

# Continued late presentation for HIV care across Europe

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for the Late Presentation Working Group of  
COHERE

IMIT AMACS ECS-Mothers & ECS-Infants NSHPC-Mothers & NHPS-Infants PISCIS  
KOMPNET CASCADE ANRS CO2 SEROCO Frankfurt HIV Cohort Study San Raffaele  
ANRS CO1/CO10 EPF UK CHIC Athena ITLR-Mothers & ITLR-Infants Swiss HIV Cohort Study  
ICC ANRS CO6 PRIMO Co-RIS MOCHIV-Mothers & MoCHIV-Infants The Italian MASTER Cohort  
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Modena Cohort Study Danish HIV Study ANRS CO8 COPILOTE ICONA St. Pierre  
**Collaboration of Observational HIV Epidemiological Research Europe**  
Coordination: Copenhagen HIV Programme (CHIP) & Institut de Santé Publique, d'Epidémiologie et de Développement (ISPED)

# Background

- Late Presentation (LP) for HIV defined as CD4  $\leq$  350/mm<sup>3</sup> or AIDS, regardless of CD4 count<sup>1</sup>
- Proportion presenting late ~ 50% with considerable variation among different demographic groups<sup>2-3</sup>
- Consequences for the individual and for public health<sup>4-5</sup>
- Numerous interventions to target HIV testing and increase awareness<sup>6-7</sup>

<sup>1</sup>Antinori et al HIV Med 2011; 12::61-64. <sup>2</sup>Mocroft et al, PLoS Med 2013;10(9):E1001510. <sup>3</sup>Girardi et al 2004;36:951-959. <sup>4</sup>Sabin et al AIDS 2004;18:2145-2151. <sup>5</sup>Quinn et al NEJM 2000;342:921-929. <sup>6</sup>HIDES Indicator disease testing (<http://hiveurope.eu/Ongoing-Projects/Guidance-HIV-Indicator-Conditions>). <sup>7</sup>HIV European testing week (<http://hiveurope.eu/Ongoing-Projects/European-HIV-Testing-Week>)

# Objectives

- To describe changes in LP in Europe between 2010-2013
- To determine changes over time in new clinical events following HIV+ diagnosis

# Study participants

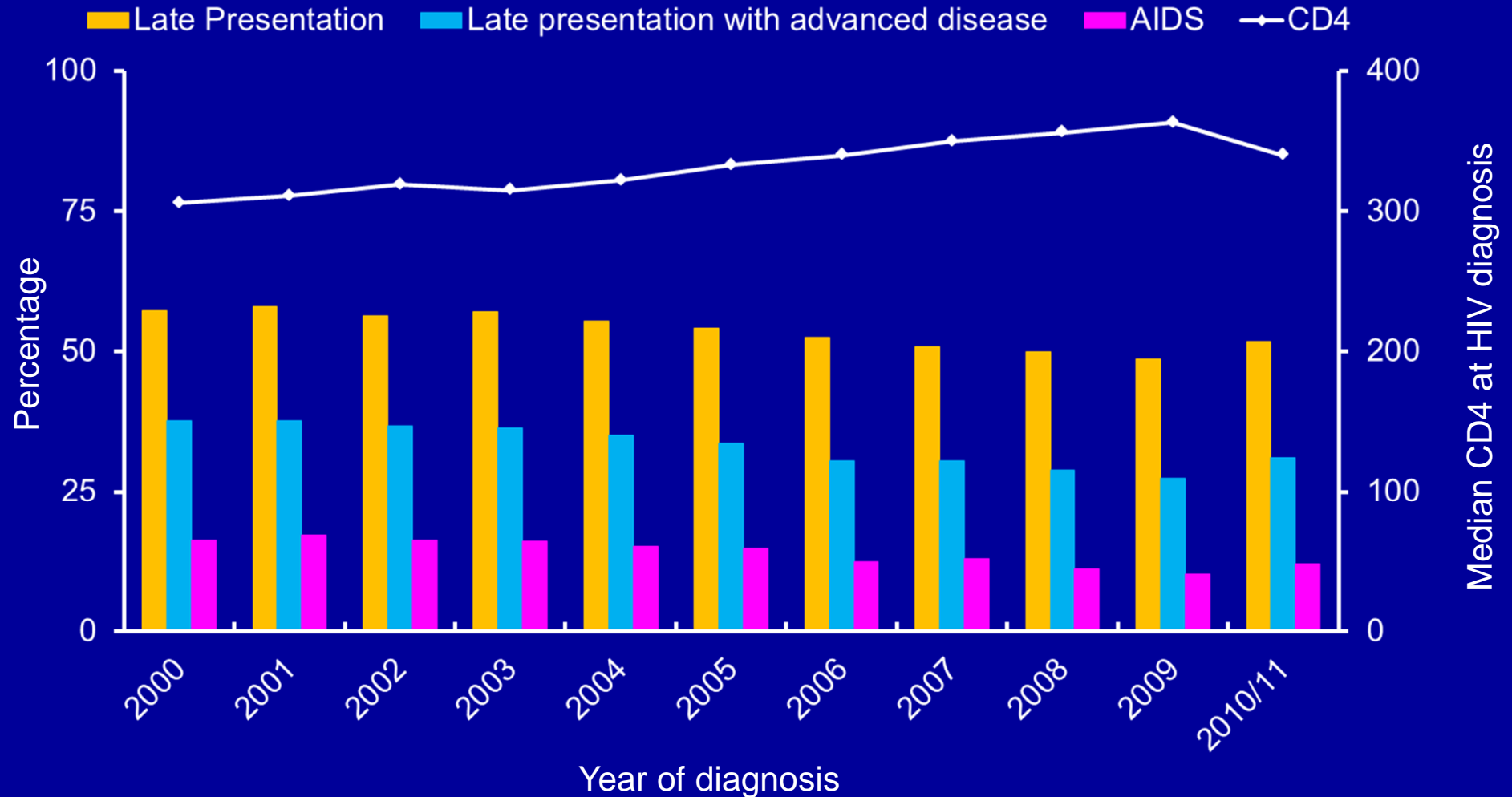
- Participants in COHERE, a collaboration of 33 cohorts from 35 countries testing HIV+  $\geq 1/1/2010$
- CD4 count measured in the 6 months after HIV diagnosis
- Aged > 16 years
- Seroconverter cohorts were excluded

# Definitions and methods

- Date HIV+ : date tested HIV+ve or recruitment to cohort/study enrolment where date HIV+ve missing
- LP : CD4<350/mm<sup>3</sup> in 6 months following HIV+ diagnosis, or AIDS, regardless of CD4 count
- Advanced LP : CD4<200/mm<sup>3</sup> in 6 months following HIV+ diagnosis, or AIDS, regardless of CD4 count
- Changes over time in proportions of LP assessed using logistic regression
- Kaplan-Meier plots and Cox PH models to examine changes in clinical outcomes (new AIDS/death)

# Changes over time in late presentation and CD4 count at HIV-diagnosis : COHERE 2000-2011

Mocroft et al, PLoS Med 2013;10(9):E1001510

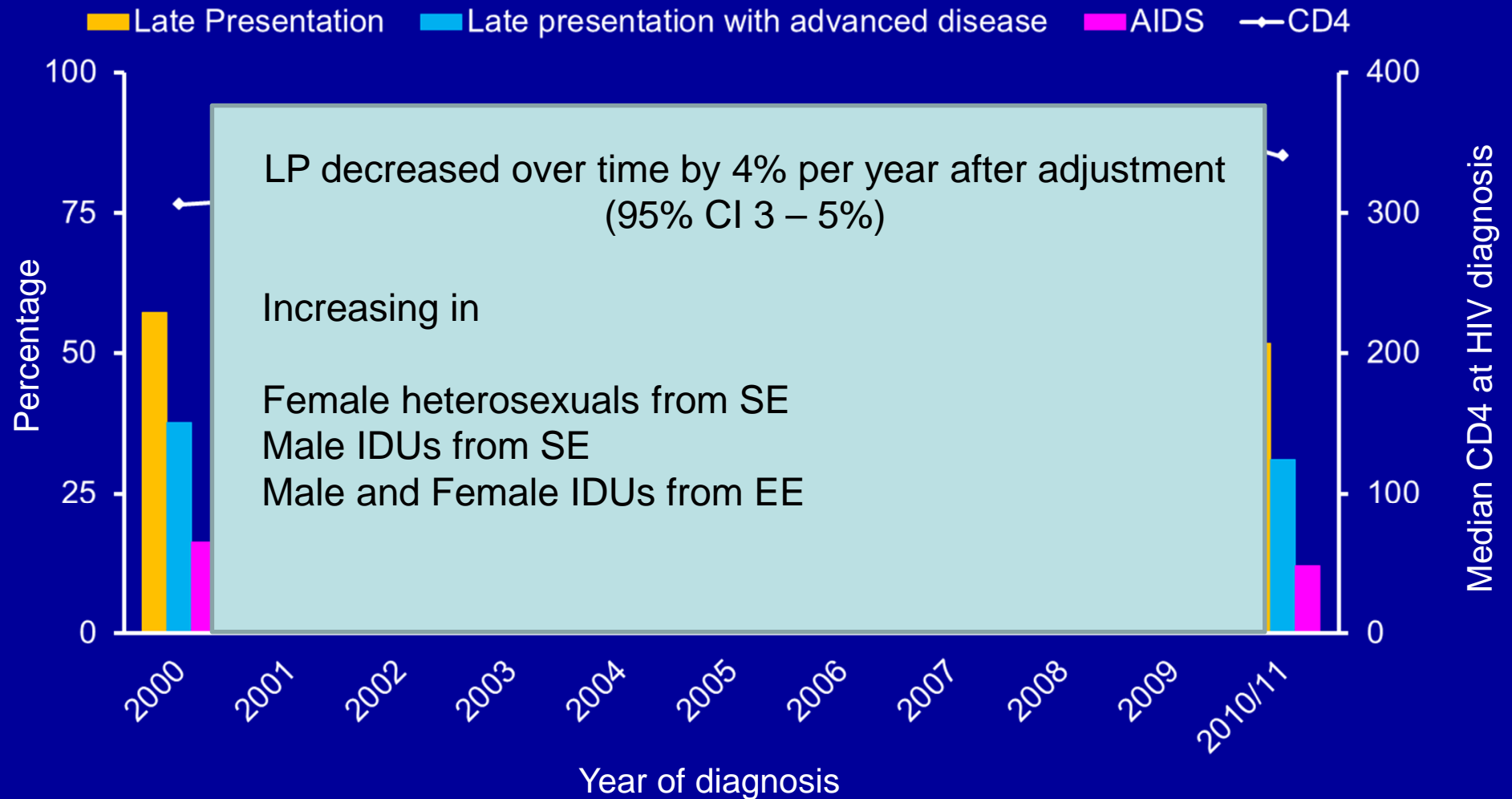


N 7367 7404 8046 7756 8591 8663 8251 8618 9057 7548 3223

Late presentation: diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis. Late presentation with advanced disease: diagnosed with HIV with a CD4 count below 200/mm<sup>3</sup> or an AIDS defining event, regardless of CD4 cell count, in the 6 months following HIV diagnosis.

# Changes over time in late presentation and CD4 count at HIV-diagnosis : COHERE 2000-2011

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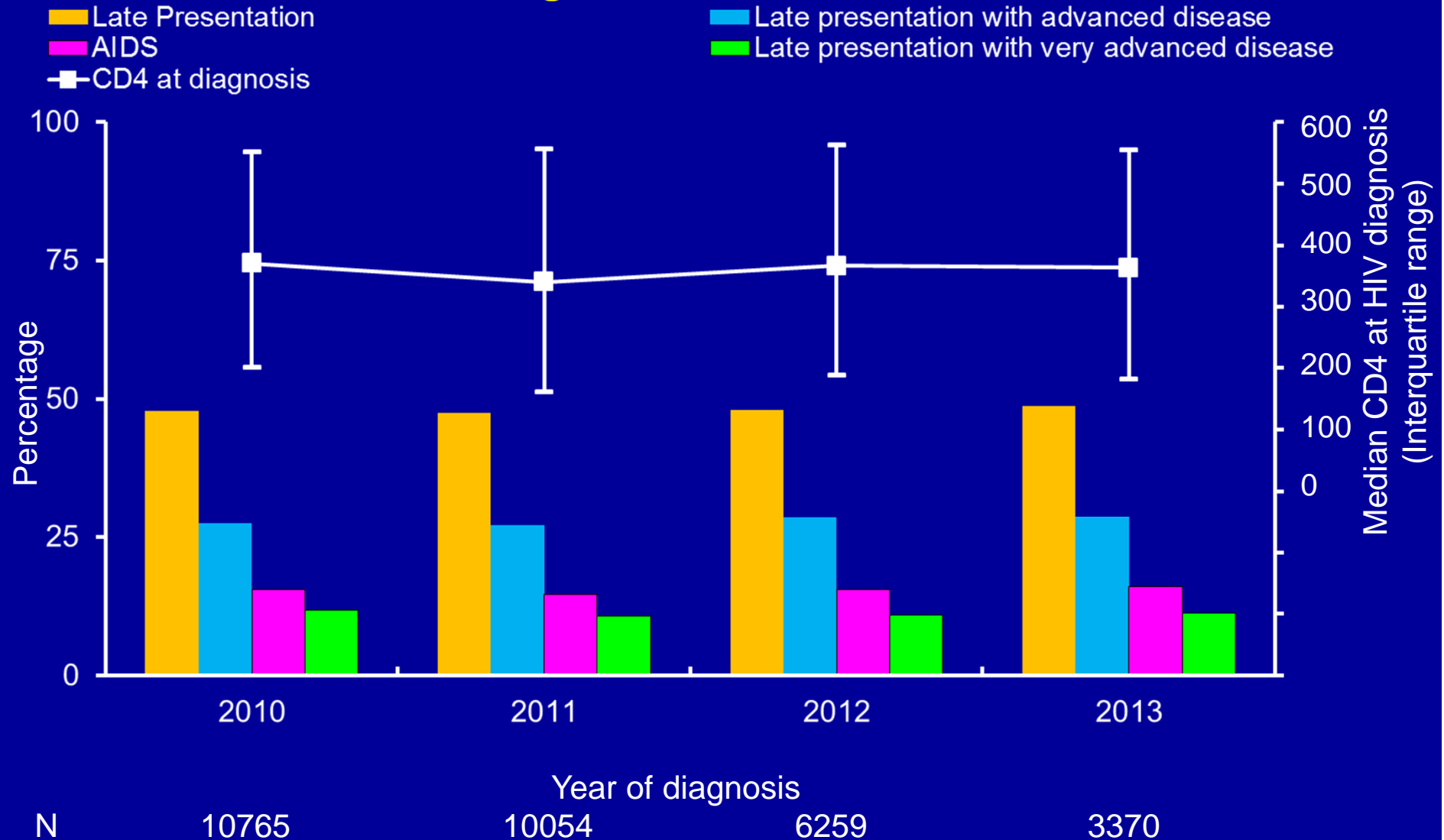
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# Patient characteristics

		All (N=30448)		LP (N=14582; 47.9%)	
		N	%	N	%
<b>HIV</b>	MSM	15370	50.5	5992	39.0
<b>Exposure</b>	Male heterosexual	4826	15.9	3011	62.4
<b>Group</b>	Female heterosexual	5487	18.0	2864	52.2
	Male injecting drug user	843	2.8	481	57.1
	Female injecting drug user	321	1.1	126	39.3
	Male other	2548	8.4	1493	58.6
	Female other	1053	3.5	615	58.4
<b>European</b>	South	6950	22.8	3133	45.1
<b>Region of</b>	Central	7621	31.6	4789	49.8
<b>Care</b>	North	12570	41.3	6135	48.8
	East	1307	4.3	525	40.2
		Median	IQR	Median	IQR
<b>Age</b>	Years	37	29 -45	39	32 – 48
<b>CD4</b>	/mm <sup>3</sup>	368	193 – 555	184	73 – 276



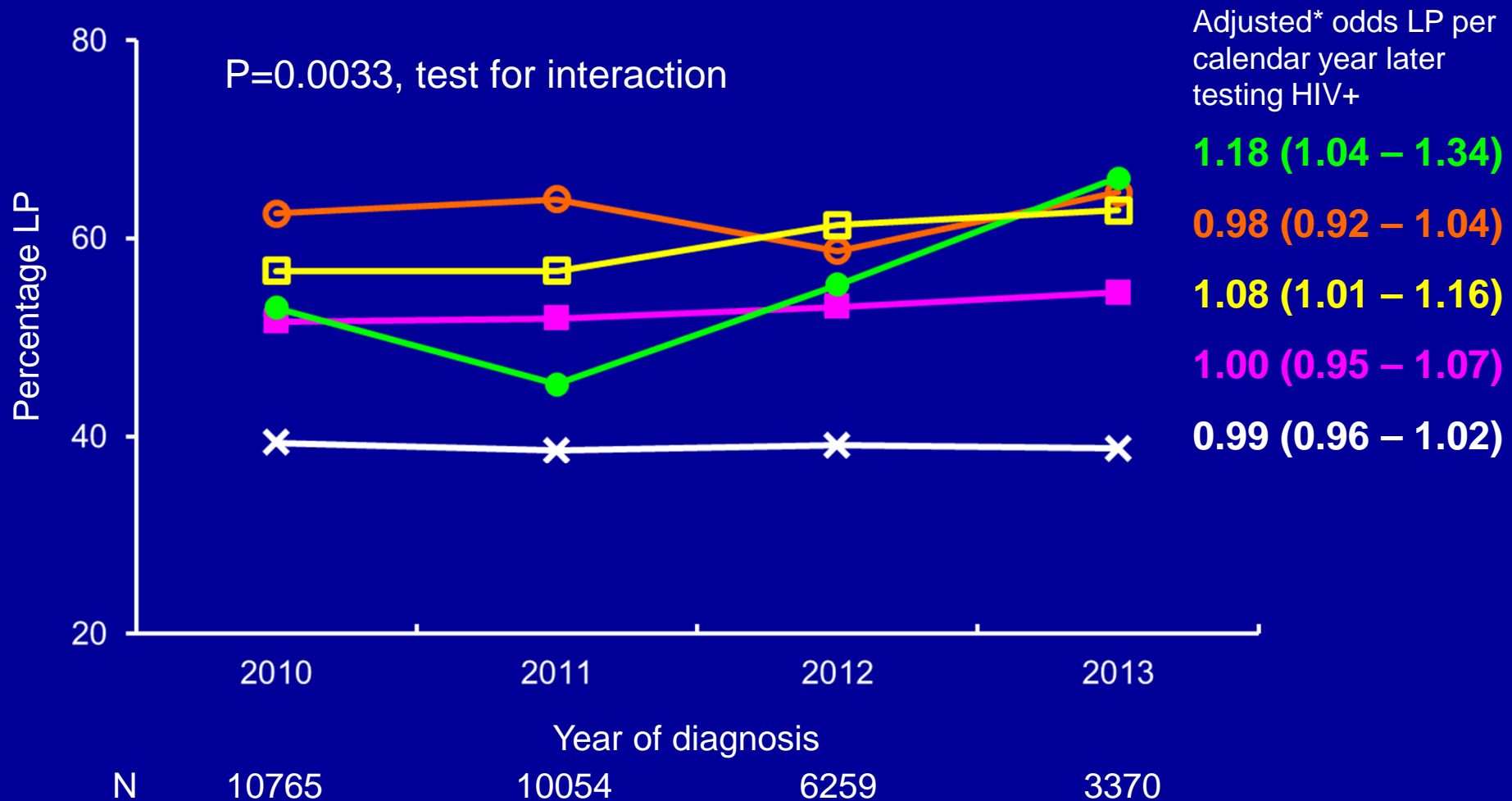
# Changes over time in late presentation and CD4 count at HIV-diagnosis : COHERE 2010-2013



Late presentation: diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis. Late presentation with advanced disease: diagnosed with HIV with a CD4 count below 200/mm<sup>3</sup> or an AIDS defining event, regardless of CD4 cell count, in the 6 months following HIV diagnosis. Late presentation with very advanced disease: diagnosed with HIV with a CD4 count below 50/mm<sup>3</sup> or an AIDS defining event, regardless of CD4 cell count, in the 6 months following HIV diagnosis

# Changes over time in late presentation : HIV exposure group

✖ MSM     
 ○ M Het     
 ■ F Het     
 ● IDU     
 □ Other



Late presentation: diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis. \*Adjusted for age, region of care, region of origin and age

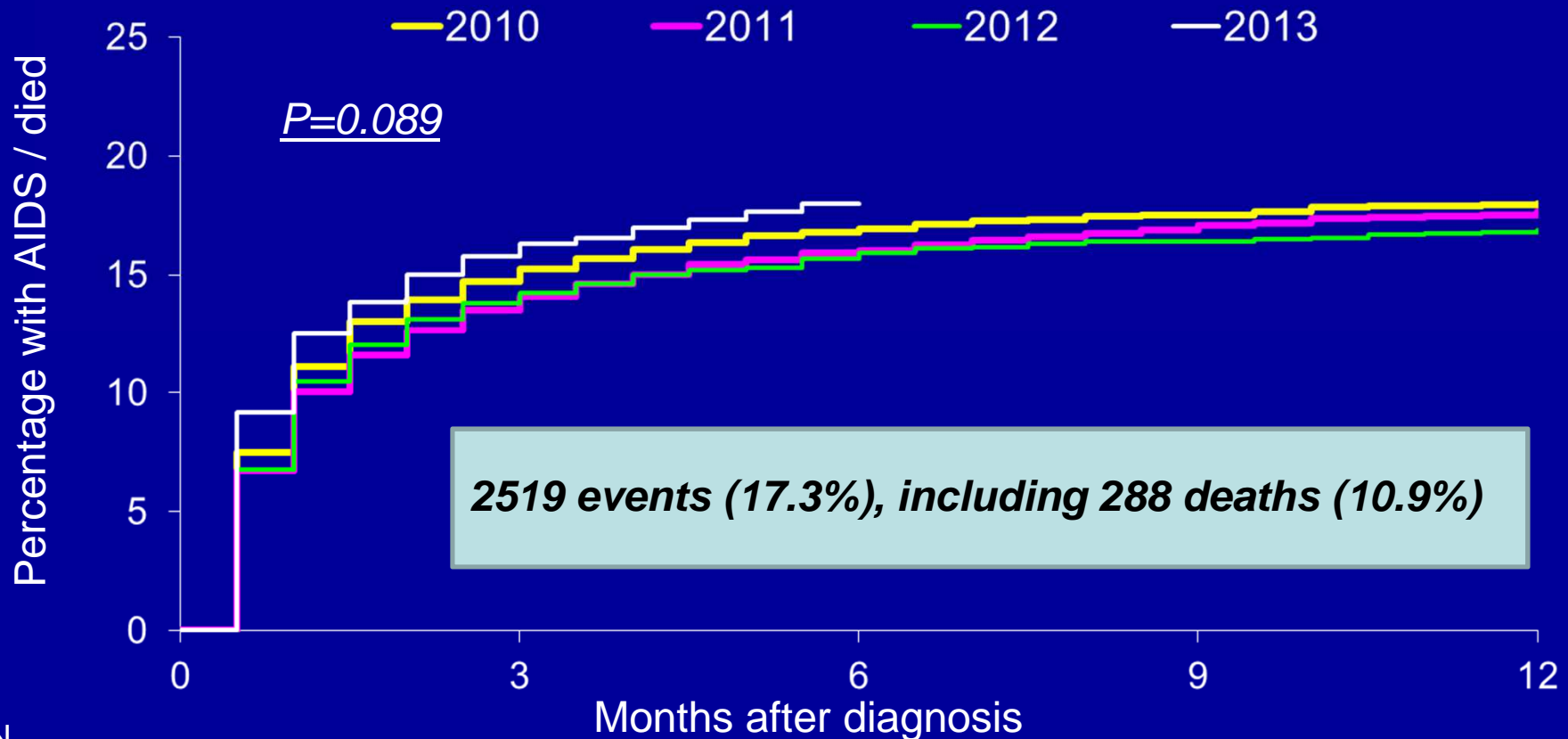
## Odds of LP per year later testing HIV+

	Univariate			Multivariate*		
	OR	95% CI	P	OR	95% CI	p
Overall	1.01	0.99 – 1.03	0.40	1.00	0.98 – 1.03	0.84
<b><u>Region</u></b>						
South	1.00	0.95 – 1.05	0.95	1.00	0.96 – 1.06	0.87
Central	1.01	0.97 – 1.05	0.64	1.01	0.97 – 1.06	0.61
North	1.01	0.98 – 1.04	0.62	0.98	0.94 – 1.02	0.27
East	1.07	0.91 – 1.25	0.41	1.03	0.88 – 1.21	0.73

P=0.073, test for interaction

Late presentation: diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis. \*Adjusted for age, HIV exposure group, region of origin and age

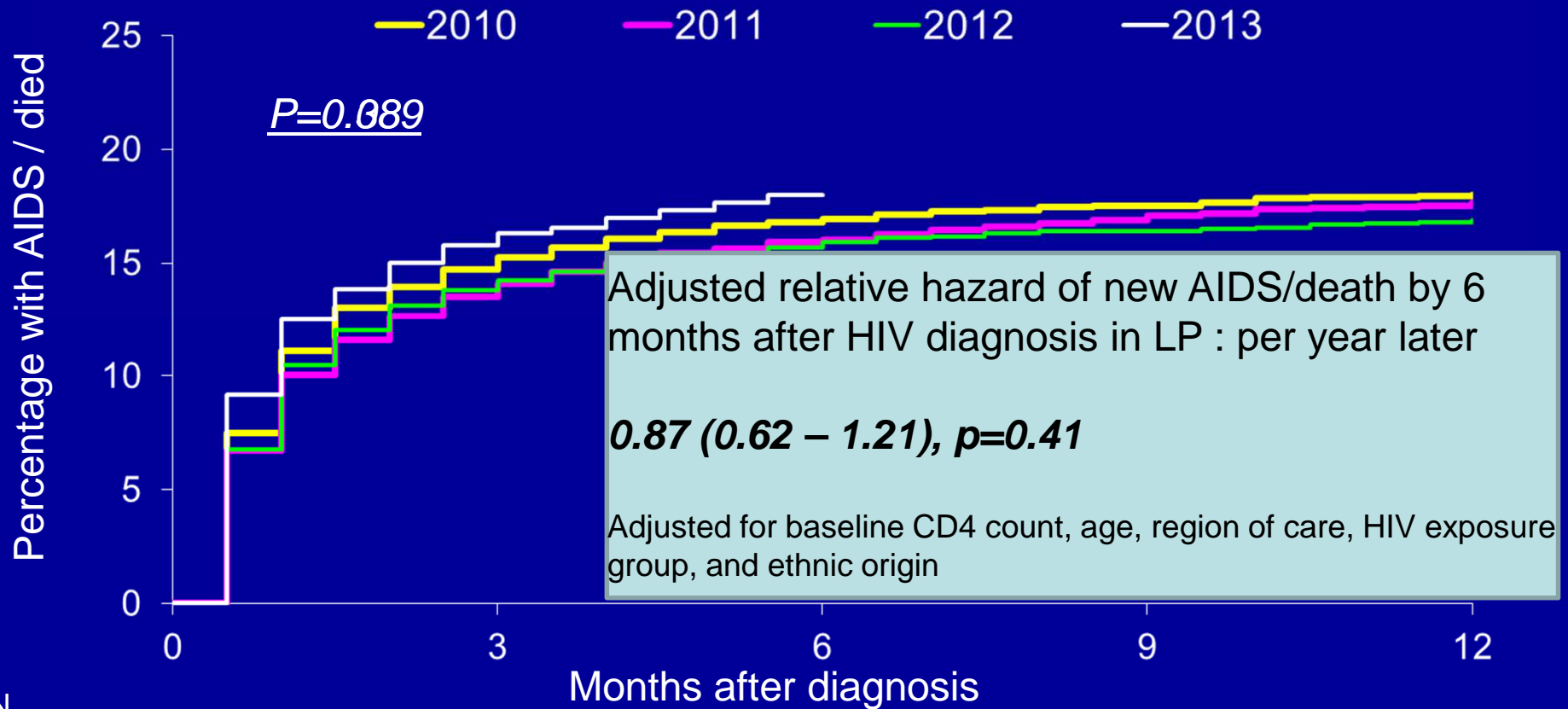
# Progression to new AIDS/death up to 1 year after HIV diagnosis in LP and calendar year of testing HIV+



N	0	3	6	9	12
2010	5130		3796		3326
2011	4736		3079		2333
2012	2988		1873		1147
2013	1613		374		

Late presentation (LP): diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis.

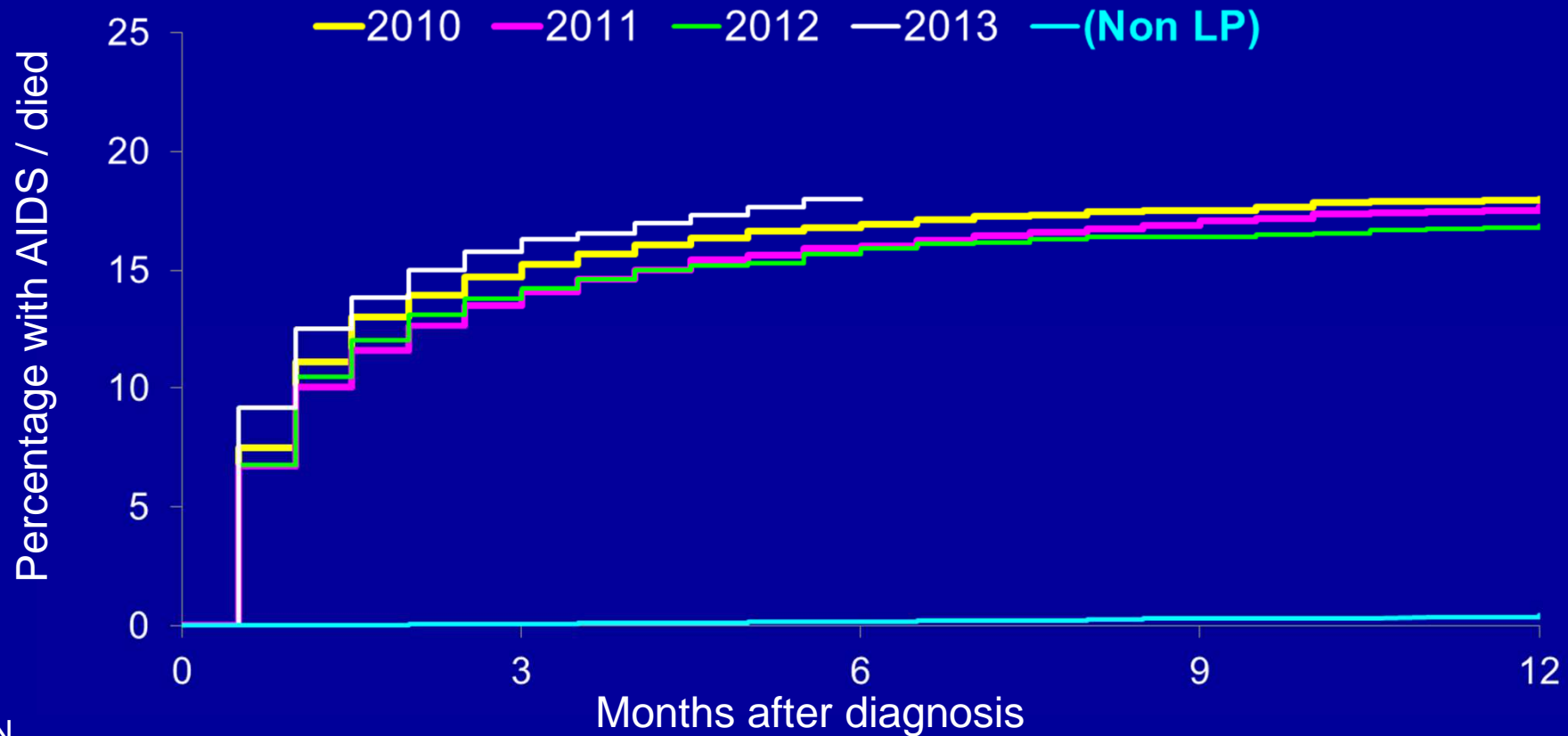
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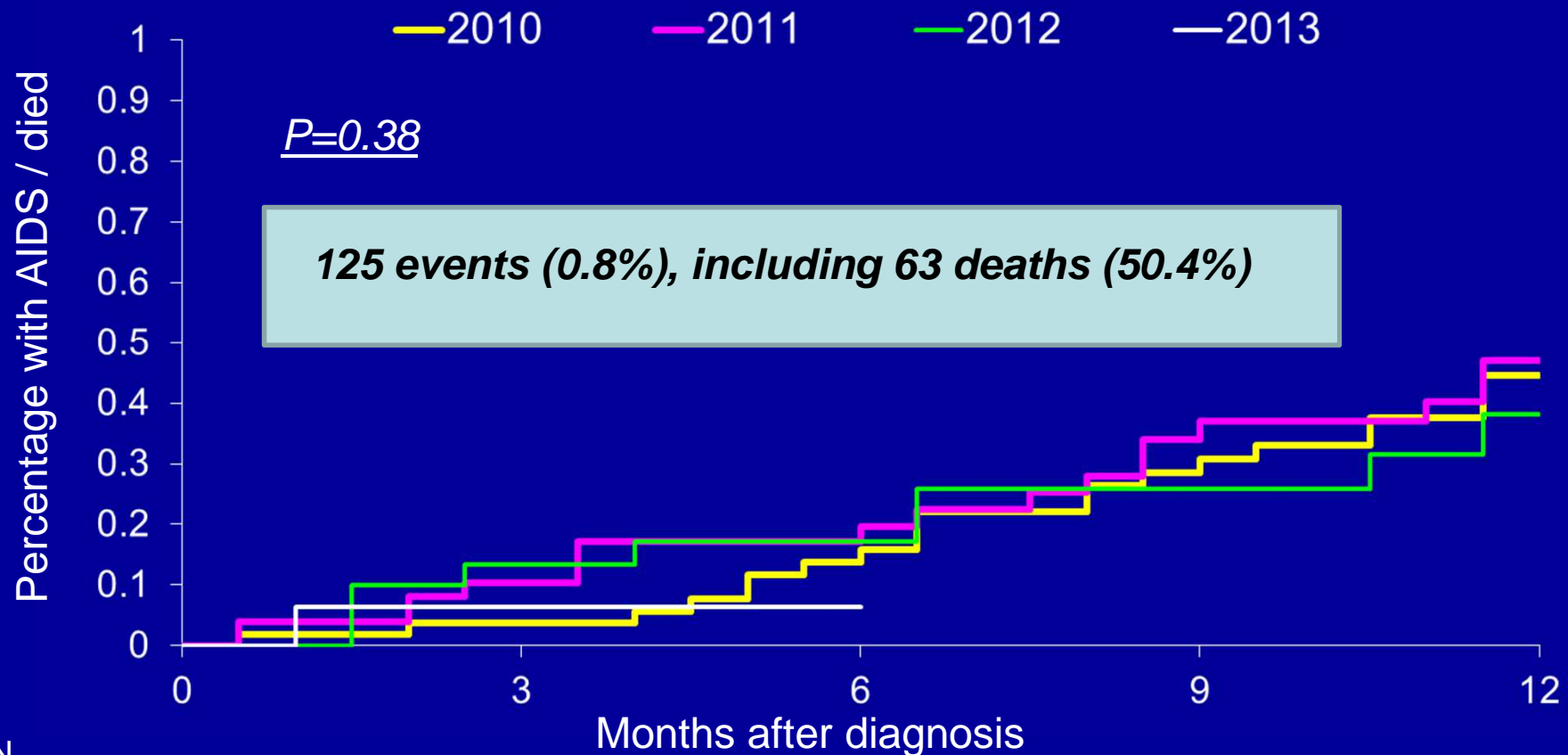
# Progression to new AIDS/death up to 1 year after HIV diagnosis in LP and calendar year of testing HIV+



N	2010	2011	2012	2013	(Non LP)
	5130	4736	2988	1613	
				3796	3326
				3079	2333
				1873	1147
				374	15

Late presentation (LP): diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis.

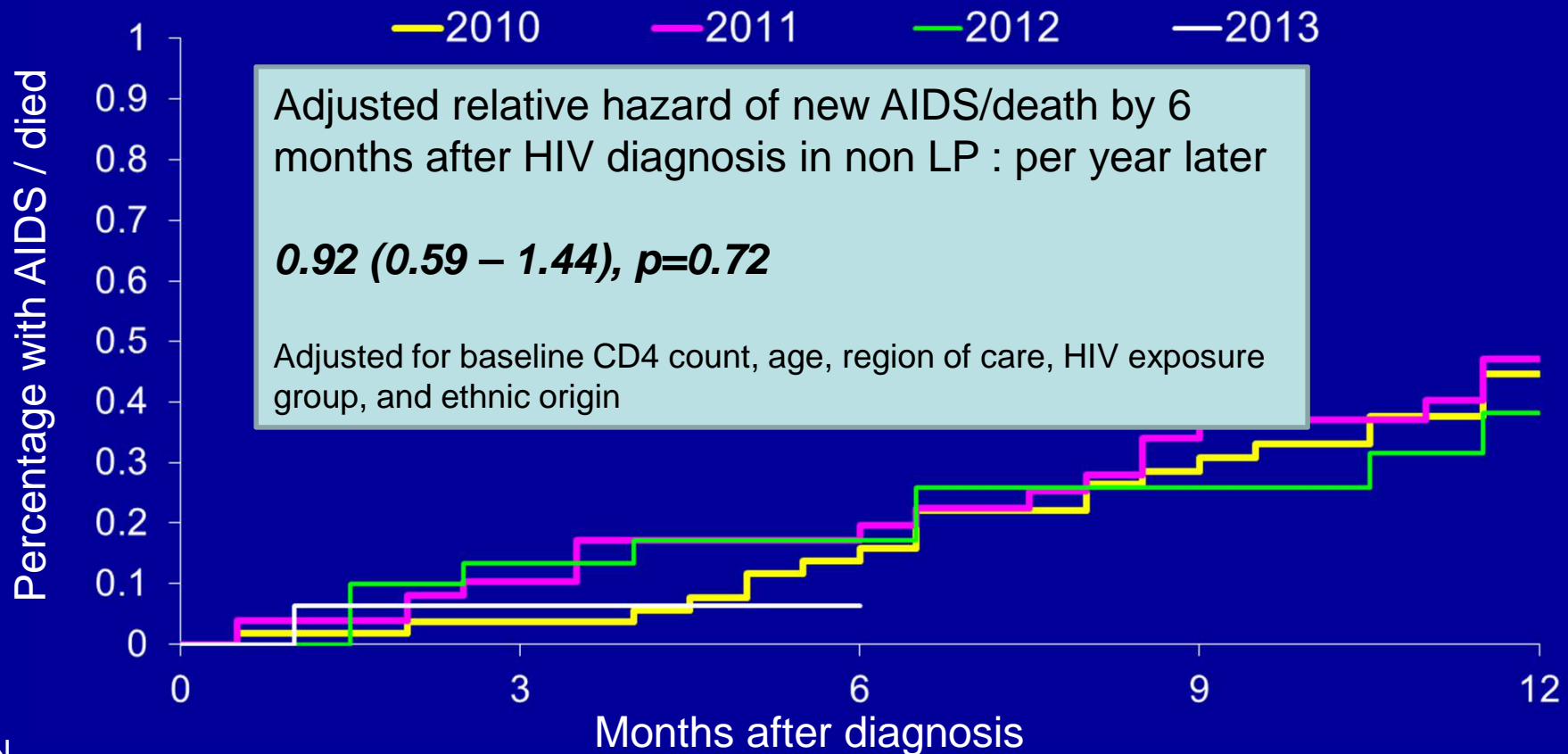
# Progression to new AIDS/death up to 1 year after HIV diagnosis in non-LP and calendar year of testing HIV+



N	2010	2011	2012	2013
	5564	5189	3201	1684
				413
				4223
				2878
				1429

Late presentation (LP): diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis.

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# Limitations

- Comparatively small numbers from Eastern Europe
- Participants in cohort studies
- Requirement to have CD4 measured
- Date HIV diagnosis unknown for ~10%

# Conclusions

- LP remains at 50% and has not decreased since 2010 across Europe, or in any region of Europe, despite the trends seen 2000-2010
- Proportion with advanced LP, very advanced LP, presentation with AIDS alone remained similar over time as did CD4 count at HIV+ diagnosis
- LP remains lowest in MSM (~40%) with some evidence to suggest continued increase over time in IDUs and 'other' group
- Further efforts to reach those not testing required to reduce LP

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## Project Team

Antonella d'Arminio Monforte, Norbert Brockmeyer, Jordi Casabona, Antonella Castagna, Dominique Costagliola, Francois Dabis, Stéphane De Wit, Gerd Fätkenheuer, Hansjakob Furrer Anne Johnson, Ole Kirk, Mario Lazanas, Catherine Leport, Jens Lundgren, Amanda Mocroft, Santiago Moreno, Niels Obel, Frank Post, Peter Reiss, Caroline Sabin, Adriane Skaletz-Rorowski, Ignacio Suarez-Loano, Carlo Torti, Josiane Warszawski, Robert Zangerle

## Steering Committee:

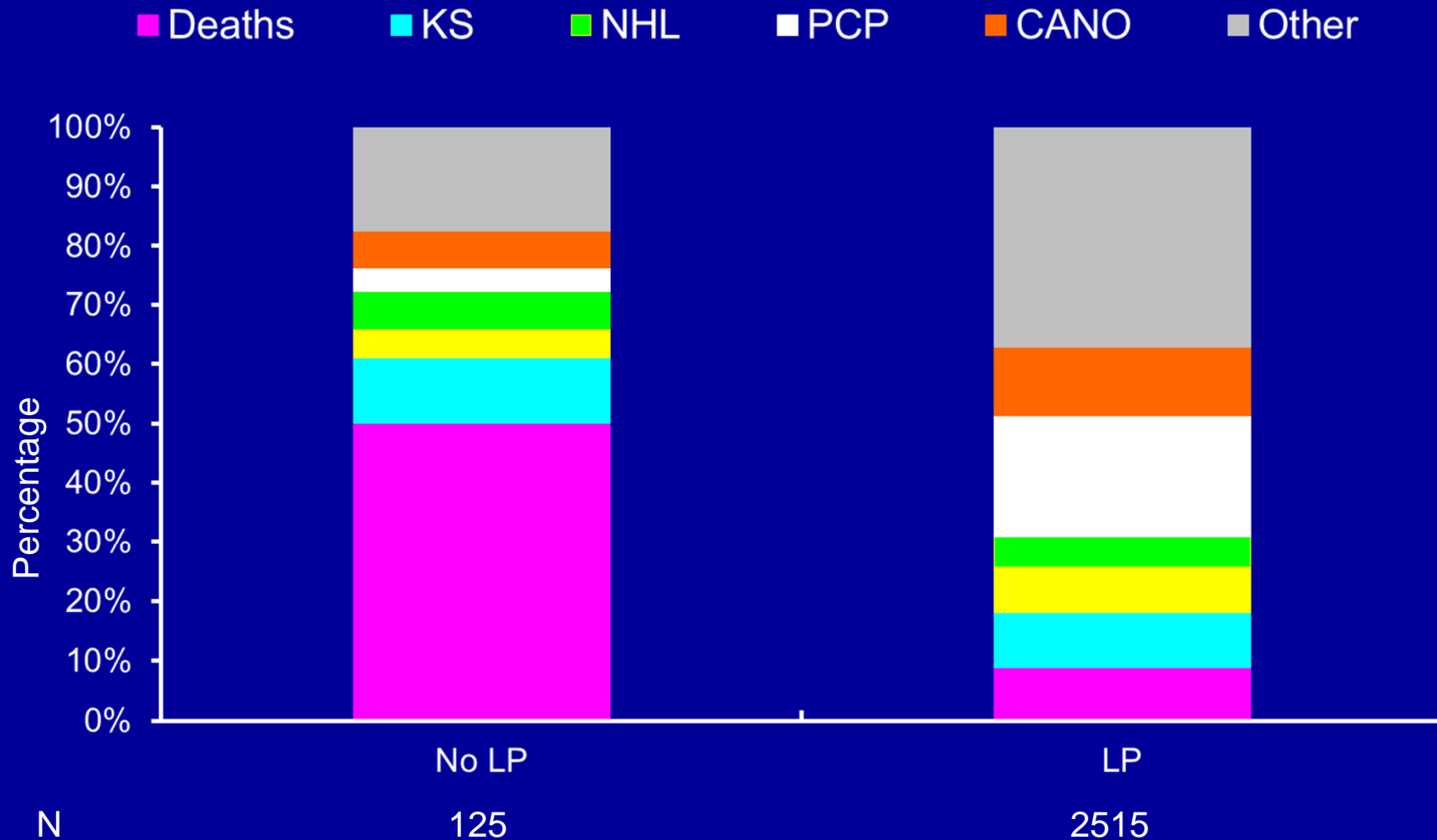
- **Executive committee:** Stéphane De Wit (Chair, St. Pierre Brussels Cohort), Manuel Battegay (SHCS, MoCHIV), Jordi Casabona (PISCIS), Dominique Costagliola (FHDH), Antonella d'Arminio Monforte (ICONA), Julia Del Amo (Co-RIS), Amanda Mocroft (University College London), Dorthe Raben (Head, Copenhagen Regional Co-ordinating Center), Geneviève Chêne (Head, Bordeaux Regional Co-ordinating Centre).
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- **Paediatric cohort representatives:** Ali Judd, Pablo Rojo Conejo
- **European AIDS Treatment Group:** David Haerry.

## Regional Coordinating Centers:

**Bordeaux RCC cohorts:** Diana Barger, Geneviève Chêne (Head), Christine Schwimmer, Monique Termote  
**Copenhagen RCC cohorts:** Rikke Salbøl Brandt, Maria Campbell, Nina Friis-Møller, Dorthe Raben (Head)

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# Clinical events following HIV diagnosis



Late presentation: diagnosed with HIV with a CD4 count below 350/mm<sup>3</sup> or an AIDS defining event regardless of the CD4 count, in the 6 months following HIV diagnosis.