



## HIV TESTING AND AGING

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Projecte dels NOMS-Hispanosida

**New Challenges and Unmet Needs of People Living With HIV/AIDS Aged 50+**

Berlin, 1<sup>st</sup> April 2016

# CONTENT

- Testing in 50+
- Testing and Accentuated Aging

# TESTING IN 50+

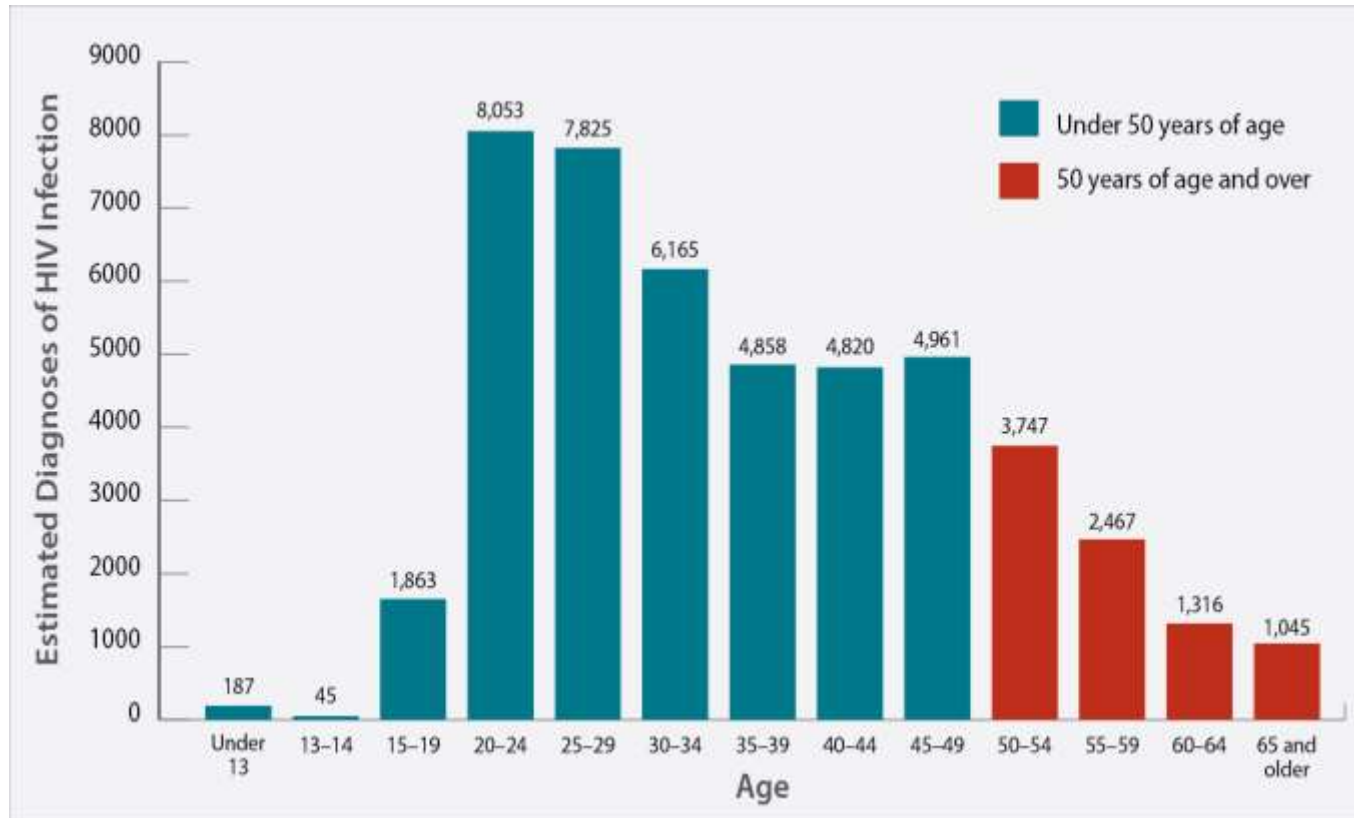


- People aged 50 and older have many of the same HIV risk factors as younger people, but may be less aware of their risk
- Older Americans are more likely to be diagnosed with HIV infection later in the course of their disease.

# I am 50+. I face these issues.

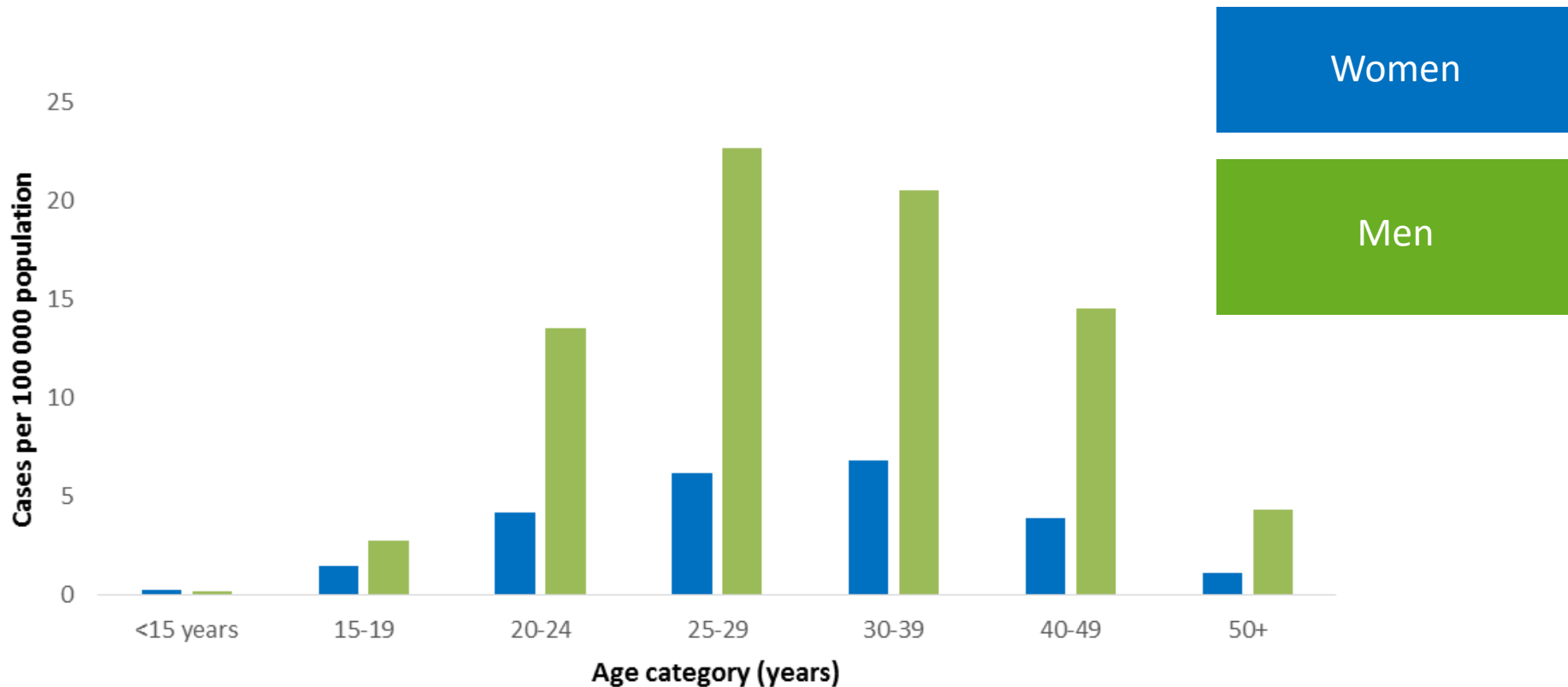


# Estimated Diagnoses of HIV Infection by Age, 2013, United States

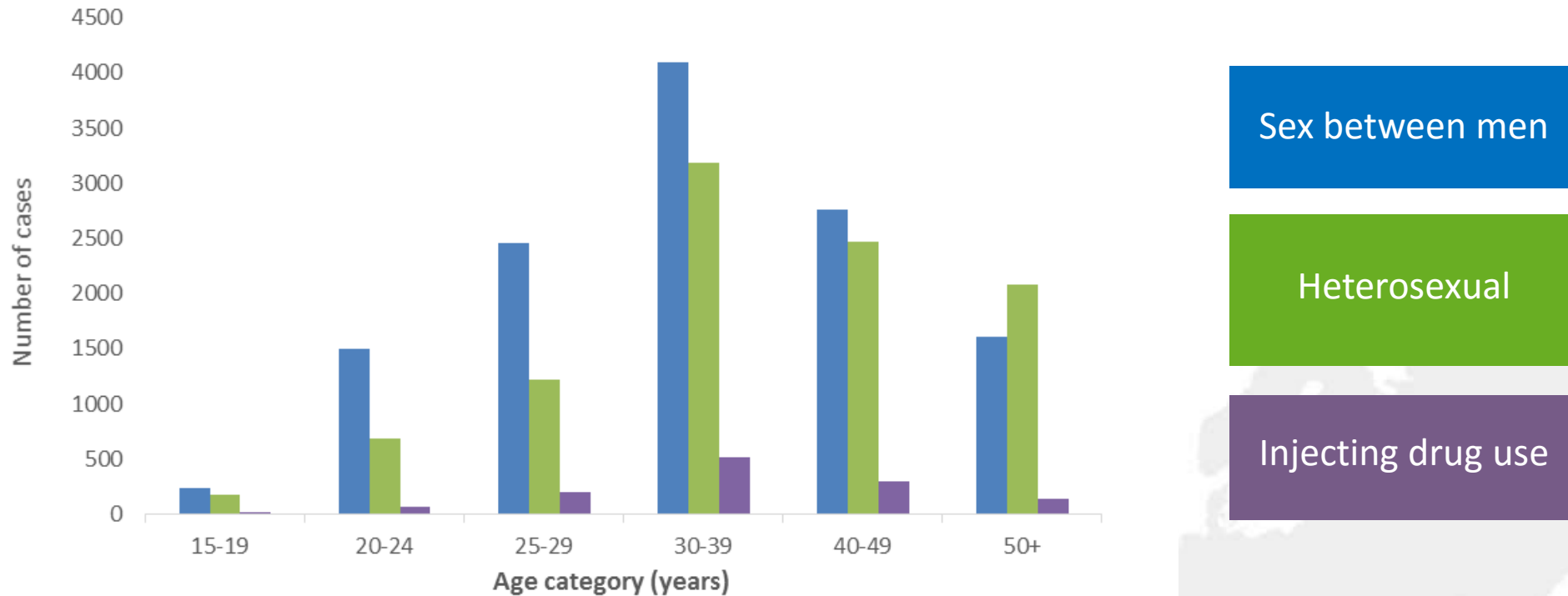


■ 18.1% of diagnoses in 50 years and over

# Age- and gender-specific rates of new HIV diagnoses, EU/EEA, 2014 (n=29 923)

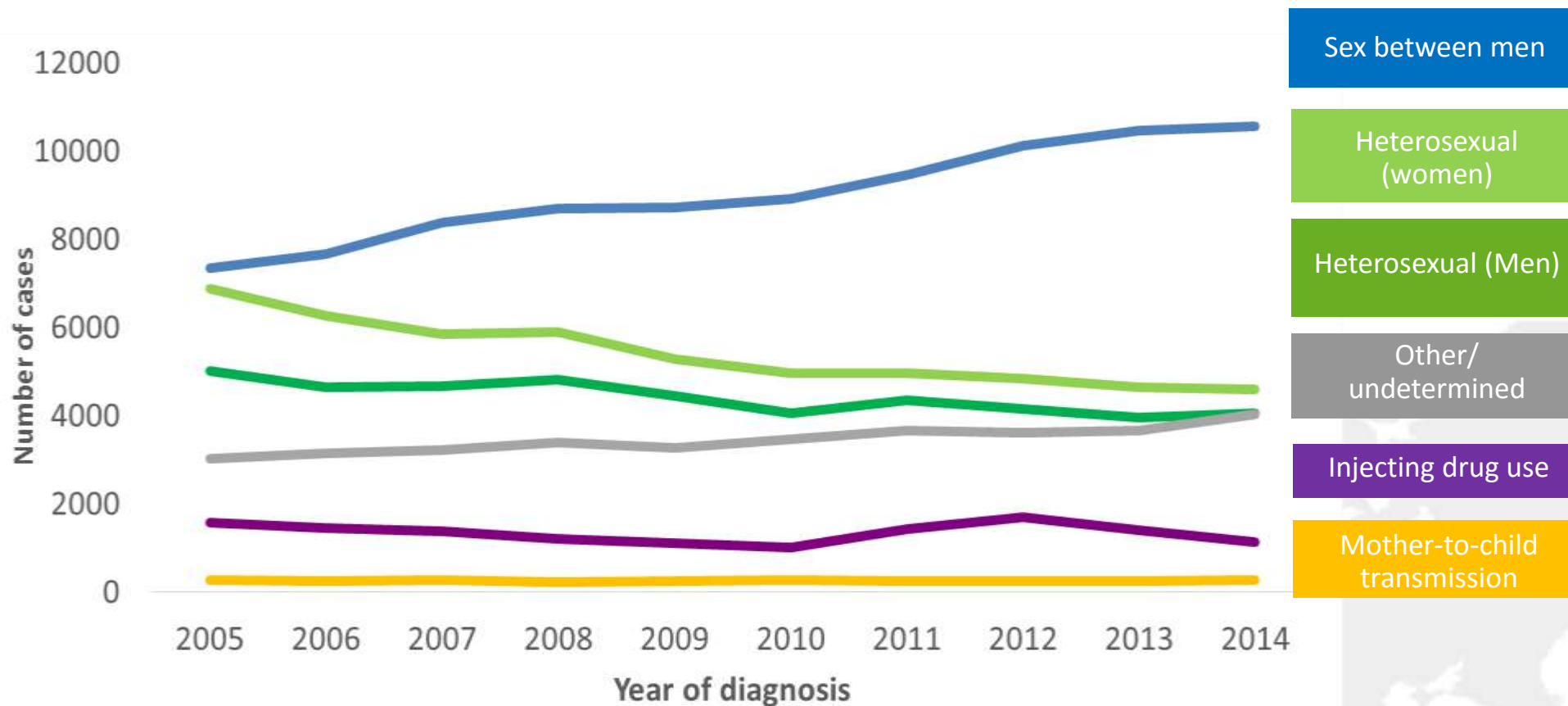


# Number of new HIV diagnoses, by age group and transmission mode, EU/EEA, 2014 (n=23 747)



Data from people <15, other/unknown transmission, mother-to-child transmission, transfusion-related transmission, and nosocomial transmission not shown here.

# HIV diagnoses, by mode of transmission, 2005-2014, EU/EEA

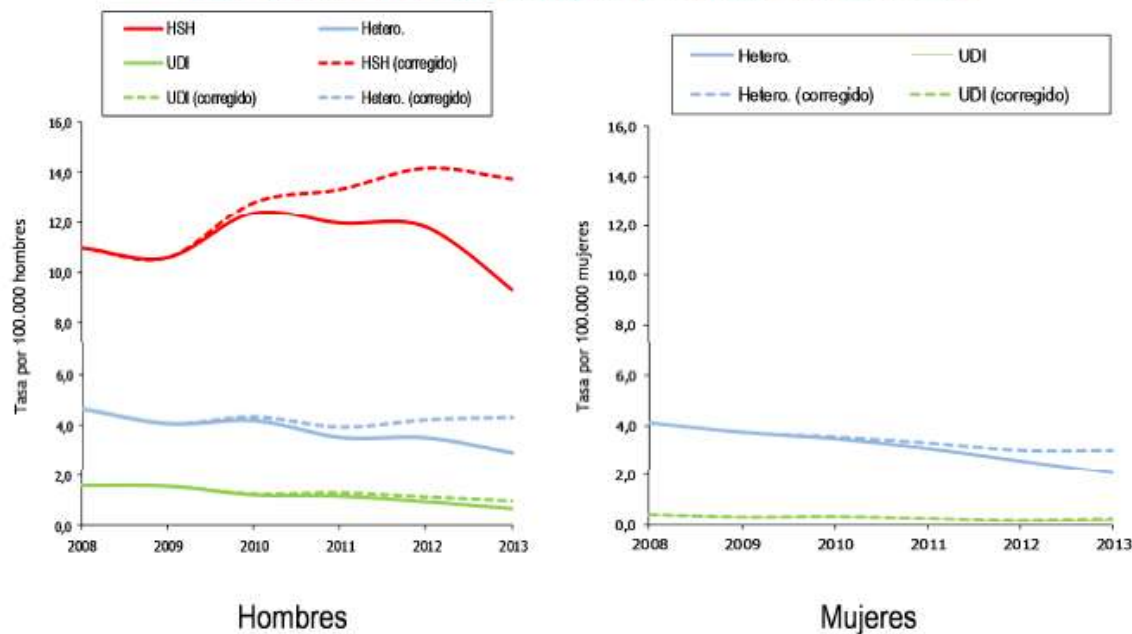


Data is adjusted for reporting delay. Cases from Estonia and Poland excluded due to incomplete reporting on transmission mode during the period; cases from Italy and Spain excluded due to increasing national coverage over the period.



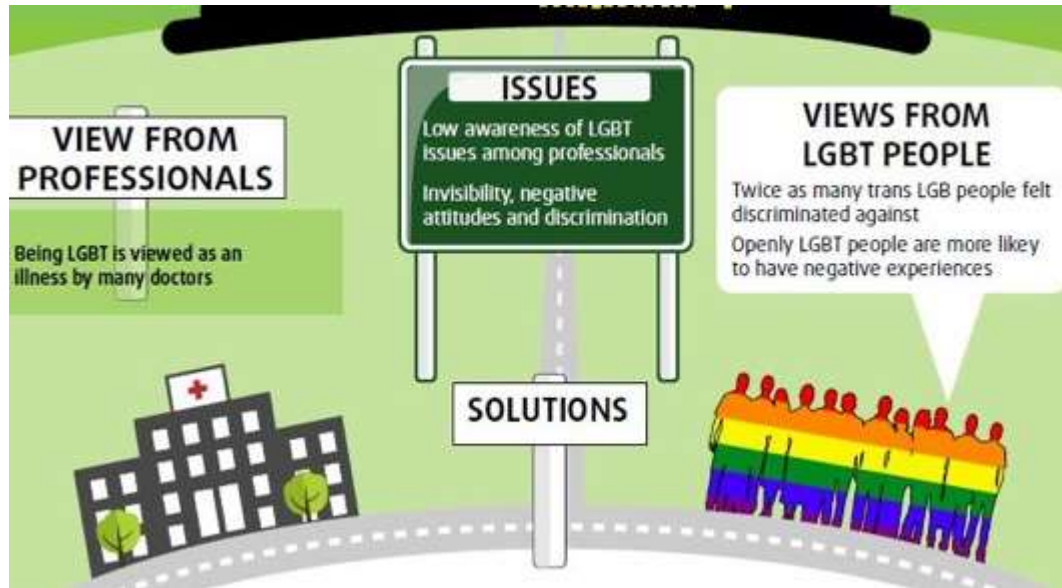
Figura 13

Tasas de nuevos diagnósticos de VIH anuales por categoría de transmisión y sexo España\*, 2008-2013. Datos corregidos por retraso en la notificación



\*Aragón, Asturias, Baleares, Canarias, Castilla La Mancha, Cataluña, Ceuta, Extremadura, Galicia, La Rioja, Madrid, Melilla, Navarra y País Vasco.

# EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS (FRA)



“A considerable proportion of LGBT persons who had accessed healthcare services in the preceding 12 months felt that healthcare personnel discriminated against them for being LGBT.”

European union agency for fundamental Rights (FRA)

“Professionally speaking: Challenges to achieve equality for LGBT people”, March 2016

- [BCN Checkpoint](#) opened in January 2006
- BCN Checkpoint introduced the use of [HIV rapid tests](#) in community-based centers in Spain in 2006
- On average, BCN Checkpoint has 40-60 clients per day
- Services:
  - ✓ HIV and Syphilis rapid testing
  - ✓ Chlamydia, Gonorrhea and HCV
  - ✓ Peer counseling + Referral to HIV clinic
  - ✓ Hepatitis A and B vaccination
  - ✓ Community Research



# RESULTS 2009 - 2015

	All	50+	%
<b>Nº Tests</b>	33.052	1.947	5,9%
<b>Nº Persons</b>	13.770	824	6,0%
<b>HIV confirmed</b>	947	23	2,4%

# RESULTS 2009 - 2015

Persons 50+

Last negative test	Freq.	Percent	Cum.
< 3 months	7	38,9%	38,9%
3 ≤ months < 6	3	16,7%	55,6%
6 ≤ months < 12	1	5,6%	61,1%
> 12 months	4	22,2%	83,3%
Never done	3	16,7%	100,0%
Total	18	100,0%	

# RESULTS 2015

	All	50+	%
<b>Nº Tests</b>	6.986	520	7,4%
<b>Nº Persons</b>	5.095	396	7,8%
<b>HIV confirmed</b>	172	4	2,3%

# RESULTS 2015

	All	50+	%
Nº Tests	6.986	520	7,4%
Nº Persons	5.095	396	7,8%
HIV confirmed	172	4	2,3%

Last negative test	Freq.	Percent	Cum.
< 3 months	3	75,0%	75,0%
3 ≤ months < 6	0	0,0%	75,0%
6 ≤ months < 12	1	25,0%	100,0%
> 12 months	0	0,0%	100,0%
Total	4	100,0%	

# RESULTS 2015

	All	50+	%
Nº Tests	6.986	520	7,4%
Nº Persons	5.095	396	7,8%
HIV confirmed	172	4	2,3%

Last negative test	Freq.	Percent	Cum.
< 3 months	3	75,0%	75,0%
3 ≤ months < 6	0	0,0%	75,0%
6 ≤ months < 12	1	25,0%	100,0%
> 12 months	0	0,0%	100,0%
<b>Total</b>	<b>4</b>	<b>100,0%</b>	

CD4 count	Freq.	Percent
200 - < 350	3	75,0%
350 - < 500	1	25,0%
> 500	0	0,0%
<b>Total</b>	<b>4</b>	<b>100,0%</b>



# LA COHORTE BARCELONA CHECKPOINT

For the year 2014 was calculated for persons of 50+ years at the end of 2015 with 4 seroconversions and 160,29 persons/year of follow-up

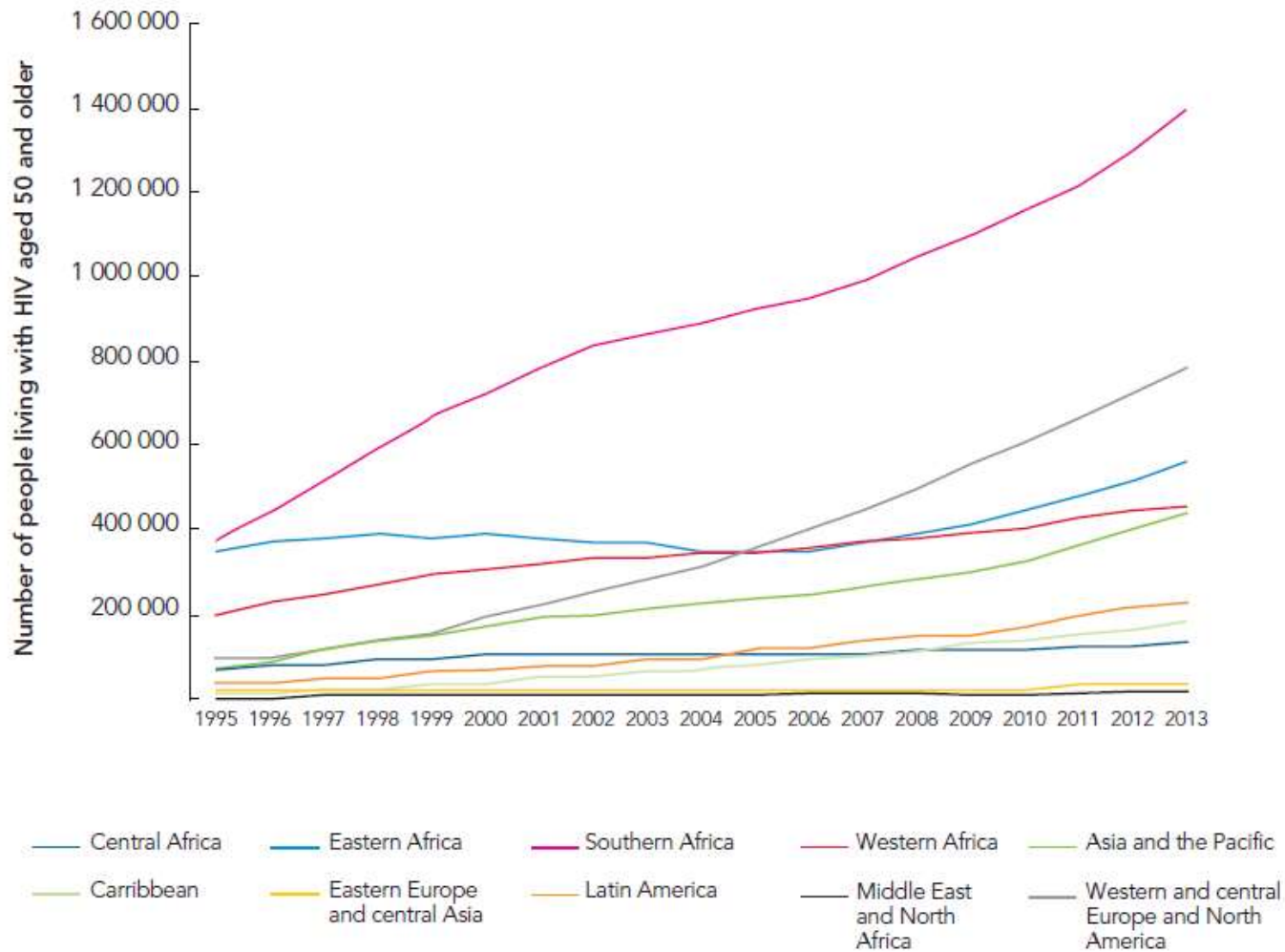
**Incidence HIV: 2,49 x 100 persons/year**  
(95% CI: 0,94 – 6,65)

When accessible, PrEP should be an option!

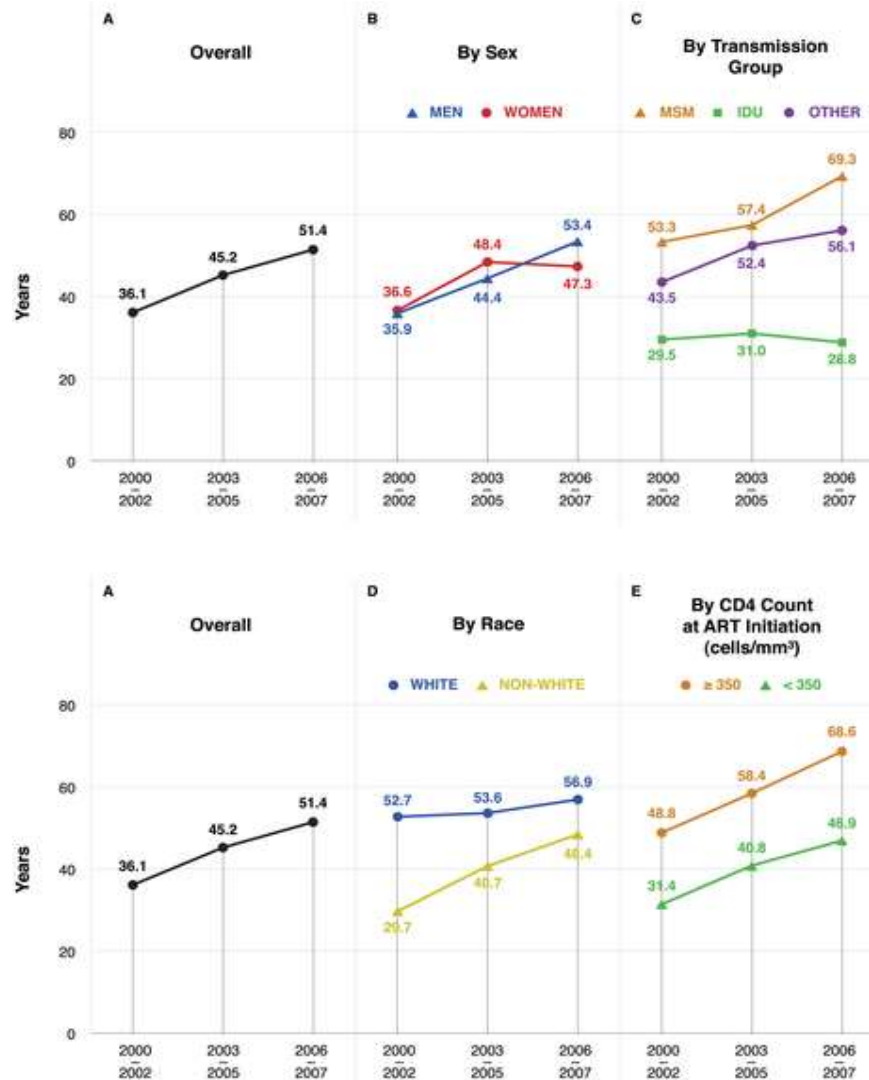
# CONTENT

- Testing in 50+
- Testing and Accentuated Aging

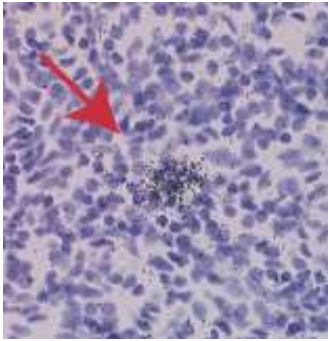
## Estimated number of people living with HIV aged 50 and older by region, 1995–2013



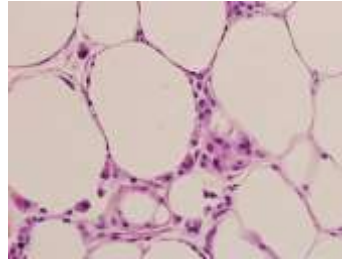
# Mid-point life expectancy estimates at age 20 years in three calendar periods, overall and by sociodemographic characteristics, 2000–2007.



**HIV production  
HIV replication**



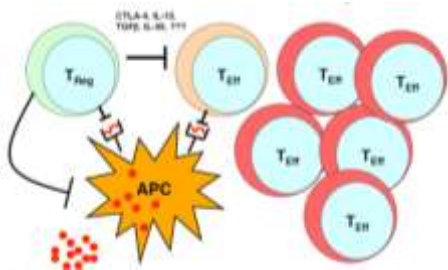
**HIV-associated fat  
Metabolic syndrome**



**CMV  
Excess pathogens**

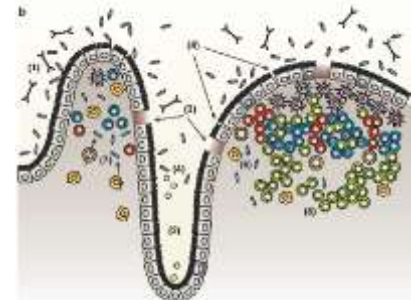


**Loss of regulatory  
cells**

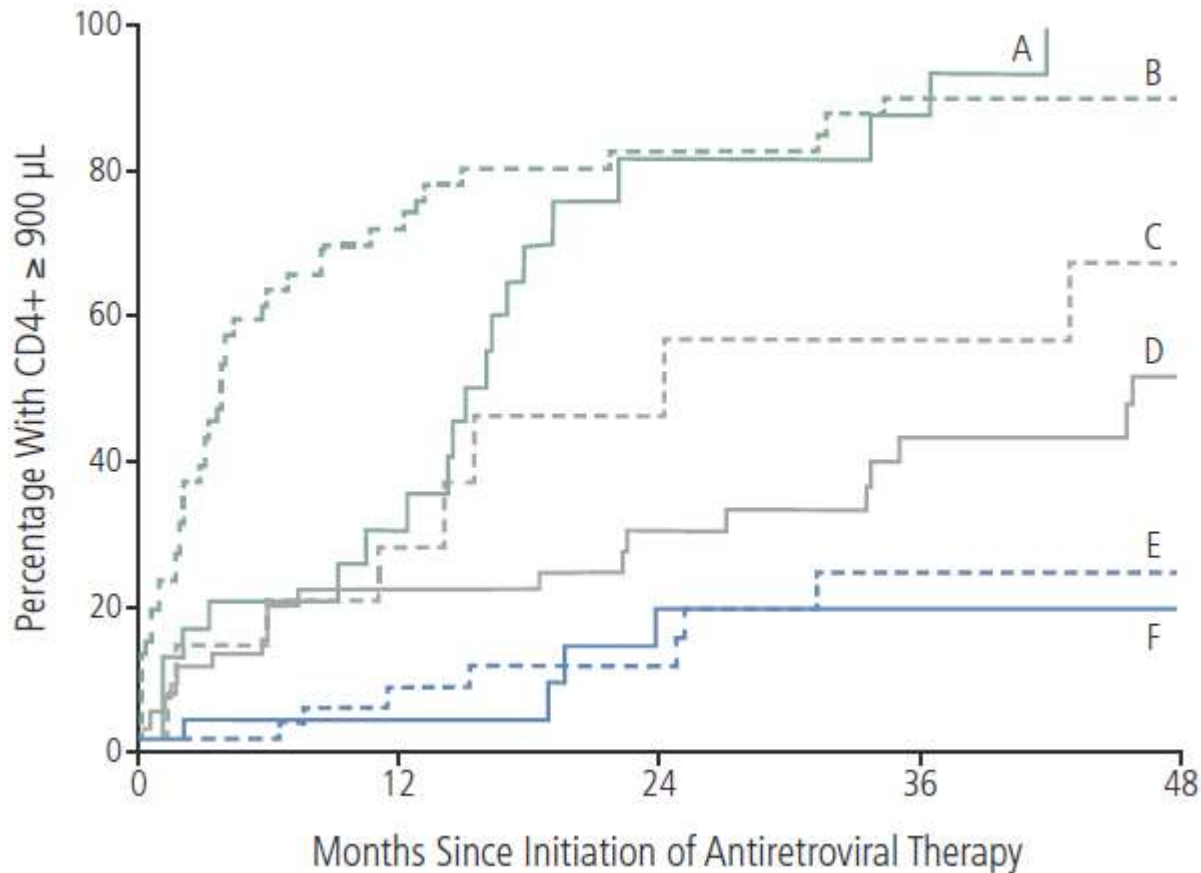


**Inflammation**  
↑ Monocyte activation  
↑ T cell activation  
Dyslipidemia  
Hypercoagulation

**Microbial  
translocation**



**Co-morbidities  
Aging**



$> 500 \text{ CD4}$

- A.  $< 4$  months
- B.  $4 \leq \text{months} < 12$
- C.  $\geq 12$  months

$< 500 \text{ CD4}$

- D.  $< 4$  months
- E.  $4 \leq \text{months} < 12$
- F.  $\geq 12$  months

## Immune activation during acute HIV infection and the impact of early antiretroviral therapy

Purpose of review: The purpose of this review is to outline recent data pertaining to mechanisms of immune activation in acute infection and describe new developments that seek to determine if early antiretroviral treatment can mitigate chronic immune activation.

Recent findings: Following the detection of HIV RNA, highly activated CD8<sup>+</sup> T cells expand and peak approximately 2 weeks following peak viral load whereas levels of proinflammatory soluble markers coincide with a rise in viral load. Immune activation during acute infection is driven by many factors including pyroptosis, replicative capacity of the infecting virus, and loss of Th17 cells within the gut. Early antiretroviral therapy (ART), particularly if initiated in Fiebig I (HIV IgM<sup>-</sup>), preserved mucosal CD4<sup>+</sup> T cells, possibly preventing the release of microbial products associated with immune activation. Viral reservoirs were restricted by the early initiation of ART, and heightened systemic immune activation was partially prevented compared with chronic HIV infection. A strong correlation was found between the size of the viral reservoir and cellular immune activation.

Summary: The timing of immune activation during acute infection occurs shortly after exposure. Recent studies demonstrated that ART mitigates inflammatory responses, preserves CD4<sup>+</sup> T cells, and limits reservoir seeding if provided early in acute HIV infection.

Krebs, Shelly J.; Ananworanich, Jintanat  
Current Opinion in HIV & AIDS, March 2016 - Volume 11 - Issue 2 - p 163–172

# Rates of non-confounded HIV-associated neurocognitive disorders in men initiating combination antiretroviral therapy during primary infection

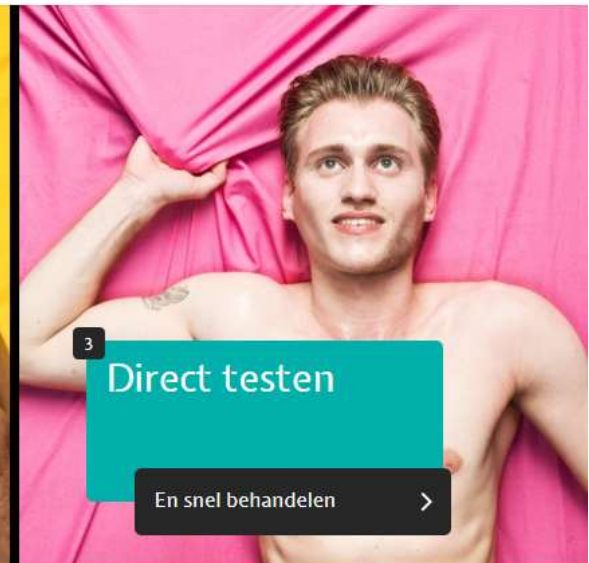
Teresa H. Evering<sup>a</sup>, Allison Applebaum<sup>b</sup>, Melissa La Mar<sup>a</sup>,  
Donald Garmon<sup>a,\*</sup>, David Dorfman<sup>c</sup> and Martin Markowitz<sup>a</sup>

**Conclusion:** Rates of HAND in this cohort of HIV-infected men without comorbid conditions who initiated early cART are low. Our findings suggest a possible neuro-protective benefit of early cART and an important contribution of comorbidities to observed HAND prevalence.

*AIDS* 2016, **30**:203–210



# heb ik hiv?



# INCREASE FREQUENCY OF HIV TESTING IN MSM



La prueba del  
**VIH**

Si los hombres gais nos hacemos la prueba del VIH cada tres meses, conseguiremos proteger nuestra salud y reducir las nuevas infecciones en nuestro colectivo.

¡Cuidar nuestra salud y parar la transmisión del VIH empieza por nosotros!

**bcn** checkpoint

*¡Cada 3 meses!*

# LOS GAIS LO HACEMOS A MENUDO

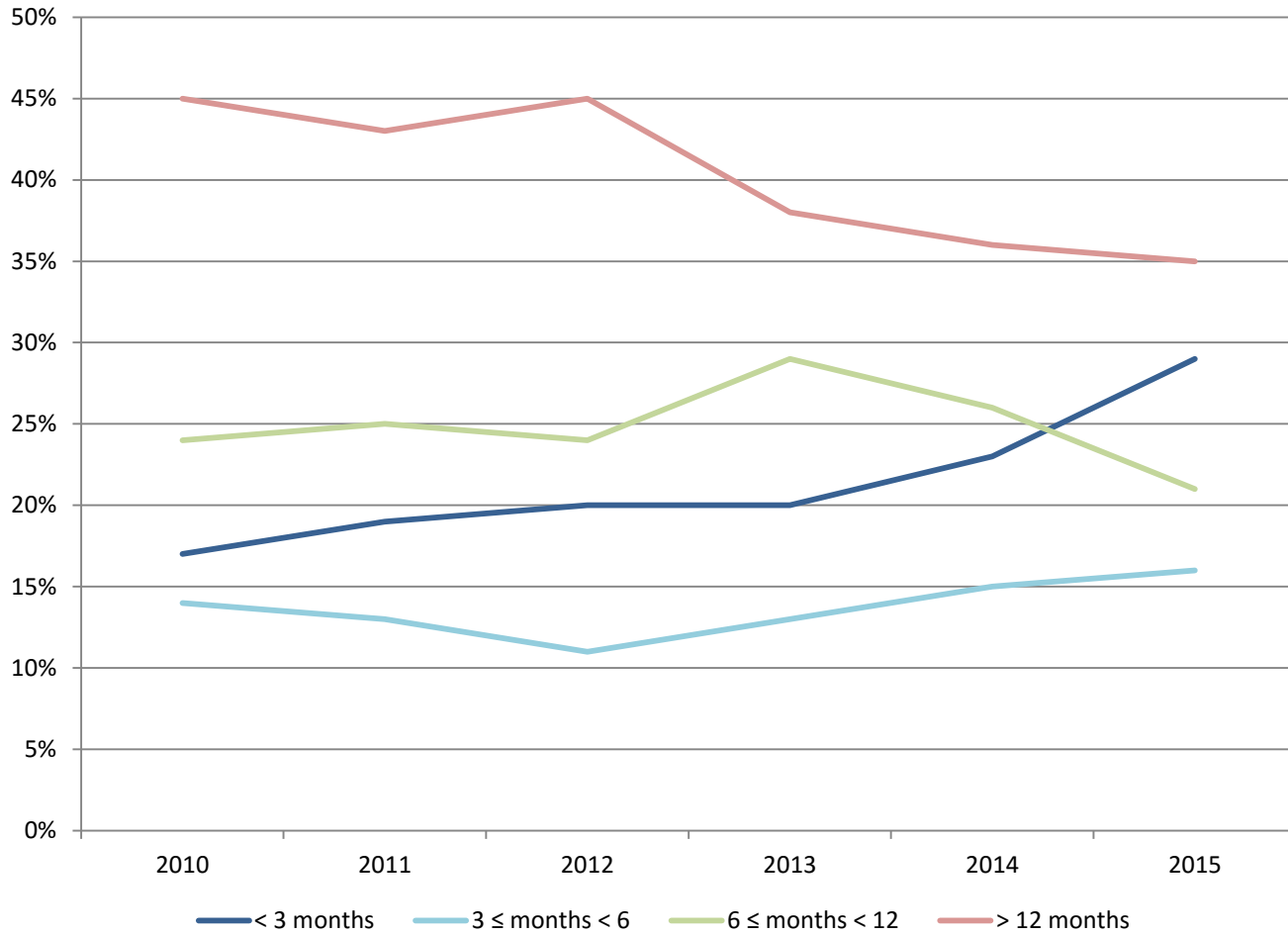
HAZTE LA PRUEBA DEL VIH UNA VEZ AL AÑO, AUNQUE SIEMPRE USES CONDONES. SI NO LOS UTILIZAS SIEMPRE, HÁZTELA CADA TRES MESES.

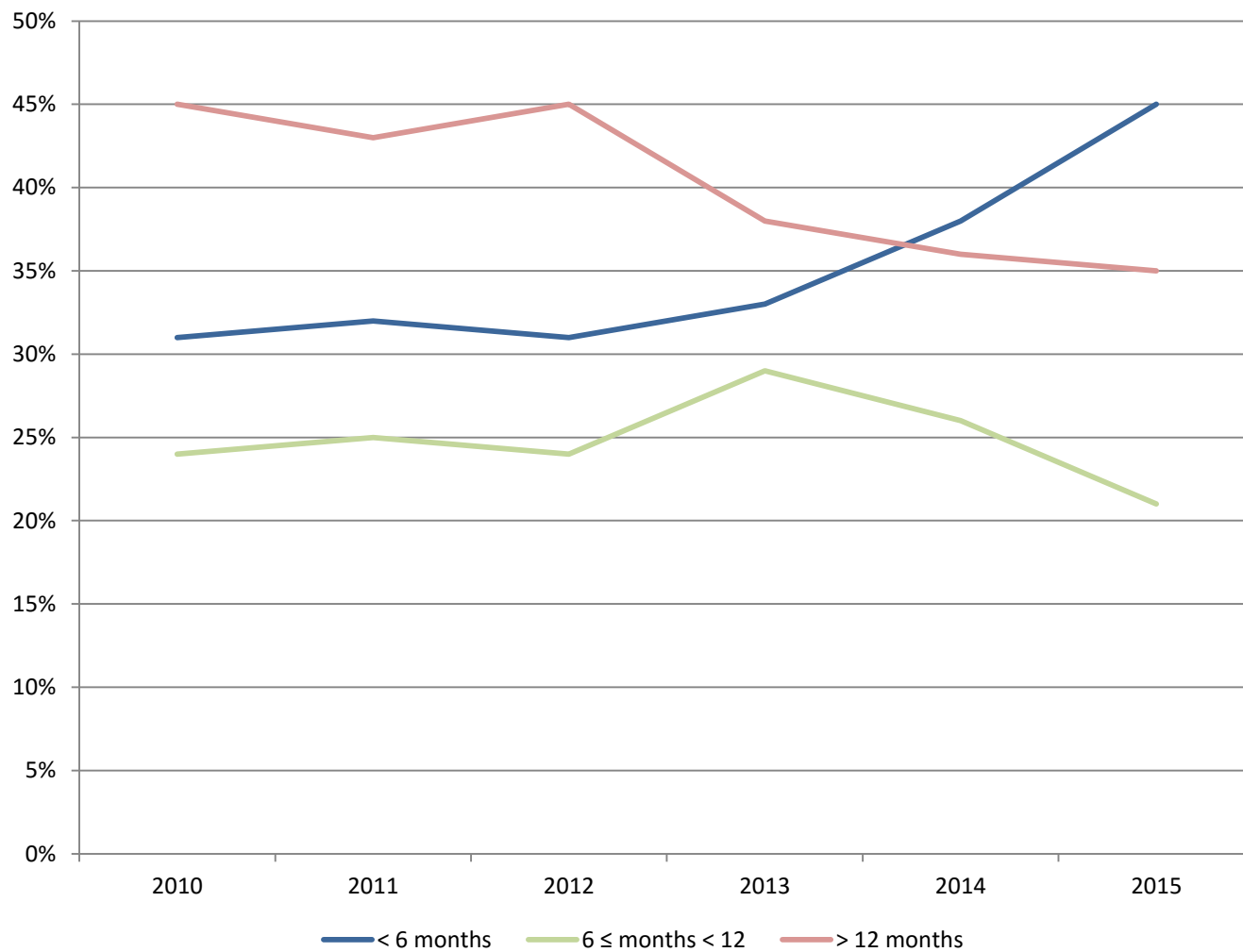


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COMTE BORSELL 144-164 (METRO URGELL) 08015 BARCELONA

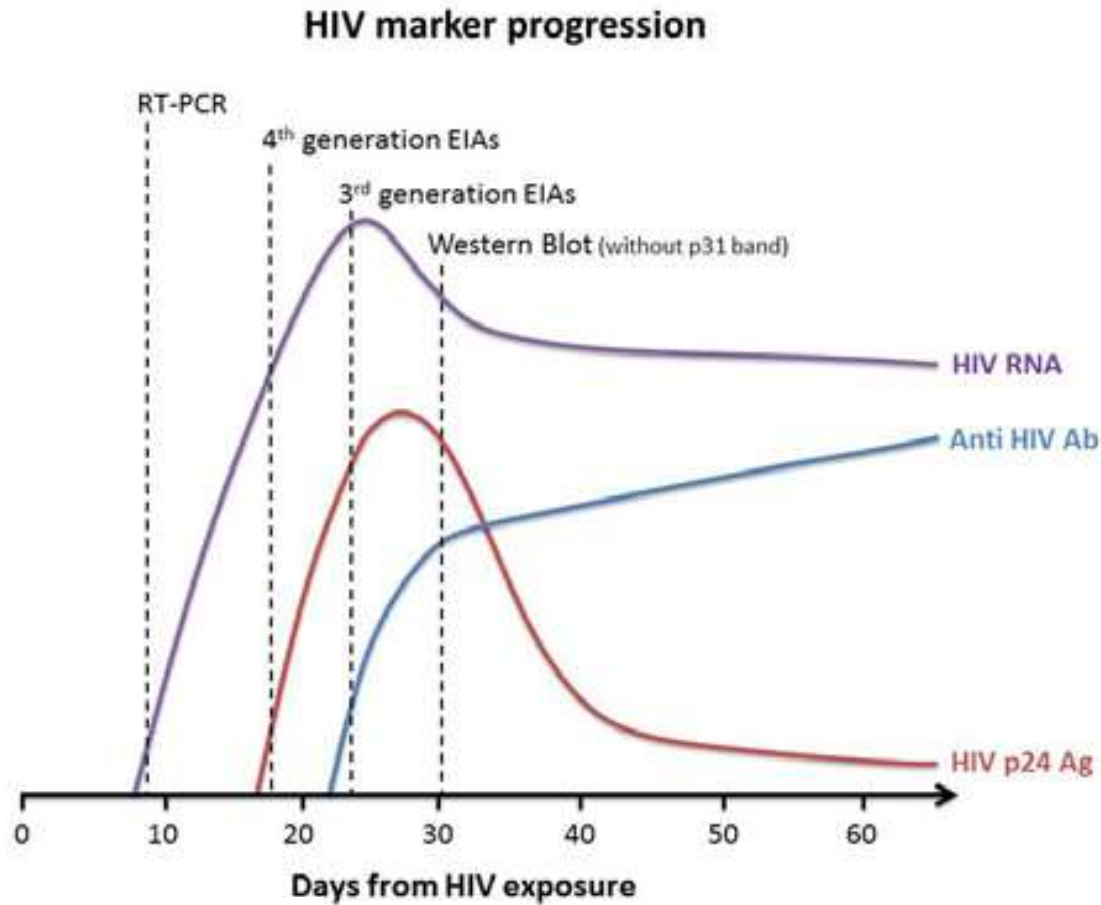
COLABORAM:







# DETECTION OF ACUTE HIV INFECTIONS



# METHOD

When Rapid Test result was negative, the Xpert HIV-1 Qual test was offered to clients with one or more of the following criteria:

- No consistent condom use during the last 3 months
- > 10 occasional partners during the last 6 months
- STI during the last 6 months
- Partner with a recent HIV diagnosis
- Symptoms of acute infection

Period: 21<sup>h</sup> April – 14<sup>th</sup> September

# RESULTS OF ACUTE INFECTIONS

Between 21<sup>st</sup> April and 31<sup>th</sup> December

Total tests performed: 4.655 (122 positive confirmed)

Total tests Xpert HIV-1 Qual: 1.055

Total Reactive Xpert HIV-1 Qual: 6

Start ART: 1-3 days

**Acute Case #2:** 38 year old, flu-like symptoms, no resolution at ED or GP

Date detection: 8-Jun; Date hospital visit: 9-Jun; Start treatment: 9-Jun (1 INSTI + 2 NRTIs)

**Western Blot:** negative & **HIV VL:** > 10 million & **CD4:** 117 (17%)

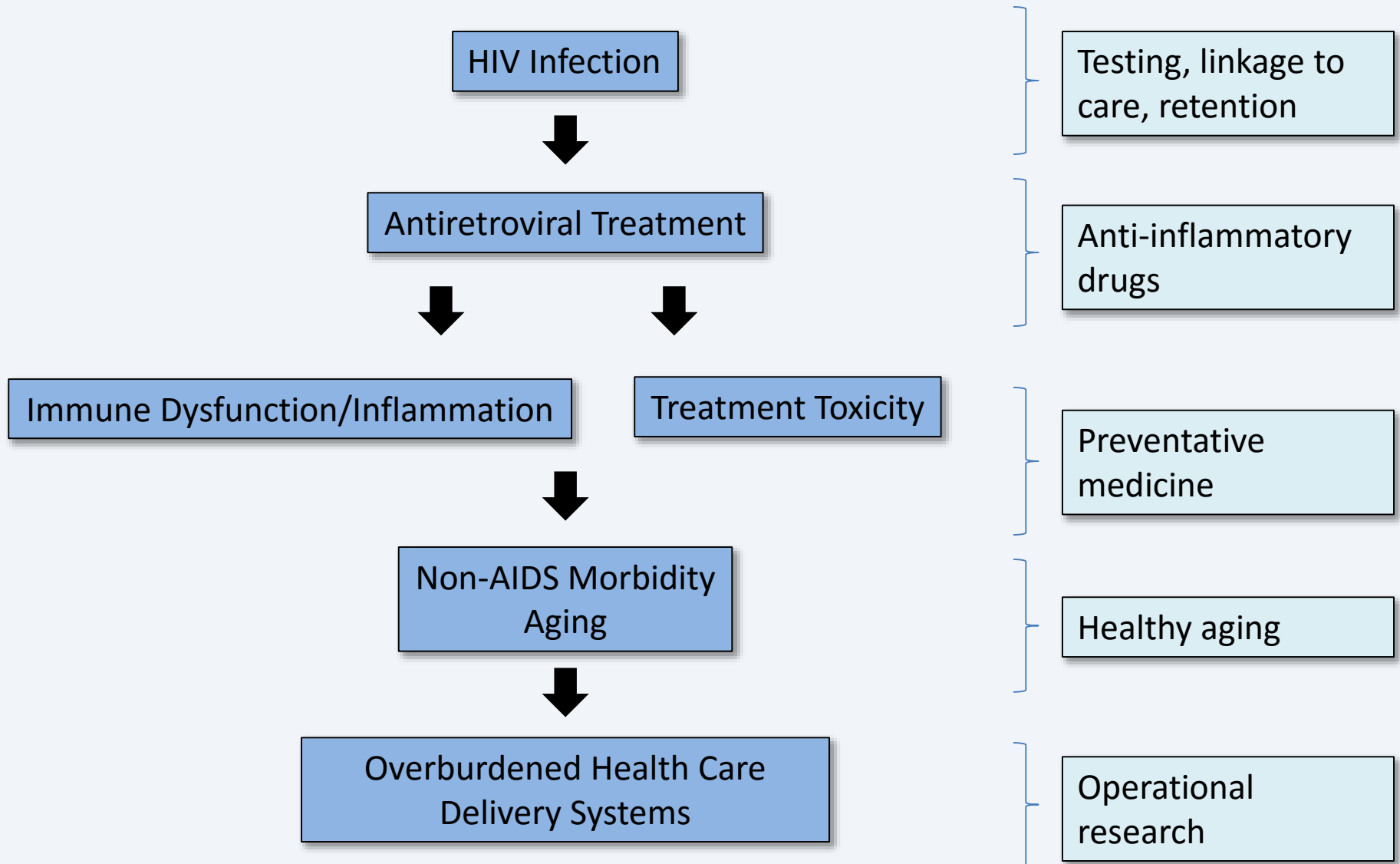
**Tx Control 4 weeks:** HIV VL 562 (↓ 99,9%),

**Tx Control 12 weeks:** HIV VL undetectable & **CD4:** 461 (27%)

**Estimated Time of Infection:** 15 days (Acute)



# Research and clinical priorities in the era of “complete “ viral suppression: Test and treat, reduce inflammation, insure healthy aging, and provide chronic care until there is a cure



# ACKNOWLEDGEMENTS

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