



OSPEDALE  
SAN RAFFAELE



**PROGRAMMA SEMINARIO 2016**

*presso il Centro Congressi Conte di Cavour Via Cavour 50/A, 00184 Roma – Zona Stazione Termini*

**SOMMINISTRAZIONE A LENTO RILASCIO DELLA TERAPIA ANTI-HIV:  
QUALI SARANNO LE SFIDE, LE OPPORTUNITÀ E LE CRITICITÀ? (2)**

Roma, 16 settembre 2016

# I NUOVI BISOGNI DELLE PERSONE CON HIV

## Il punto di vista della comunità scientifica

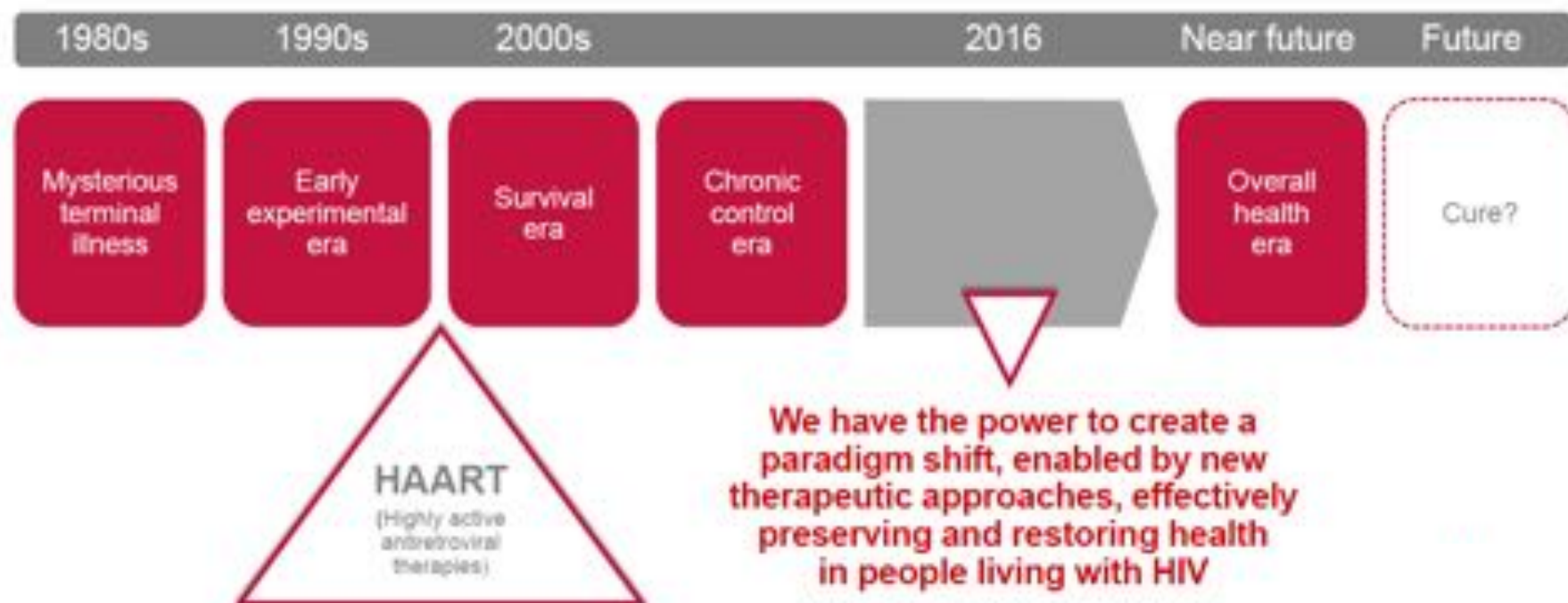
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Dipartimento di Malattie Infettive

Ospedale San Raffaele Milano

We are entering a new era

**THEN**  **NOW**



DELAY MAY BE SERIOUS **NOW**

**FREE**

FOR ONLY

**FREE**

THIS WAY TO HEAVEN

**FREE**

S-A-A-Y these are good GOOD  
pure and better, my new medical  
discovery you my tangy goodness  
you with the secret KLEEN-  
KLEER-VU my blended you my

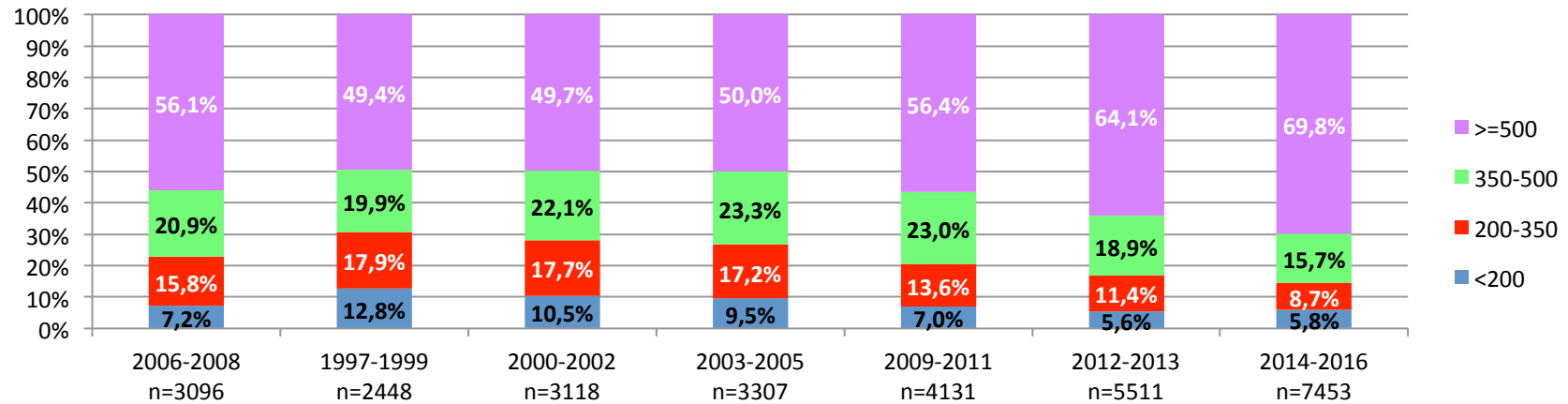


***La dittatura  
della certezza***

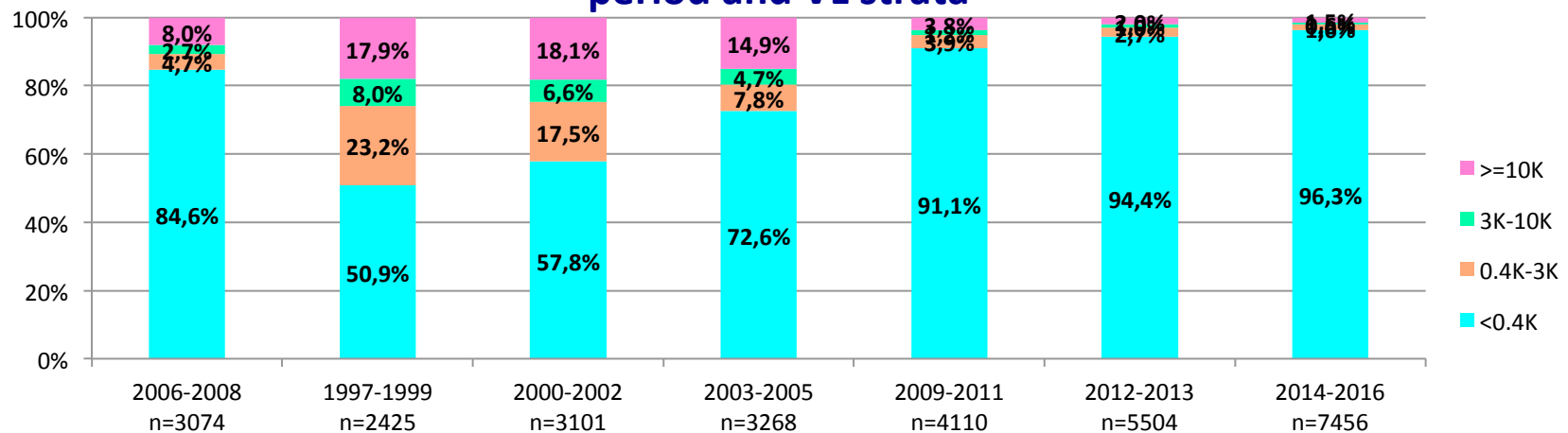




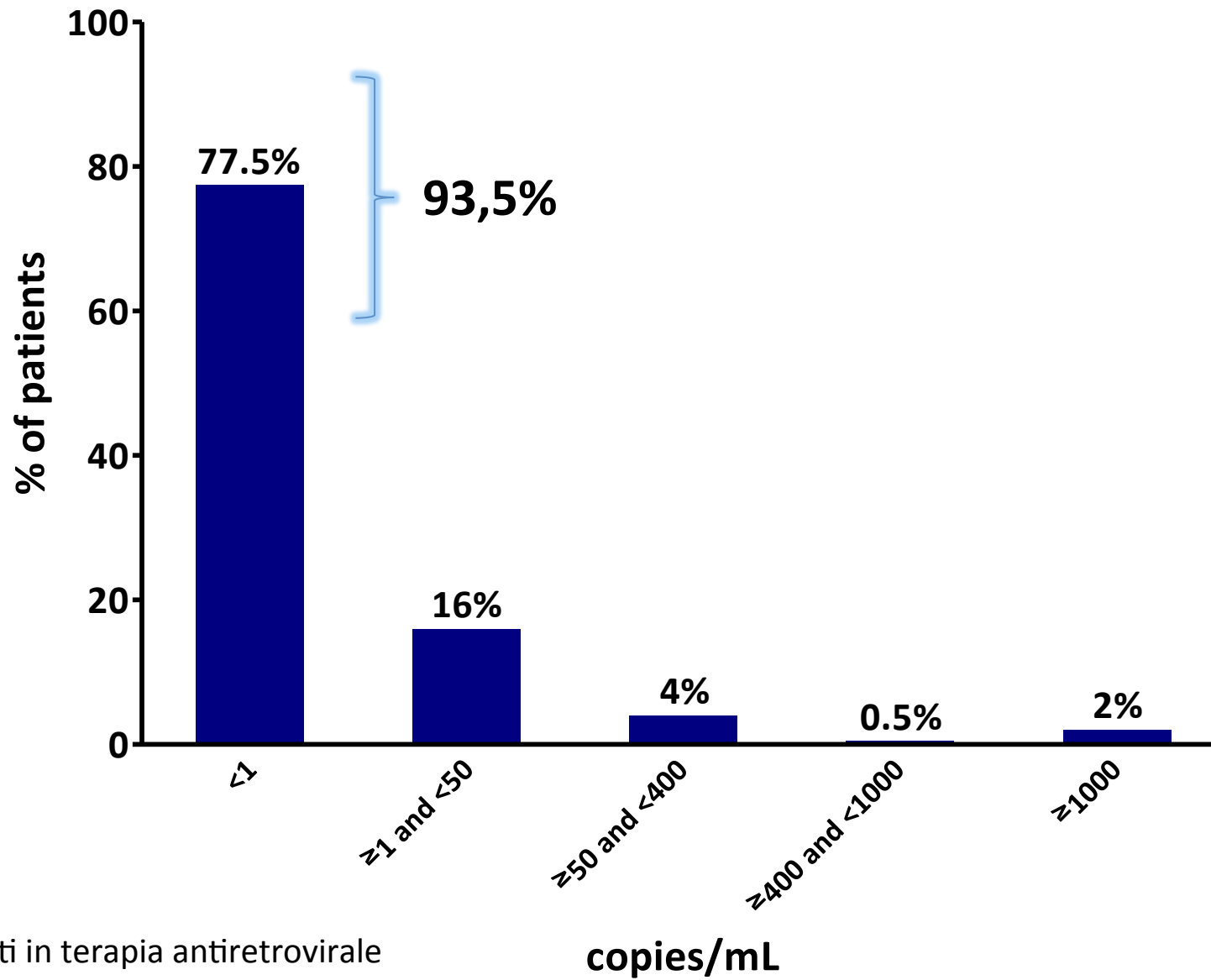
## CD4 in drug experienced patients, according to calendar period and CD4 strata



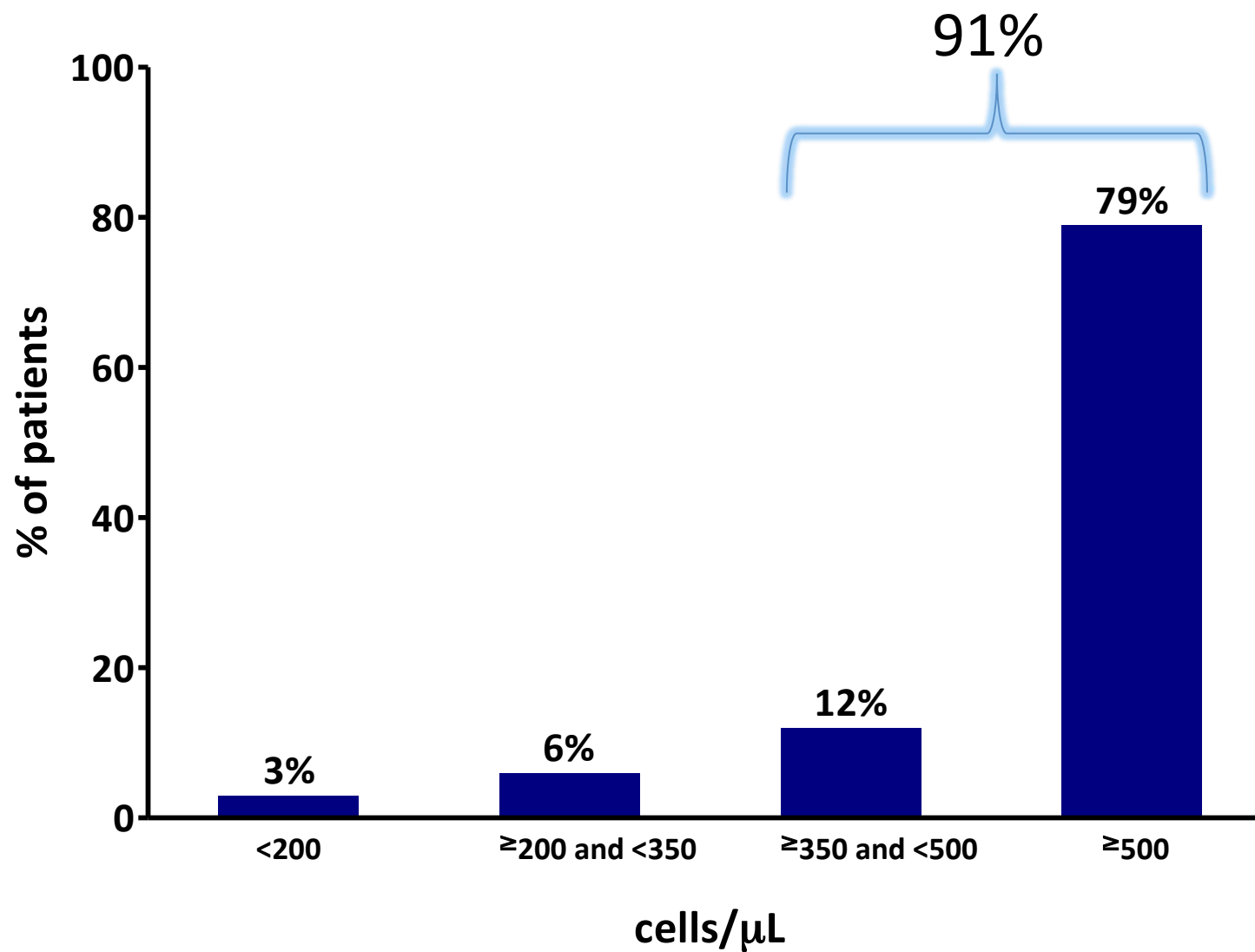
## HIV-RNA in drug experienced patients, according to calendar period and VL strata



# Carica virale tra i pazienti\* attualmente seguiti

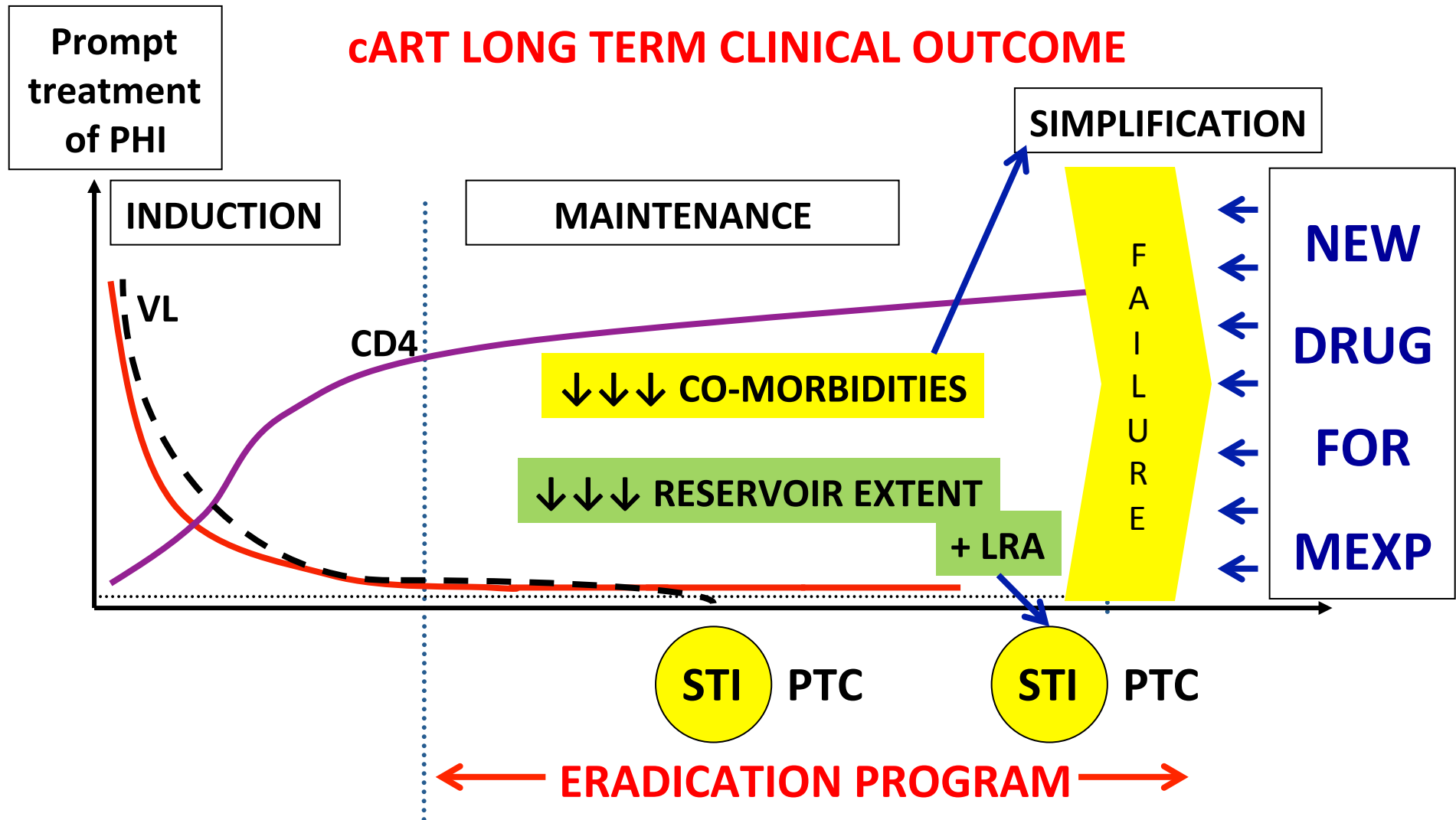


## CD4+ tra i pazienti\* attualmente seguiti



\* pazienti in terapia antiretrovirale

# cART 2.0: Different approach and aim in distinct moment of HIV therapy





# More or less perspectives

+

- Immediate therapy (PHI!)
- Immunorecovery
- Rx convenience (STR)
- Switch RCT driven
- Simplification (long-acting drugs)
- Drugs/class
- Clearance of reservoirs
- Post treatment controller
- Eradication research

-

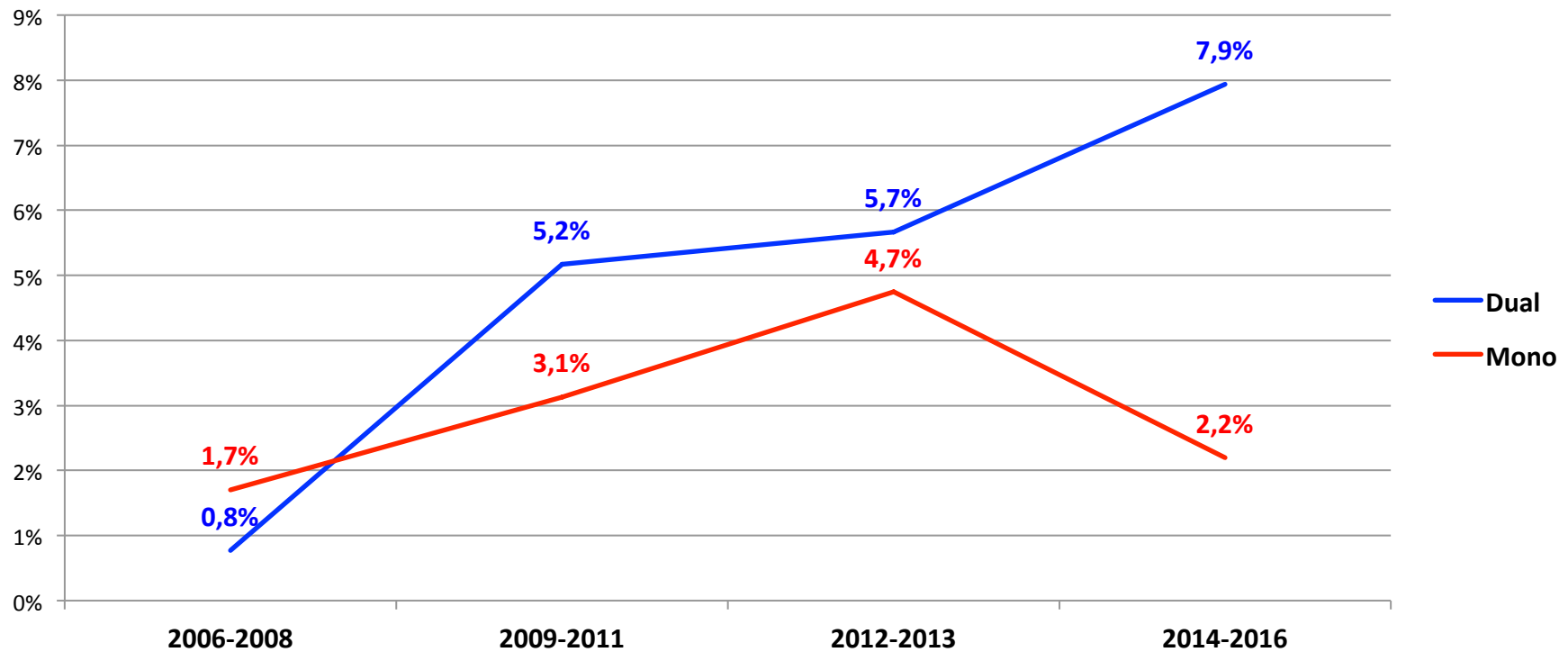
- Late presenters
- Drug toxicity
- Immune-activation
- Co-morbidities
- «Trendy» changes
- Failures
- Costs

***Il dispotismo  
del 2NA backbone***





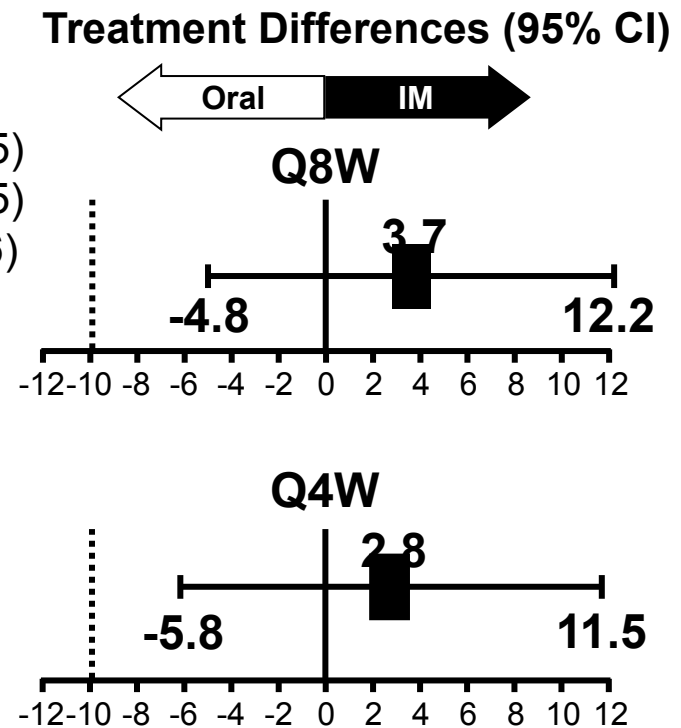
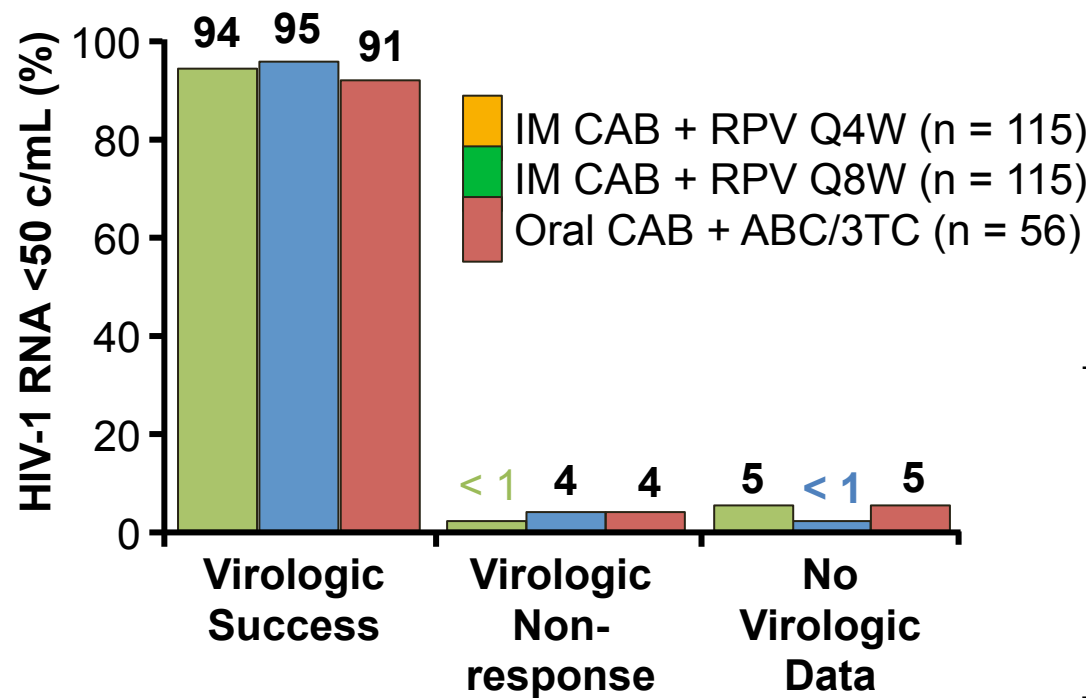
### Proportion of mono/dual PI therapies according to calendar period of starting



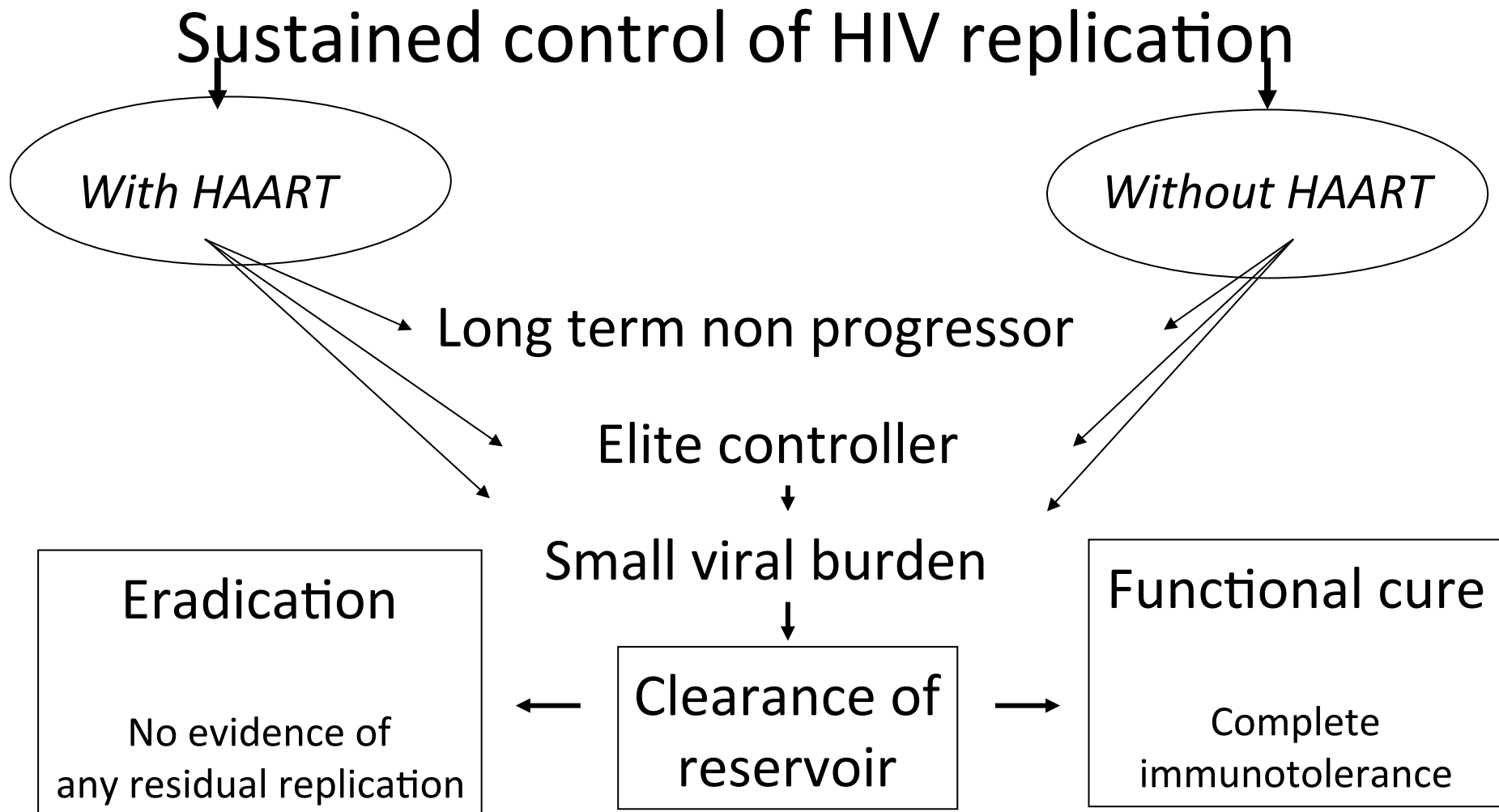


# LATTE-2: Maintenance Wk 32 Virologic Efficacy (ITT-Maintenance Exposed)

- Virologic efficacy of Q4W and Q8W IM regimens similar to oral regimen
- No INSTI, NNRTI, or NRTI resistance mutations detected



# Reopening the frontier of the going goal of the antiretroviral therapy.



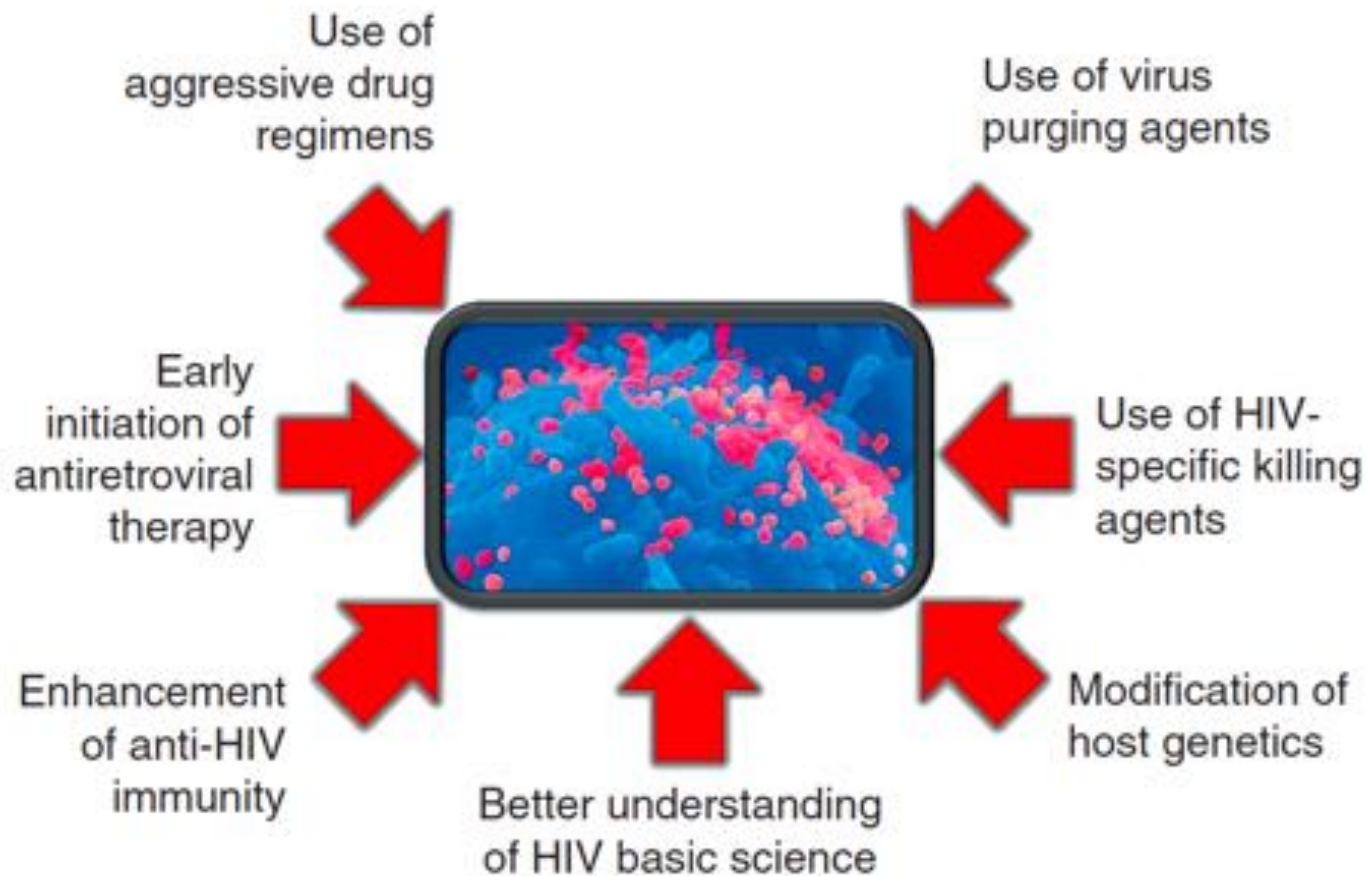
# BEST PERFORMERS

<50 copies/mL for at least 12 years = 38/4706 (0,8%)

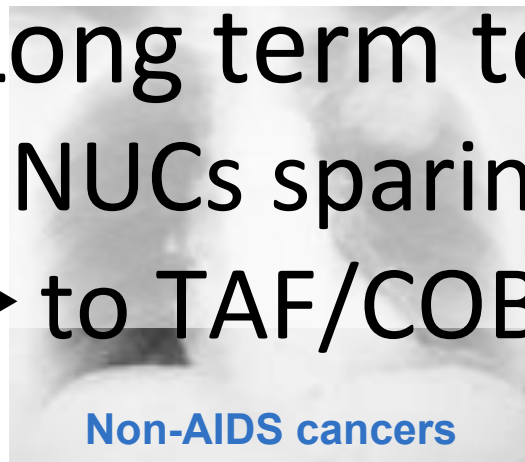
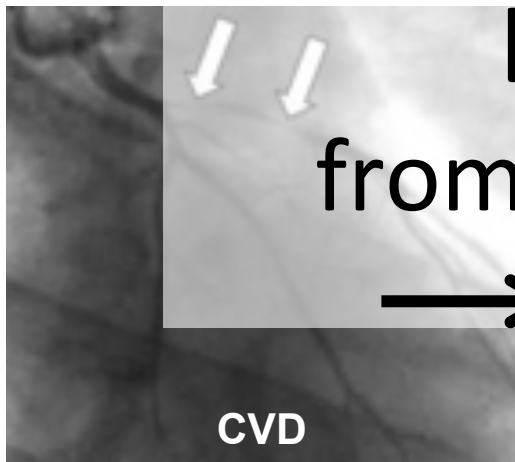




# Potential strategies for eradicating HIV in infected individuals receiving ART

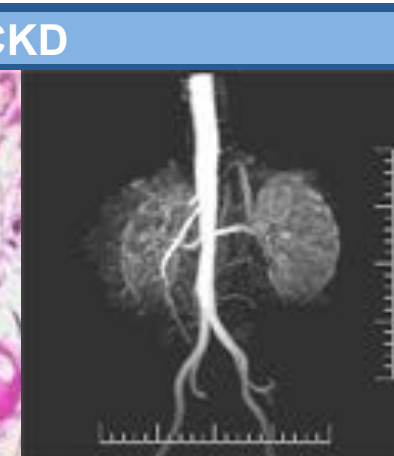
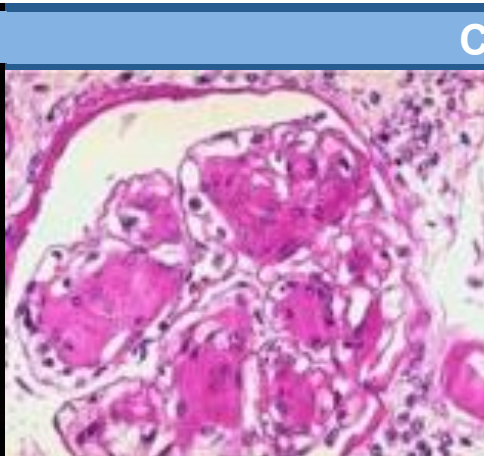
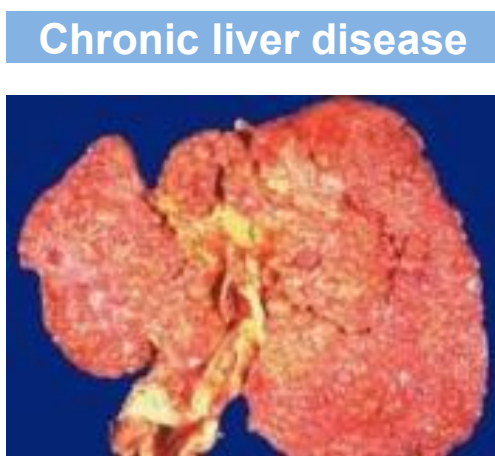
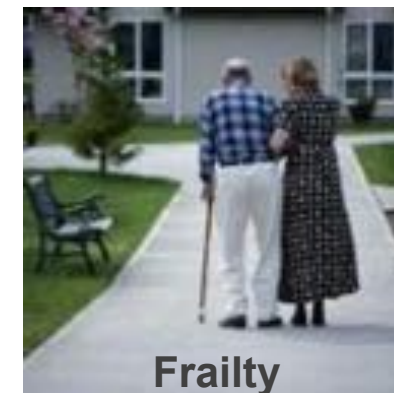


# Long term toxicity: from NUCs sparing/NUCS lite → to TAF/COBI FDC



Co-morbidities in HIV share common risk factors

- HIV Disease
- Drugs choice and Exposure
- Lifestyle factors



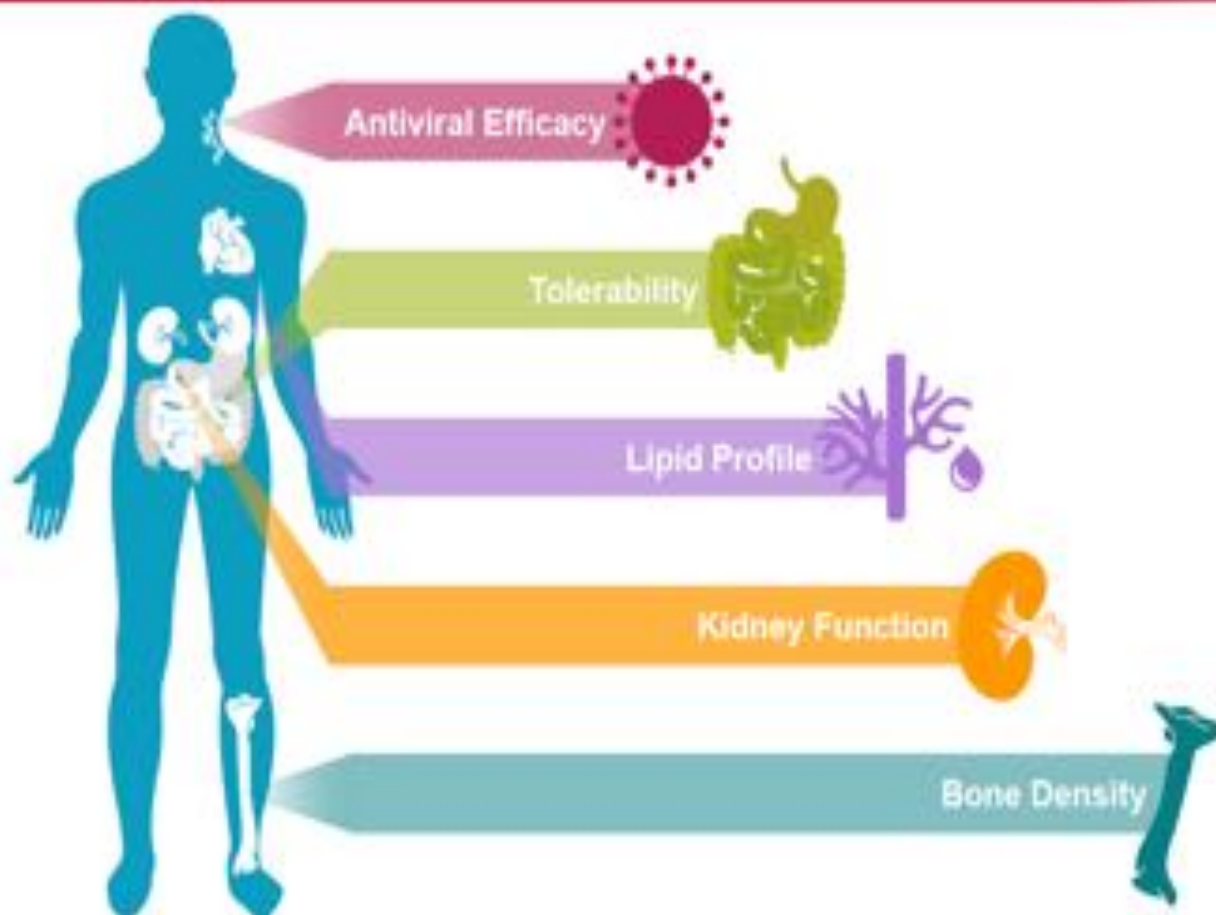
***After Chernobyl***

TDF  
DAMAGE RECLAIM

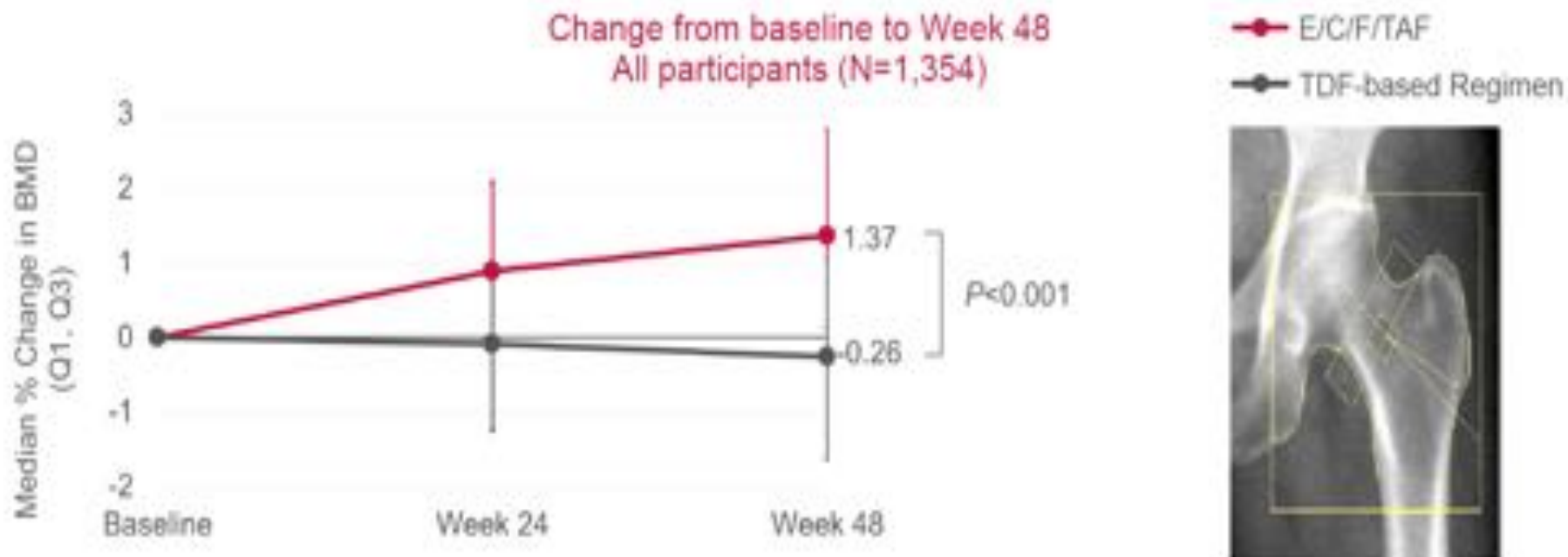




## TAF: Effect of 90% lower plasma tenofovir by organ system



## Changes in hip BMD after switch to E/C/F/TAF TDF switch (Study 109)

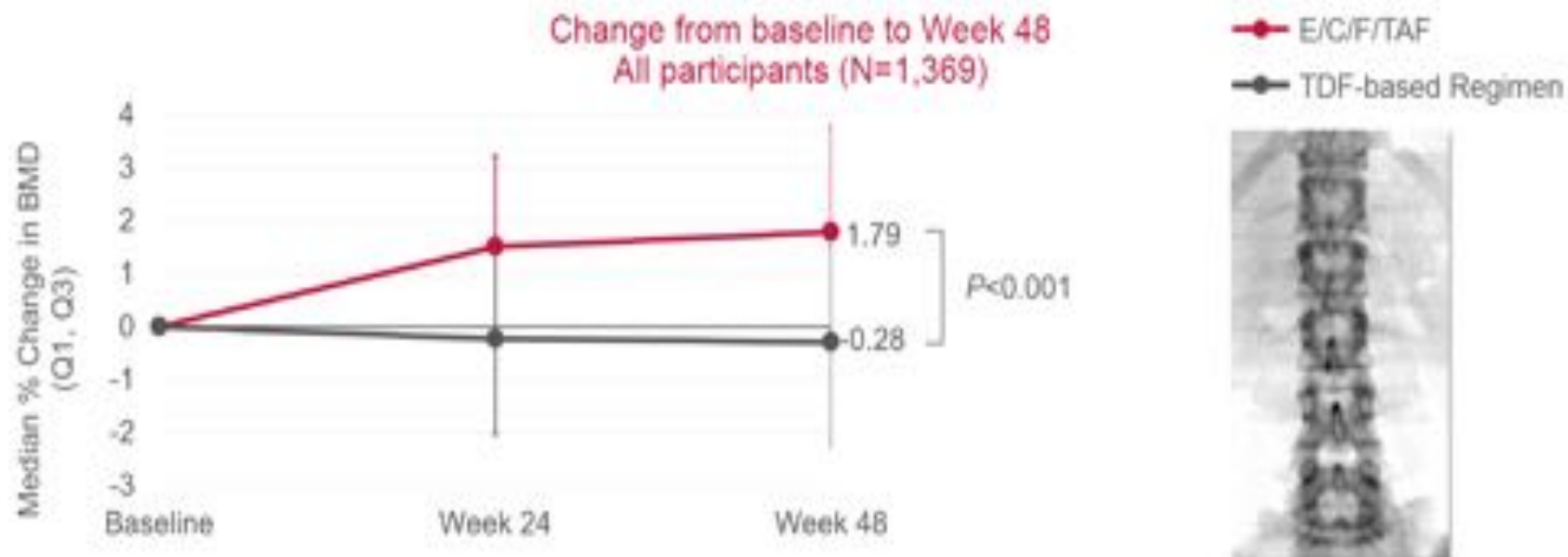


- Regardless of prior treatment regimen, differences between arms were statistically significant
- >1.6% difference between the arms at Week 48

<sup>1</sup>Assessed by DXA.

Mills A, et al. IAS 2015, Vancouver, CA, #TUJAB0102.

## Changes in spine BMD after switch to E/C/F/TAF TDF switch (Study 109)



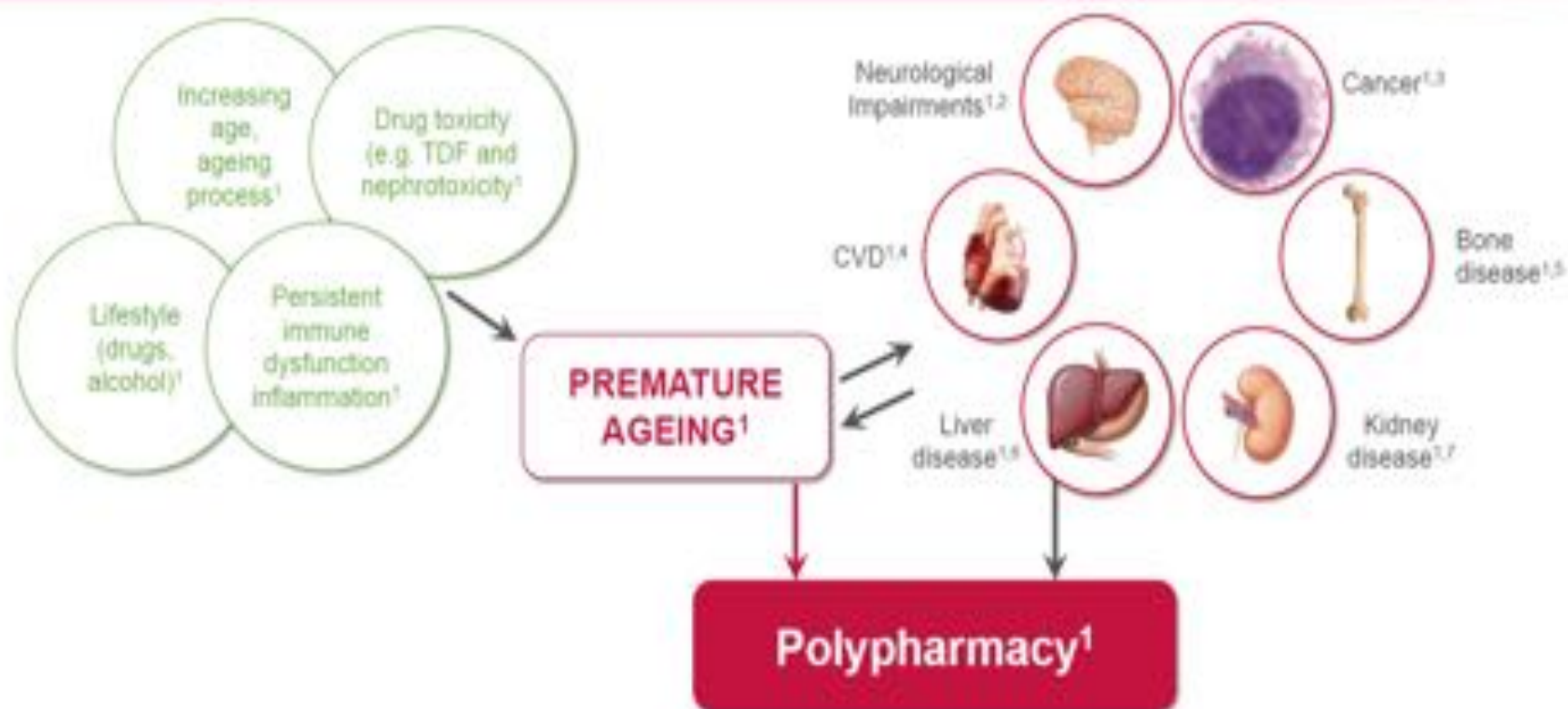
- Regardless of prior treatment regimen, differences between arms were statistically significant
- >2% difference between the arms at Week 48

<sup>†</sup>Assessed by DXA.

Mills A, et al. IAS 2015, Vancouver, CA; #TUAB0102.



## Do PLWHIV age prematurely?



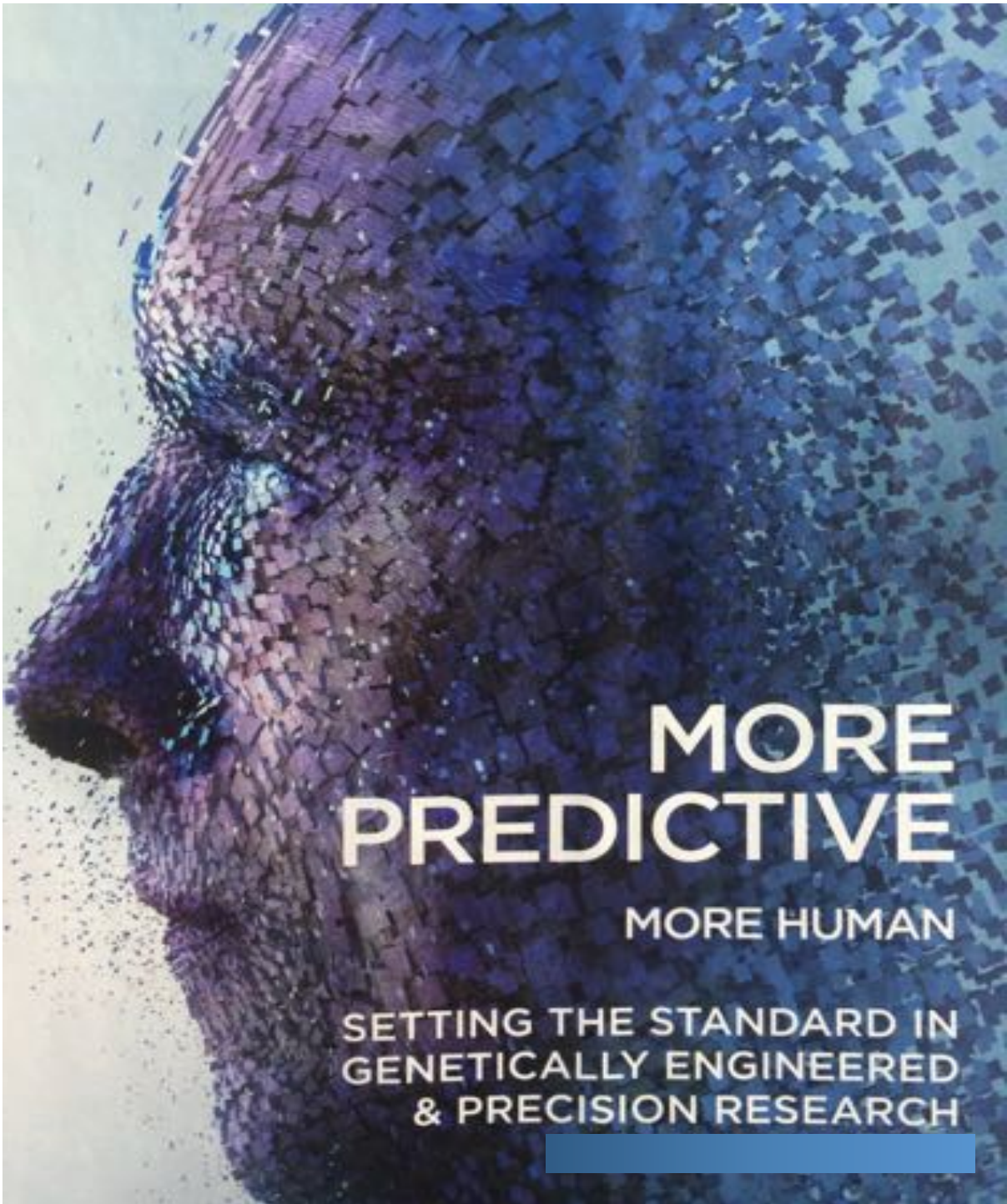
CVD, cardiovascular disease; PLWHIV, people living with HIV

1. Deeks SG et al. *BMJ* 2009;338:a3172. 2. McArthur JC et al. *Ann Neurol* 2010;67:699-714. 3. Nguyen ML et al. 18th IAC, Vienna, Austria 2010. Abstract WEAB0105. 4. Freiberg MS et al. *JAMA Intern Med* 2013;173:614-22. 5. Brown TT et al. *AIDS* 2006;20:2165-74. 6. Townner WJ et al. *JAIDS* 2012;60:321-7. 7. Lucas GM et al. *Clin Infect Dis* 2014;59:e96-138.

# STR triple combo everywhere?

Preferred

Alternative



# MORE PREDICTIVE

MORE HUMAN

SETTING THE STANDARD IN  
GENETICALLY ENGINEERED  
& PRECISION RESEARCH



## Viral co-infection can contribute to the higher risk of cancer among HIV-positive patients



Human herpes virus 8 co-infection



Human papillomavirus co-infection



Epstein-Barr virus co-infection



Hepatitis virus co-infection

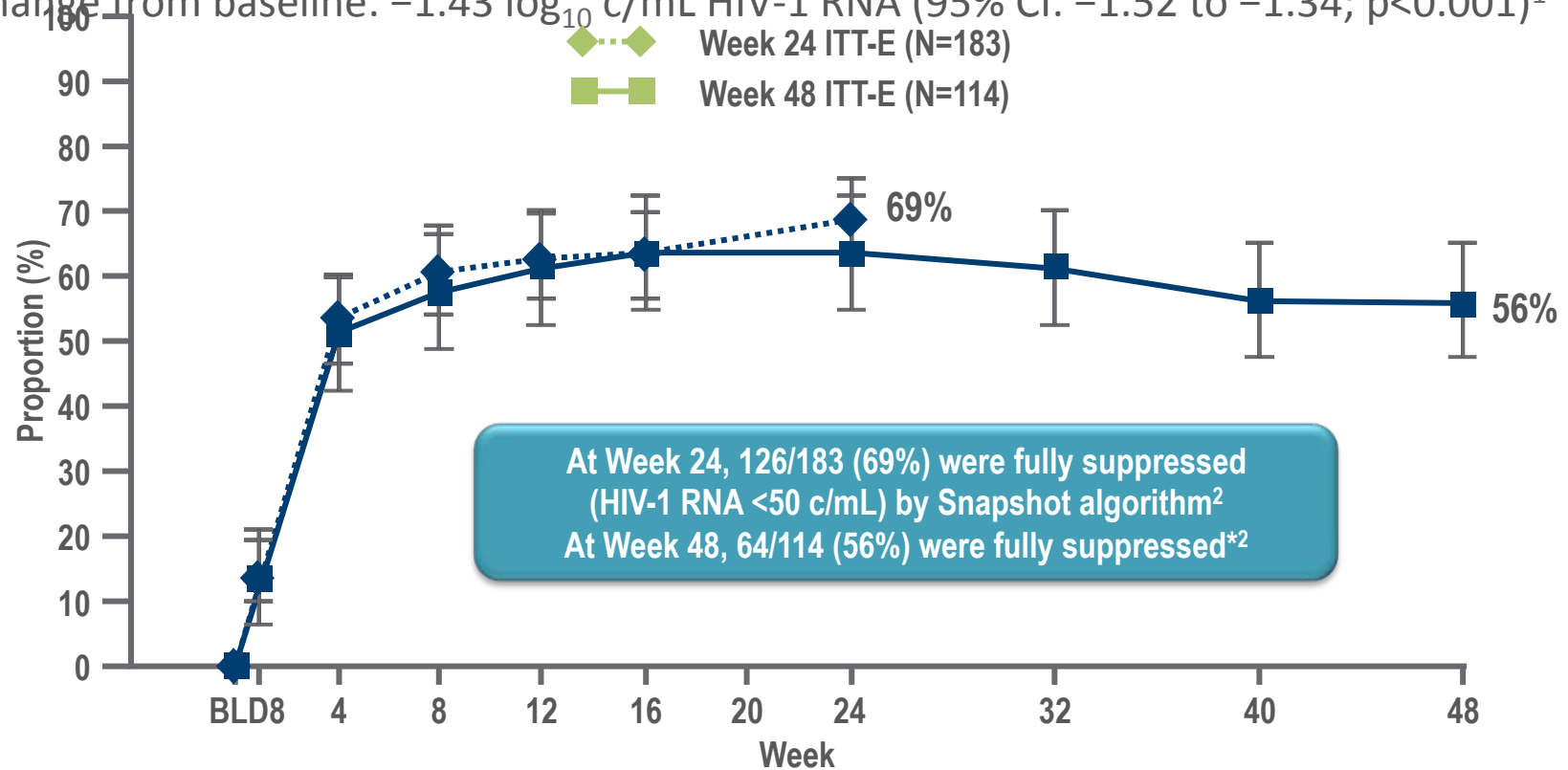
In addition to viral infections, the prevalence of some traditional risk factors for cancer, such as smoking and heavy alcohol use, are more prevalent among HIV-positive patients<sup>2</sup>



## EFFICACY OF DTG OVER TIME (SNAPSHOT, ITT-E)

- **Day 8 efficacy:** DTG was associated with significant reductions from baseline in HIV-1 RNA;

change from baseline:  $-1.43 \log_{10}$  c/mL HIV-1 RNA (95% CI:  $-1.52$  to  $-1.34$ ;  $p < 0.001$ )<sup>1</sup>



\*Week 48 population (N=114) included those subjects who had the opportunity to reach Week 48 at time of data cut-off

Adapted from:  
1. Nichols G, et al. HIV11 2012. Abstract O232  
2. Nichols G, et al. IAS 2013. Abstract TULBPE19



***Costs: fairplay***



## Conclusions

### PLWHIV are ageing

- Increased life expectancy of PLWHIV on ART
- Increasing numbers of people seroconverting at an older age

### Risk of age-related co-morbidities is greater for PLWHIV than for HIV- uninfected individuals

- Hypertension, CVD, diabetes, bone fractures, renal failure, and malignancies

### Treatment and prevention of co-morbidities alongside HIV poses challenges

- Additive toxicities
  - Contribution of ART toxicities
- Management of DDIs
- Multidisciplinary approach

***Grazie per l'attenzione!***