* 2016;3:ofw059
4. Pérez-Latorre L, et al. IX Congreso GESIDA 2017 Abstract # OR-1. EACS 2017; Abstract # PS9/3.. *Open Forum Infect Dis* 2017;3:ofx258

# Prevalence of HCV infection 2002 - 2016



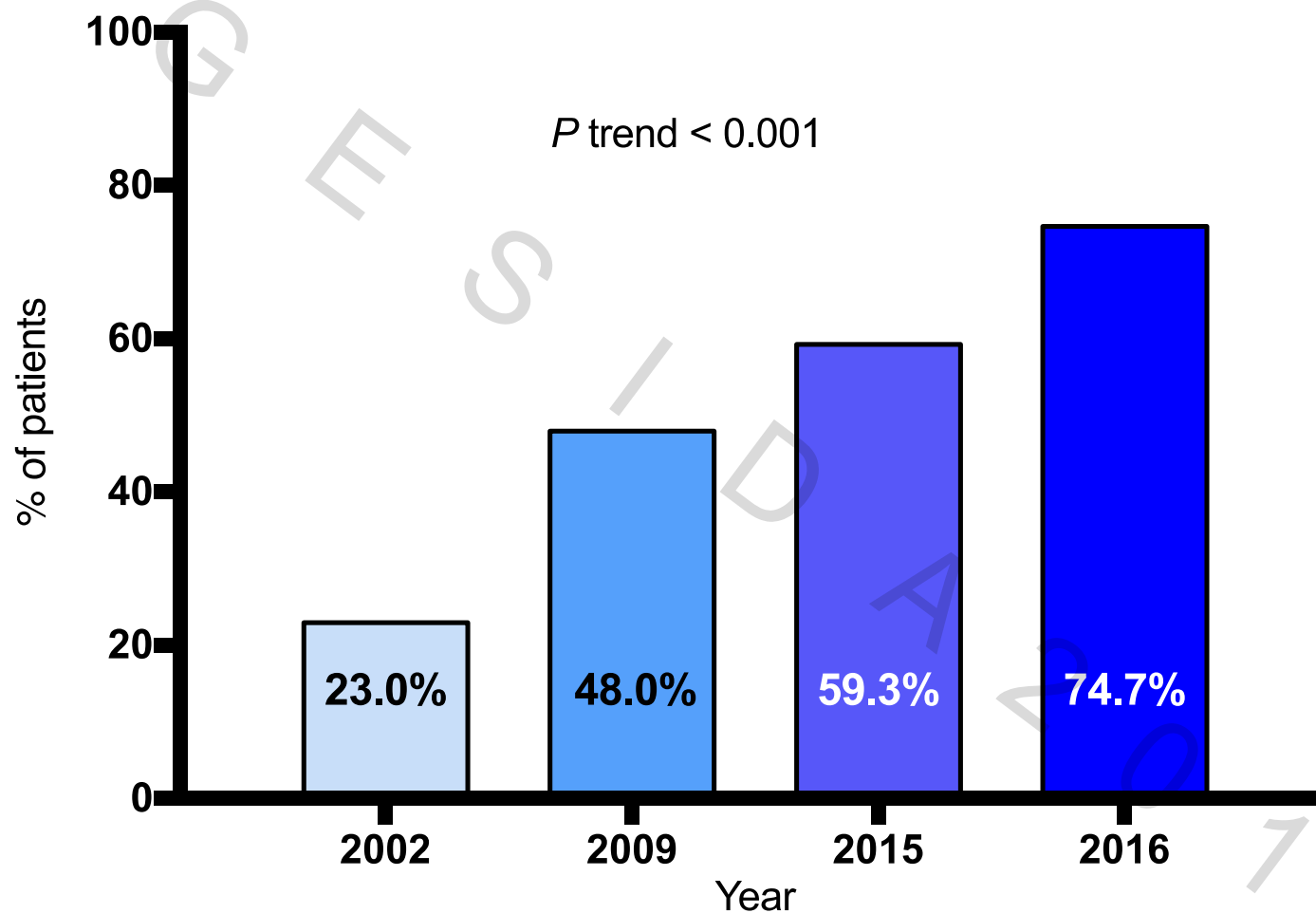
1) González J, et al *Enferm Infecc Microbiol Clin* 2005; 23:340–8. 2) González J, et al. IV Congreso Nacional de GeSIDA; 2012. Abstract # PO-41.  
 3) Berenguer J et al. *Open Forum Infect Dis* 2016;3:ofw059. 4) Berenguer J, et al. EACS 2017; Abstract # PS9/3

## Mechanisms of HIV transmission 2002 - 2016



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# Anti-HCV treatment uptake 2002 - 2016



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

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# 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.
  - ✓ This decrease may be attributable to increased exposure to DAAs.
- 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 DAA-based therapy is accessible to all coinfecting patients.

## GeSIDA 8514 Study Group

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

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# Funding

- Grants Ref# RD16/0025/0017 and RD16/0025/0018 from the Spanish AIDS Research Network that is included in the **Spanish I+D+I Plan** and is co-financed by ISCIII-Subdirección General de Evaluación and European Funding for Regional Development (FEDER).
- Grant Ref# GLD14-00279 from the **GILEAD Fellowship Programme** (Spain)
- Dr. Leire Pérez-Latorre is supported by a Rio Hortega specialized healthcare post-training contract from the Instituto de Salud Carlos III, Ref# CM15/00102

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