

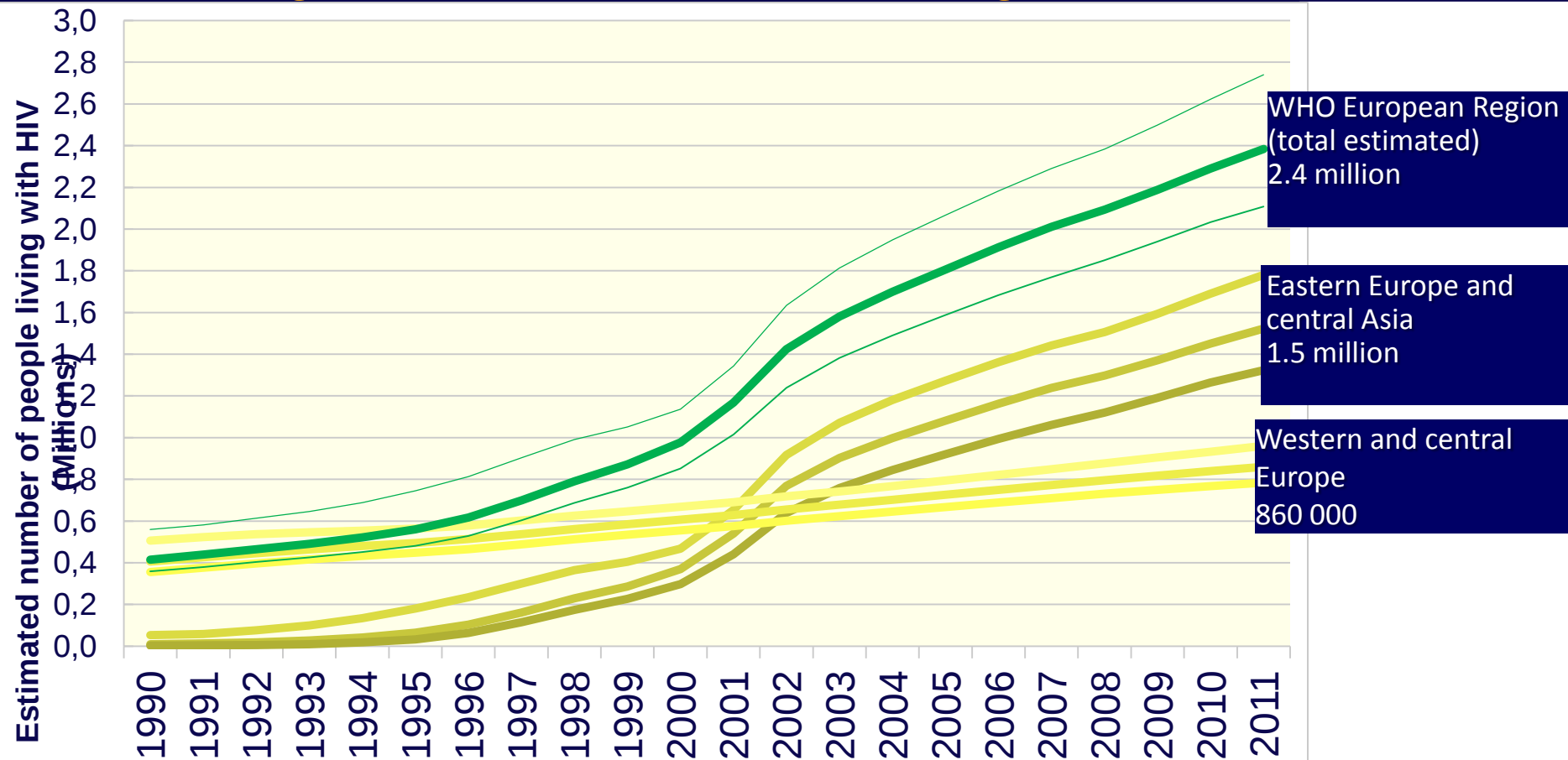
HIV In Europe: Remaining challenges

**III HIV Portugal Conference:
Zero HIV infections, zero discrimination, zero AIDS related deaths**

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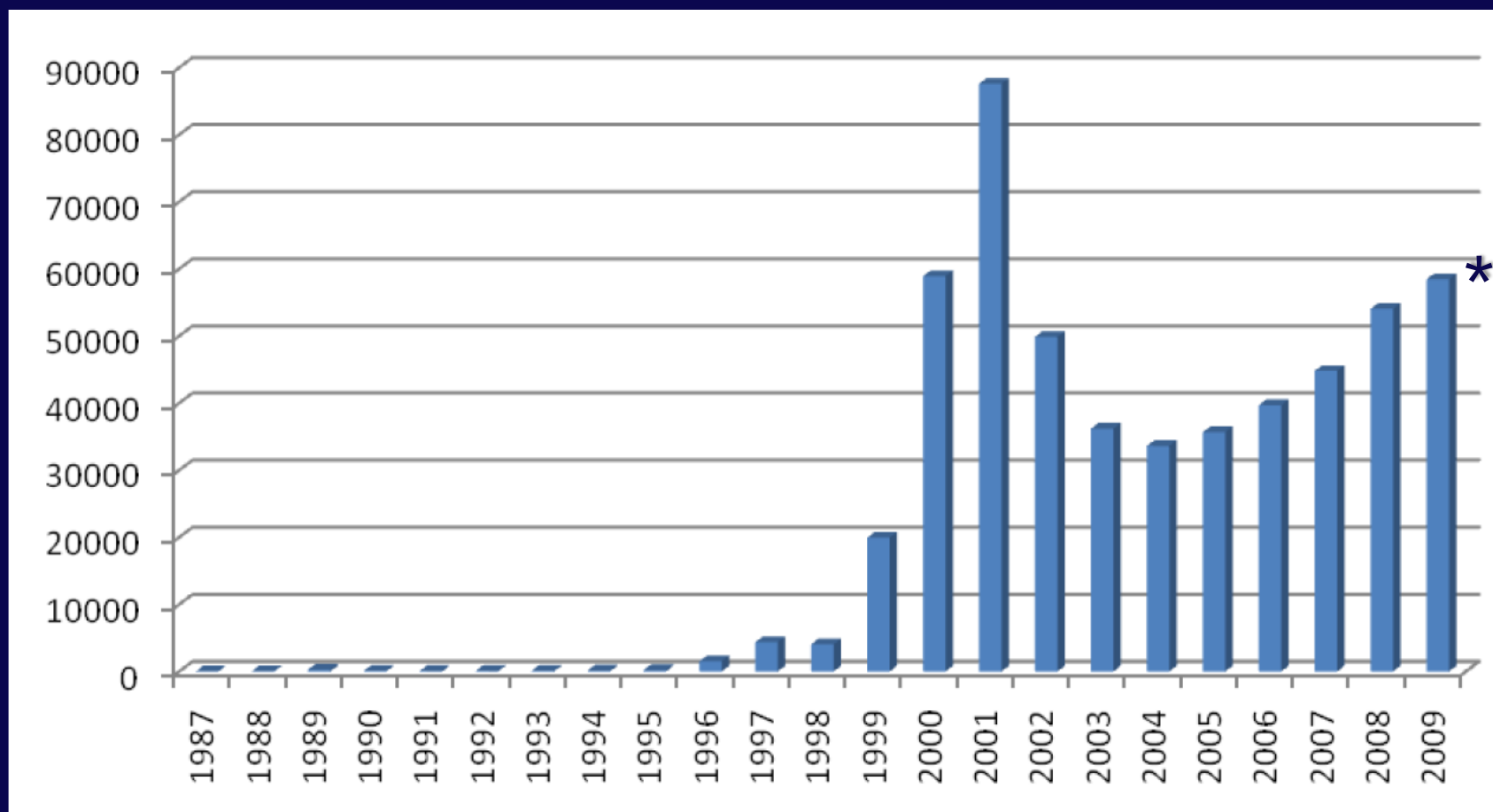
HIV epidemic in eastern Europe and central Asia the fastest growing in the world:

Estimated number of people living with HIV in WHO-EURO Region, 1990-2011



Source: UNAIDS. Global report: UNAIDS report on the global AIDS epidemic 2012.

The number of new cases of HIV infection in Russian citizens, 1987 - 2009

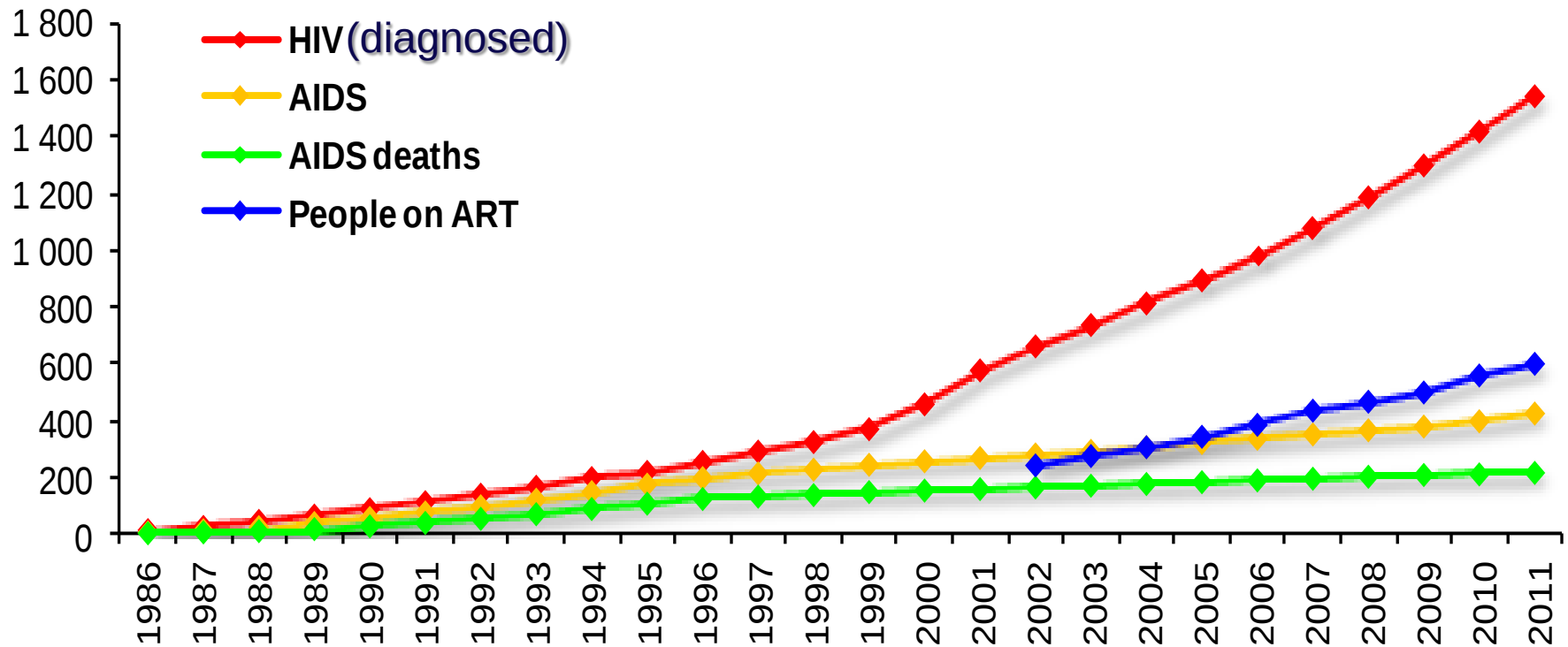


*: numbers continue to increase in 2010/11 (app 70,000)

20-25 million HIV tests per year – www.hivrussia.org

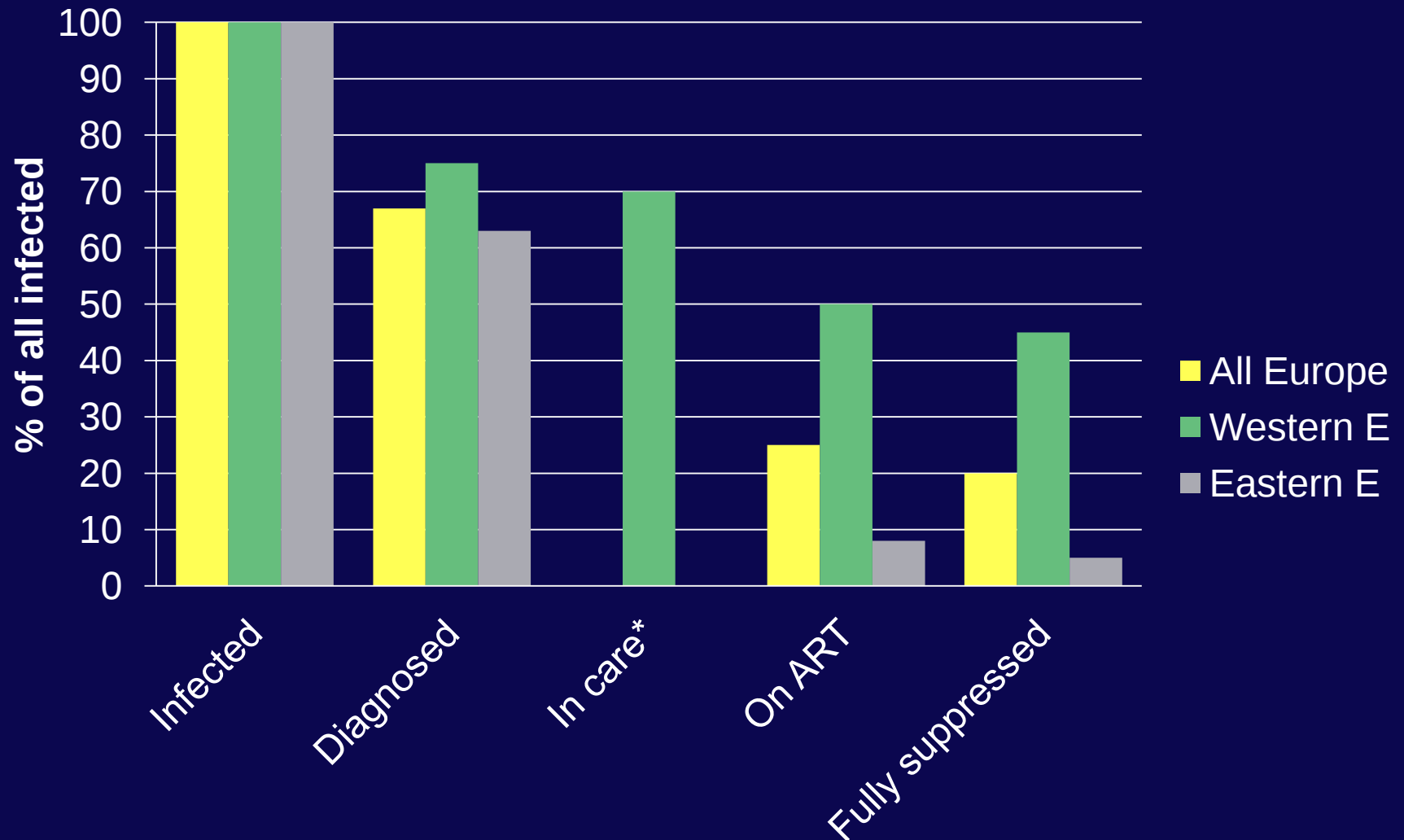
UNAIDS Country Report

Infection increasing faster than treatment: WHO European Region, 1985–2011



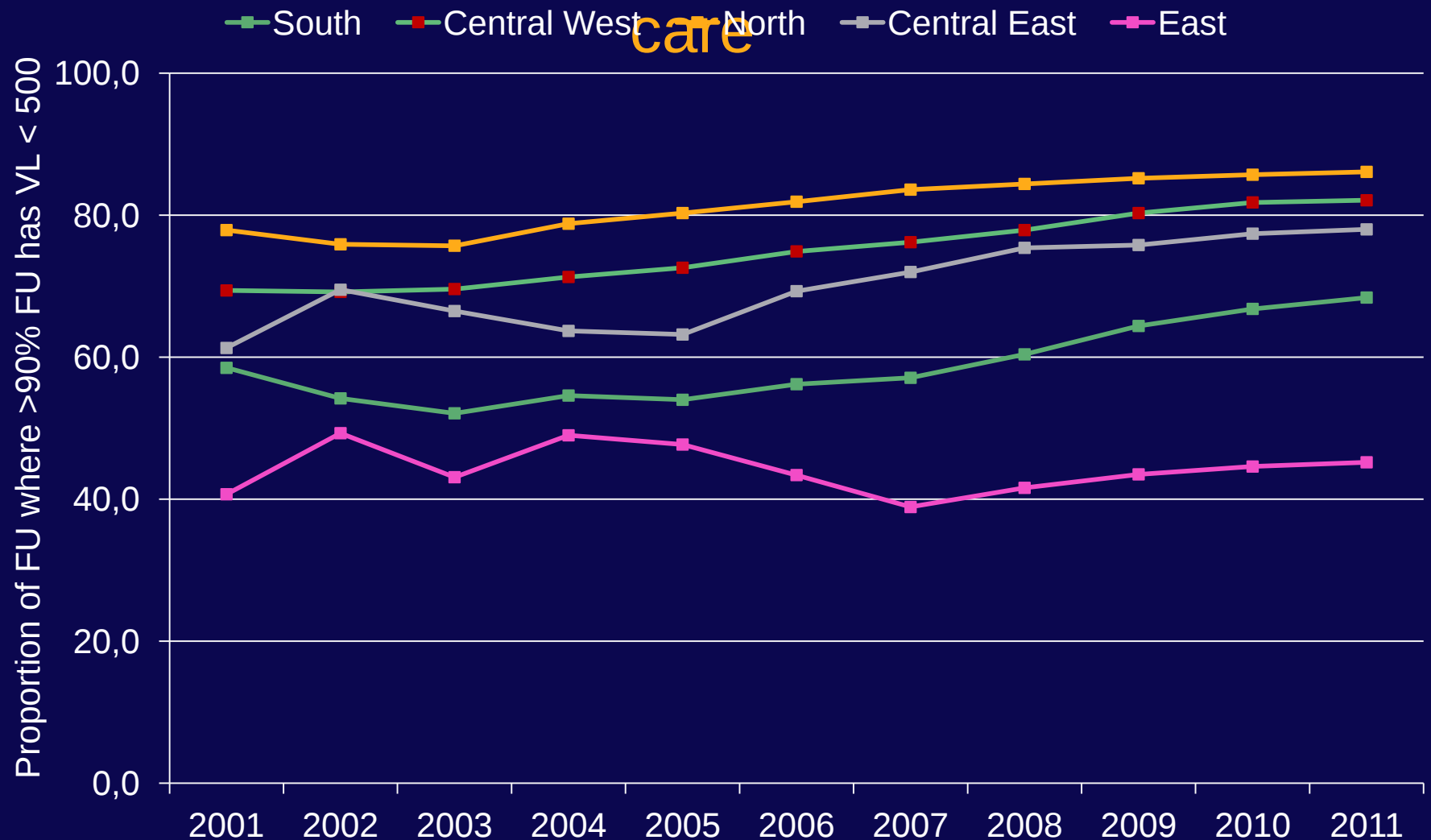
Sources: ECDC/WHO. HIV/AIDS surveillance in Europe 2011. Stockholm: ECDC; 2012; Federal Scientific and Methodological Center for the Prevention and Control of AIDS, Russian Federation; Ukrainian AIDS Centre, Ukraine; WHO/UNICEF/UNAIDS monitoring and reporting on the Health Sector Response to HIV/AIDS.

Treatment cascade in Europe



*: incomplete data on number of persons in care in Eastern Europe

Durability of HIV suppression*: the key indicator to benchmark for good ART



*: % of follow-up (FU) on ART where >90% FU has VL < 500

EuroSIDA (unpublished)

Opioid-substitution-therapy (OST) and ART among IDU in selected Eastern European countries in 2010

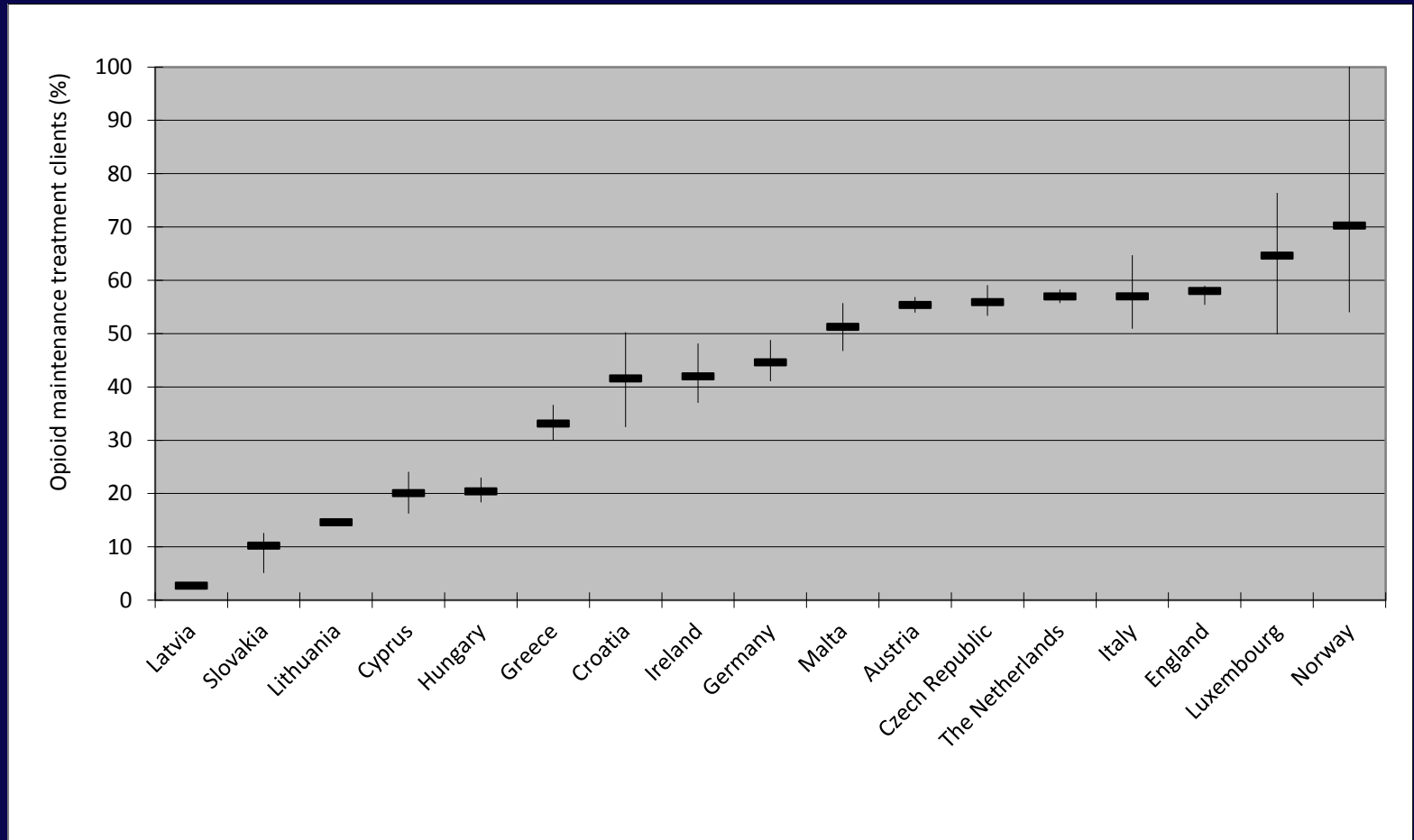
	# IDU	% of IDU receiving OST	# IDU HIV+ in 2010	# of HIV+ IDU on ART
Belarus	75,000	0,3%	10,500	?
Kazakhstan	186,000	0,1%	5,580	182
Lithuania	5,458	?	1,250	62
Moldova	25,000	1,4%	4,450	446
Russia	2 million	0%	?	?
Ukraine	375,000	2,1%	85,000	1732

15,9 million IDU's globally – 80% in low-middle income countries

Countries from where data was collected: Afghanistan, Bangladesh, Belarus, China, India, Indonesia, Kenya, Kazakhstan, Kyrgyzstan, Lithuania, Mauritius, Moldova, Myanmar, Nepal, Nigeria, Pakistan, Russia, South Africa, Tanzania, Ukraine and Vietnam.

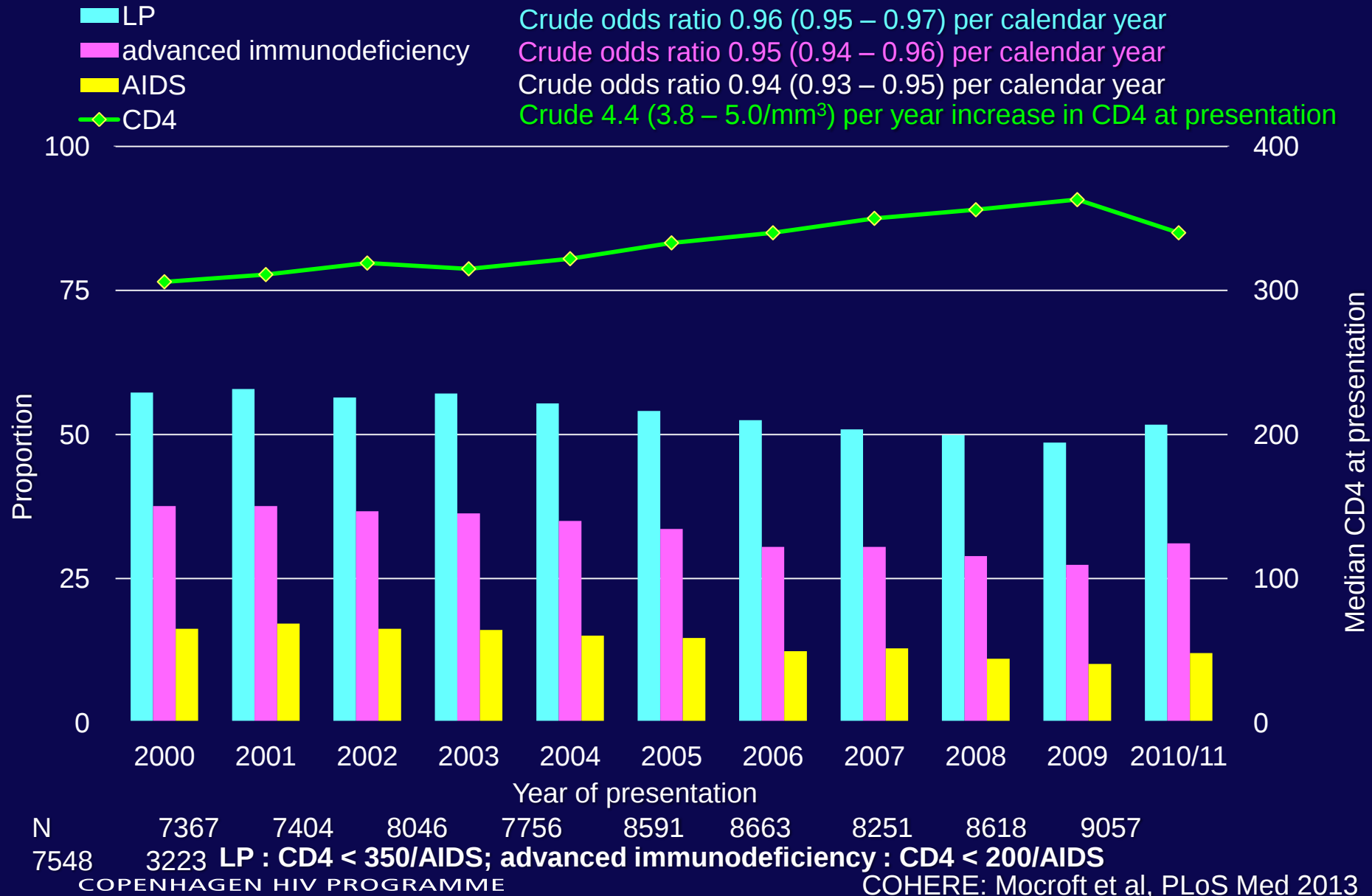
Petersen et al. Harm Reduction J, 2013

Opioid substitution treatment clients as a percentage of the estimated number of problem opioid users



2011 or most recent year; EMCDDA Statistical Bulletin 2013

Late presentation by year of presentation



Testing strategies

- Existing approach
 - Self referral
 - Selected clinics in health system (ID, STD)
- Future approach
 - Community testing (ensure transferral to care)
 - Provider-initiated testing
 - Indicator conditions (in any clinic or general practitioner seeing persons with such conditions)
 - Mononucleose-like illness, TB, viral hepatitis, STD, psoriasis, cervical dysplasia, esophageal candidiasis, malignant lymphoma, etc

Feasibility and Effectiveness of Indicator Condition-Guided Testing for HIV: Results from HIDES I (HIV Indicator Diseases across Europe Study)

Ann K. Sullivan¹, Dorte Raben^{2*}, Joanne Reekie³, Michael Rayment¹, Amanda Mocroft³, Stefan Esser⁴, Agathe Leon⁵, Josip Begovac⁶, Kees Brinkman⁷, Robert Zangerle⁸, Anna Grzeszczuk⁹, Anna Vassilenko¹⁰, Vesna Hadziosmanovic¹¹, Maksym Krasnov¹², Anders Sönnernborg¹³, Nathan Clumeck¹⁴, José Gatell⁵, Brian Gazzard¹, Antonella d'Arminio Monforte¹⁵, Jürgen Rockstroh¹⁶, Jens D. Lundgren^{2,17}

	Individuals having HIV test (number)	HIV positive (number)	Prevalence (95% CI)	Number of surveys
Total	3588	66	1.84 (1.42–2.34)	39
<u>Indicator condition</u>				
Sexually transmitted infection (STI)	764	31	4.06 (2.78–5.71)	4
Malignant lymphoma (LYM)	344	1	0.29 (0.006–1.61)	5
Cervical or anal dysplasia or cancer (CAN)	542	2	0.37 (0.04–1.32)	4
Herpes zoster (HZV)	207	6	2.89 (1.07–6.21)	5
Hepatitis B or C (HEP)	1099	4	0.36 (0.10–0.93)	6
Ongoing mononucleosis-like illness (MON)	441	17	3.85 (2.26–6.10)	7
Unexplained leukocytopenia/thrombocytopenia (CYT)	94	3	3.19 (0.66–9.04)	4
Seborrheic dermatitis/exanthema (SEB)	97	2	2.06 (0.25–7.24)	4

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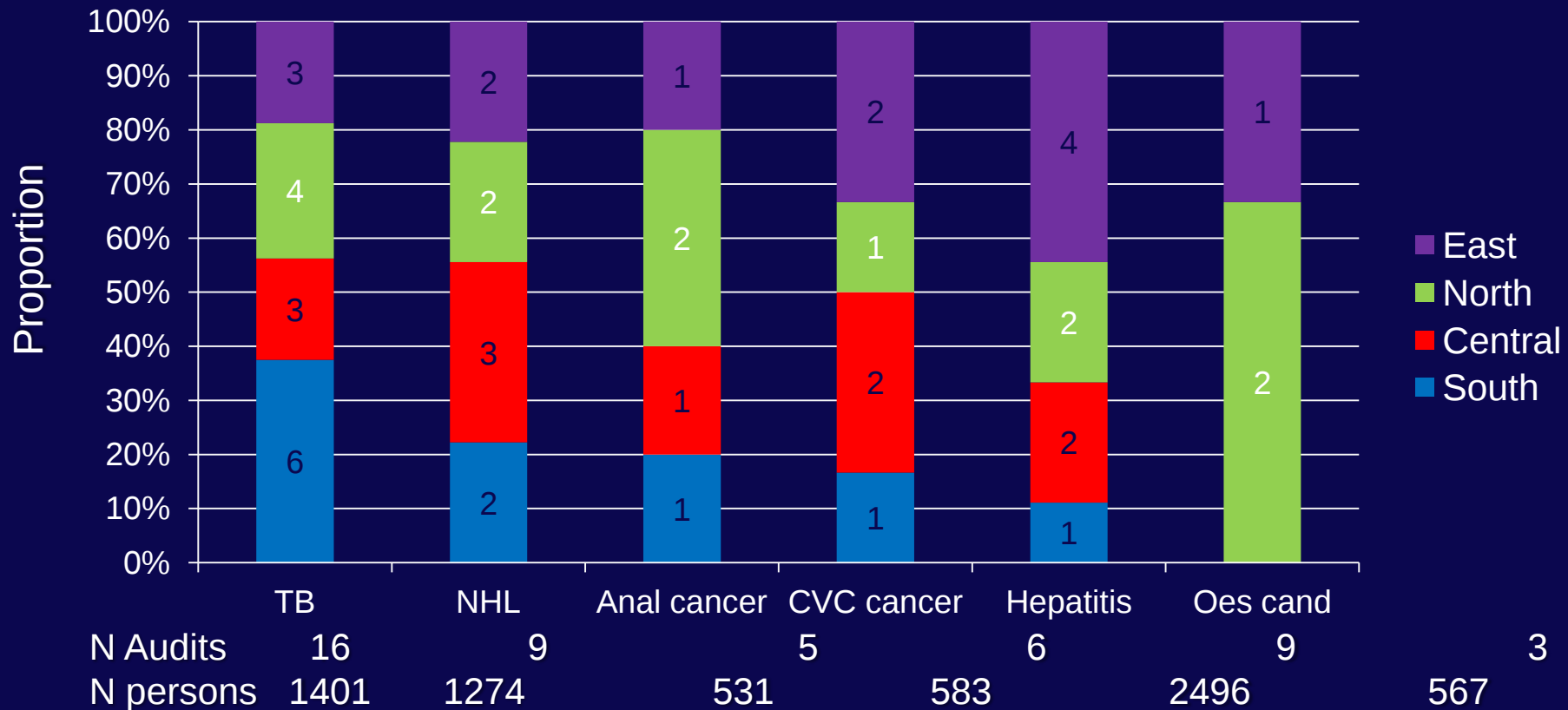
Focus to get
general practitioners
to test persons
presenting with indicators
routinely

				Number of surveys
Total				39
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Audits for established indicator

48 audits were completed in 14 countries across the 4 regions of Europe

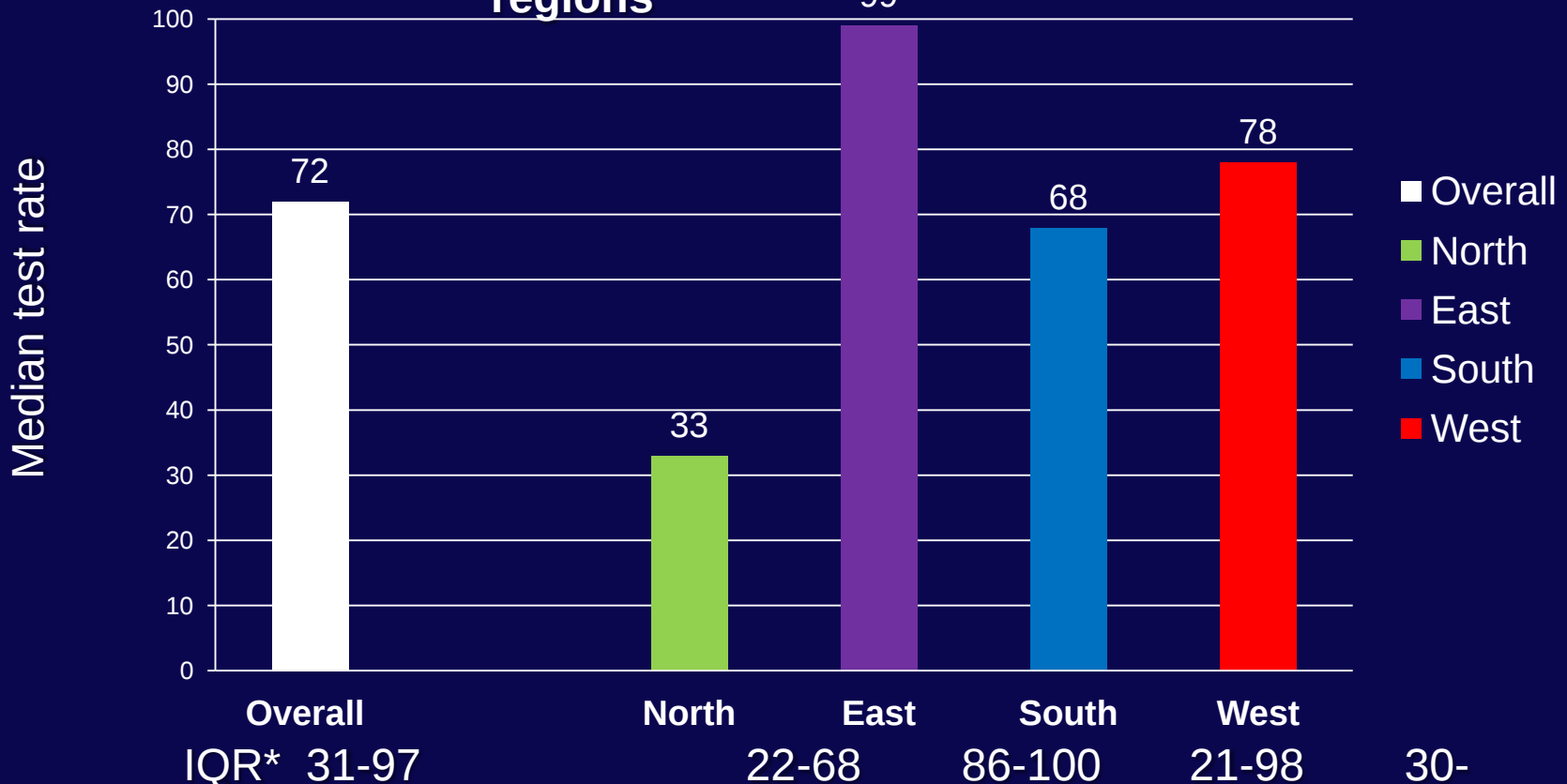
NORTH	EAST	SOUTH	WEST
United Kingdom	Belarus	Italy	Belgium
Sweden	Poland	Spain	Austria
Denmark	Croatia	Portugal	France
	Bosnia & Herzegovina		
		Israel	



N Audits	16	9	5	6	9	3
N persons	1401	1274	531	583	2496	567

Median test rate per audit per region

P=0.011 comparing regions



*IQR; interquartile range

Test rate was defined as the number of patients seen with an ID/number tested

HIV testing routine in pregnancy in Europe

- Testing strategies that offer HIV testing routinely to all pregnant women are commonly employed in Europe (16 of 18 countries universally offer HIV testing to women attending antenatal services)
 - ECDC 2010 HIV testing: increasing uptake and effectiveness in the European Union. Evidence synthesis for Guidance on HIV testing



HIV Indicator Conditions:

Guidance for
Implementing
HIV Testing in
Adults in Health
Care Settings



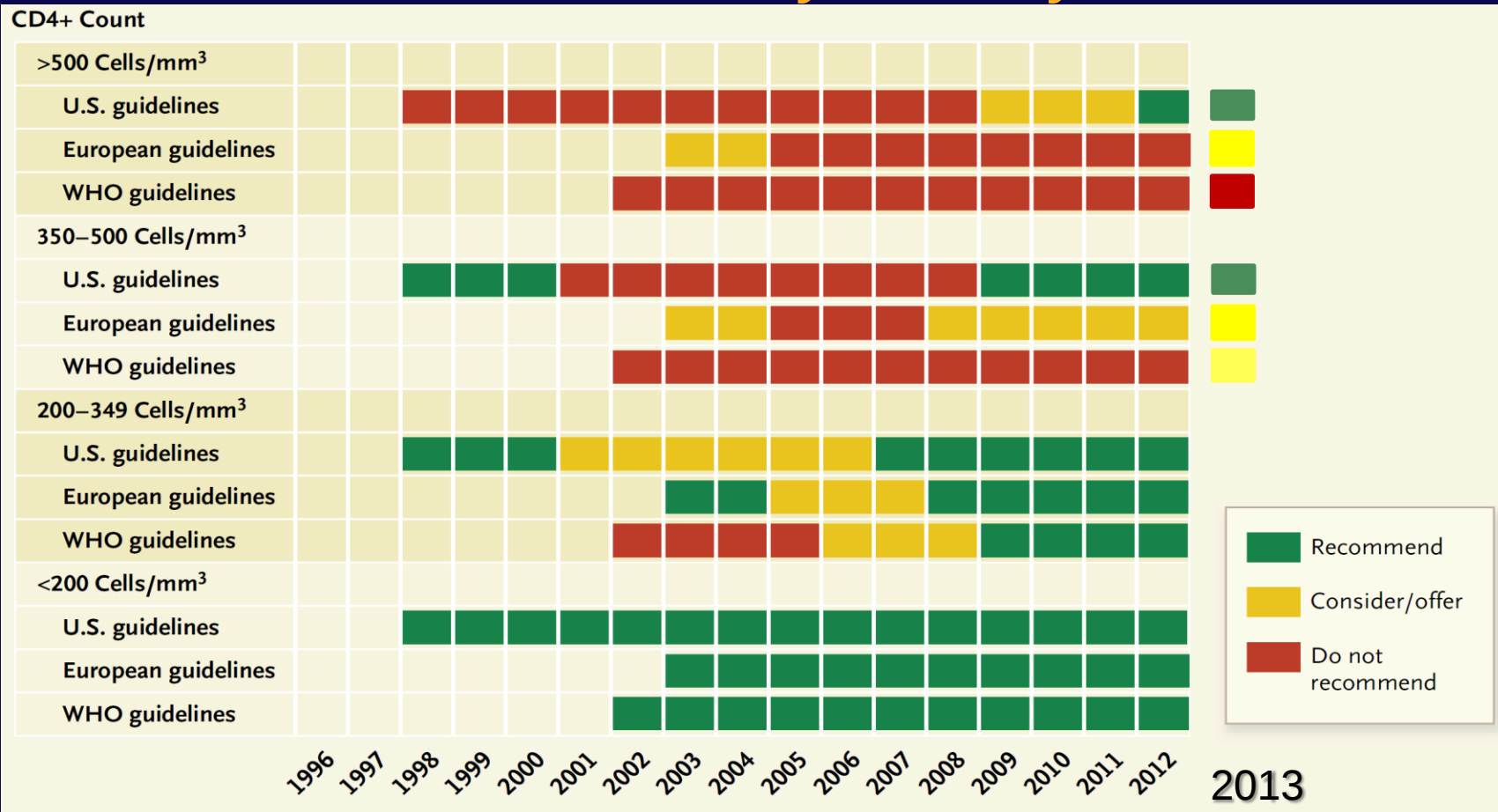
Other challenges in relation to testing

- Ensure that key affected populations gets better access to know their status
- Normalisation of testing – pre-test counselling
 - With respect for privacy & confidentiality
- Ensure linkage to care (20-50% loss)
- Reduce stigmatisation
 - Caused by policy makers
 - Homophobic laws
 - Exclusion of injecting drug users from
 - Exclusion of HIV+ immigrants for accessing health care
 - Criminalisation of HIV+
 - By society at large
 - HIV+ persons deserves our empathy and compassion

When to START ART ?

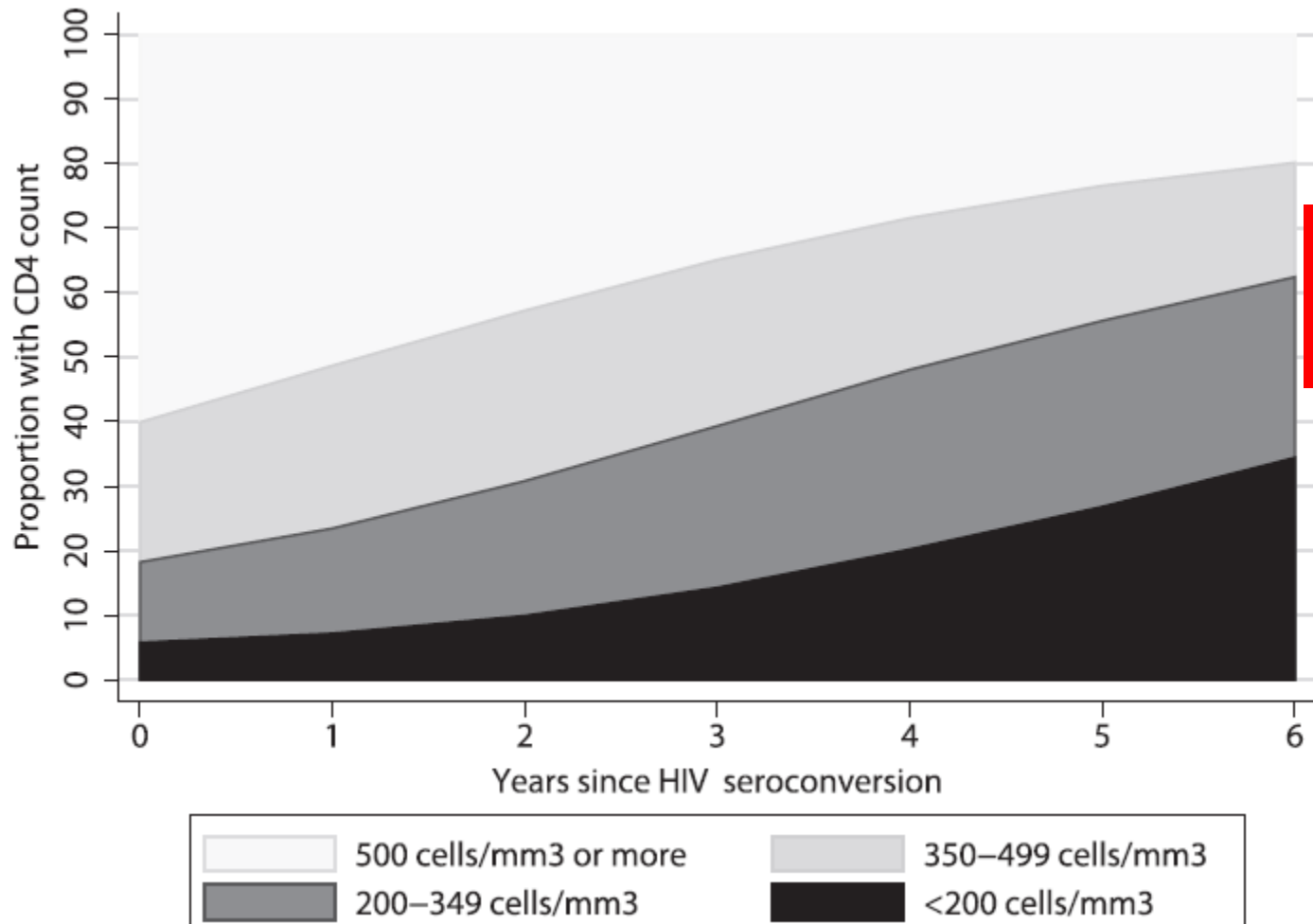
Benefit to
Individual vs
individuals sexual partner vs
societal benefit

Guidelines Change but not in Synchrony



De Cock & El-Sadr, NEJM 2013

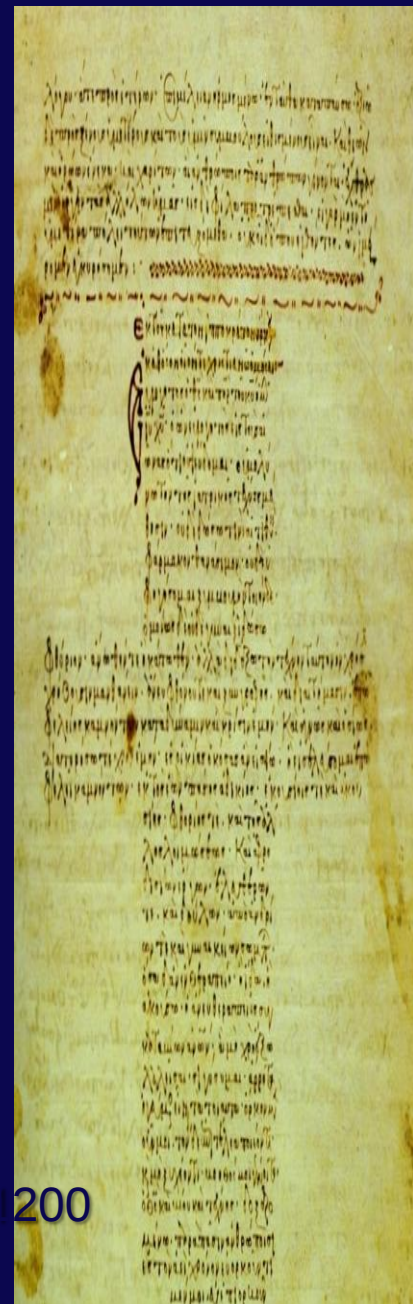
Natural history of HIV: CD4 count distribution according to time from infection



After 5 years
50% in need
of ART

First, do no harm

- *Primum non nocere*
- The doctor should not prescribe medications unless s/he knows that the treatment is unlikely to be harmful

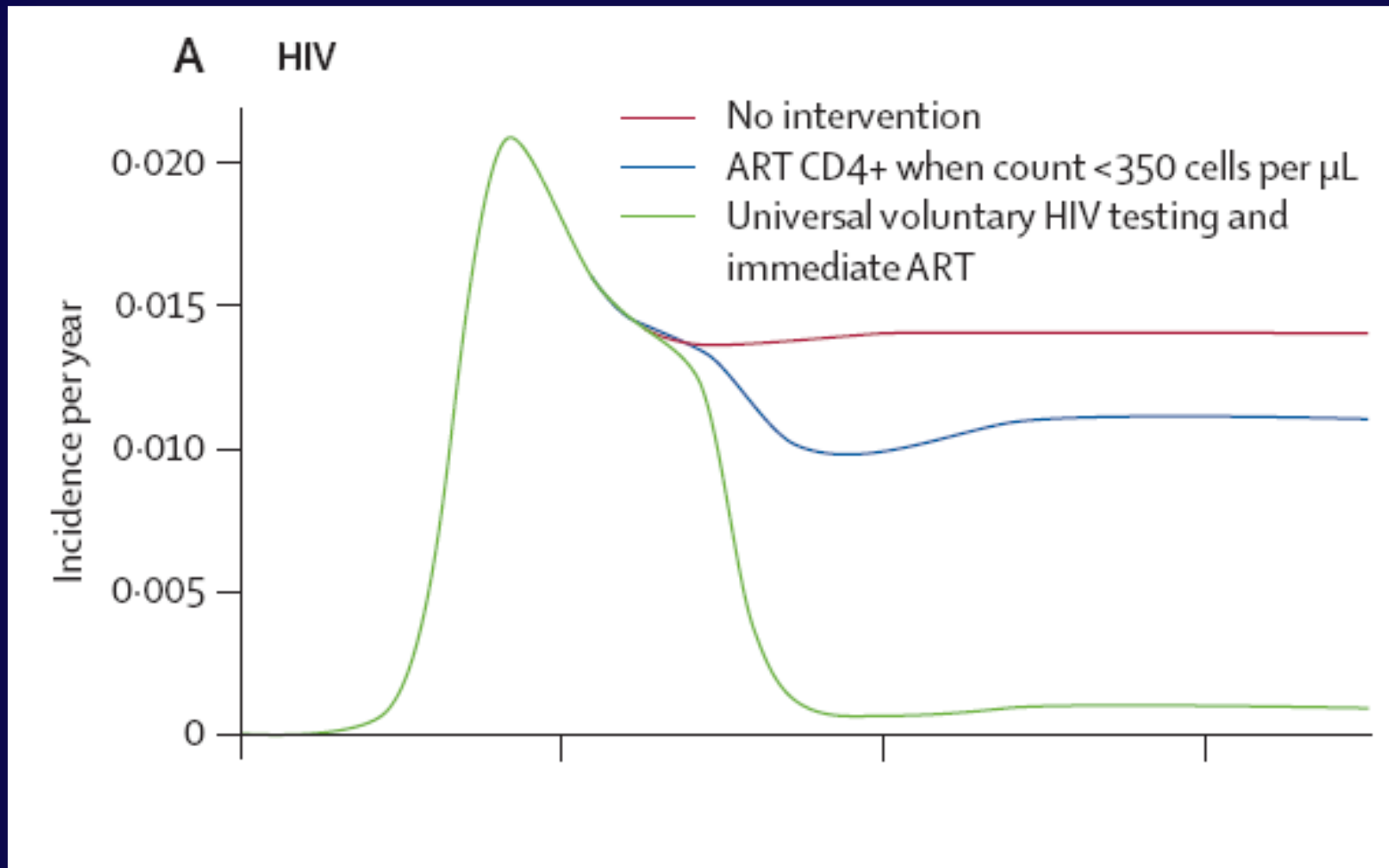


Doctor oath, year 1200

The case why early ART may cause net harm ?

- Low risk of morbidity and mortality in early HIV without ART
 - In particular among younger persons
 - Overrepresented among persons with early HIV
 - *If* ART is of benefit, many treated for one to benefit
- ART causes adverse drug reactions
 - Risk is low – many treated for one to be harmed
- **If # harmed > # benefitting = ART of net harm**
- COPENHAGEN HIV PROGRAMME If correct (we will know in next 3-4 yrs) – major

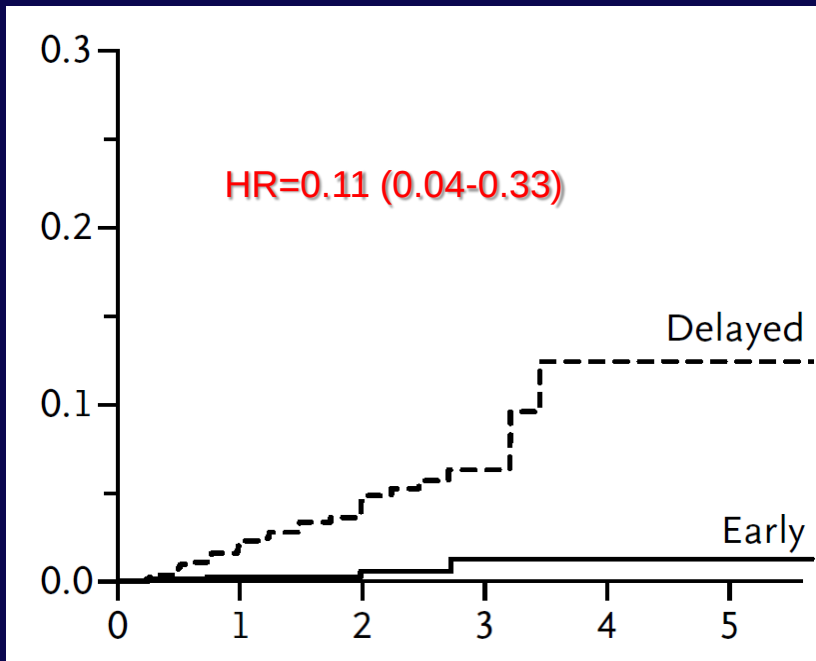
Potential impact of cART on epidemic



Early vs delayed* ART of HIV+ persons living in sexual relationship with HIV- person: HPTN

052

Risk of HIV infection for HIV neg



Most :
Heterosexual
Reported use of condoms

Unknowns from study:
IDU ?
No condoms ?
MSM ?
Population benefit ?

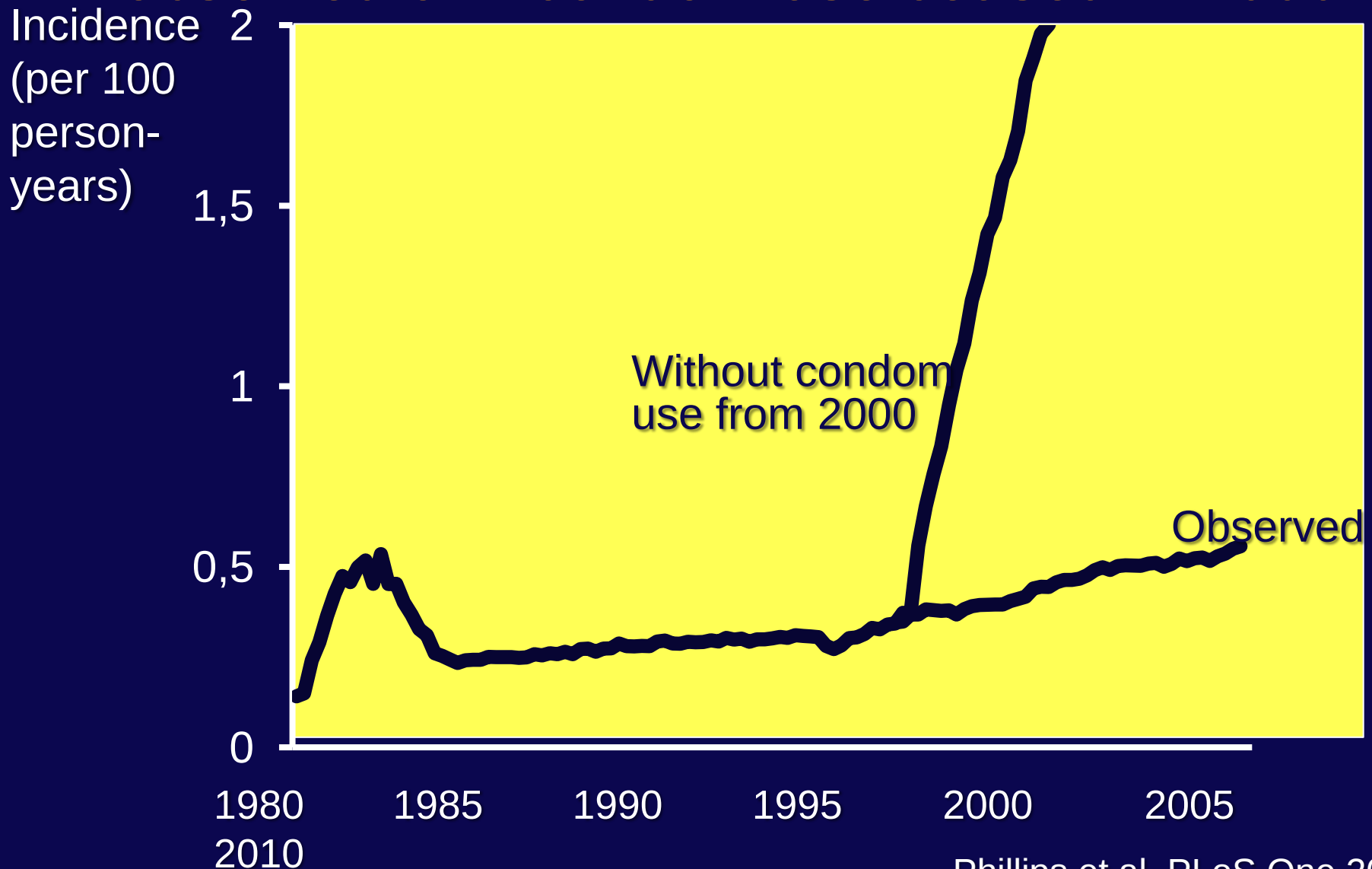
In 28 of 38 infections, virus was
genetically linked to virus from HIV+

*: Early = CD4 350-550 cells/ μ L; delayed = CD4 < 250 cells/ μ L

HIV among MSM in the UK – increasing incidence despite extensive ART coverage

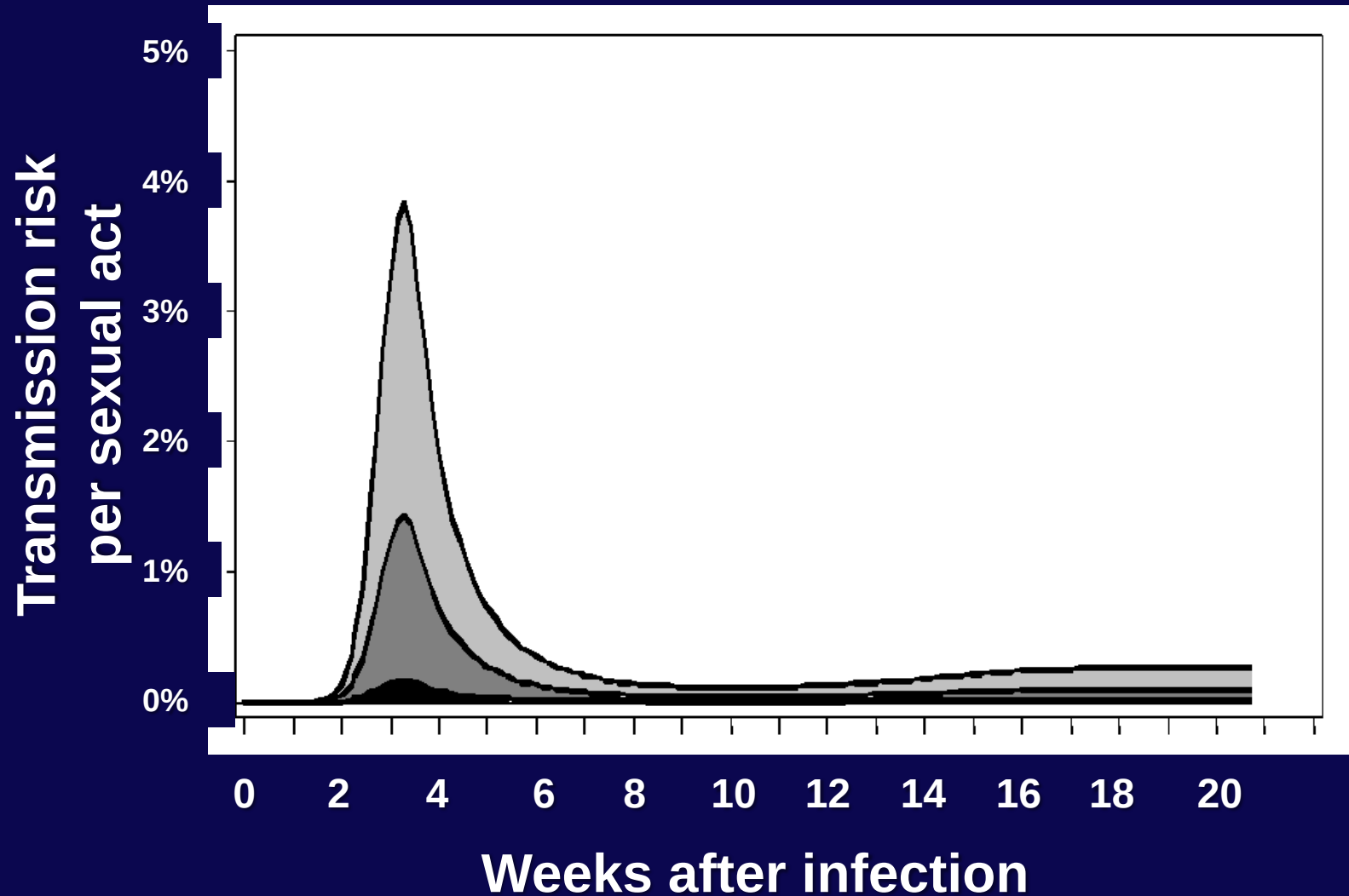
- Observed increases in HIV incidence in last 10 years despite gradual larger ART coverage
- More condom-less sexual behaviour

HIV incidence in the UK among MSM: observed or if condom use ceased in 2000



When does HIV transmission occur?

The role of primary HIV Infection



Pilcher et al JID 2004; 189:1785–92

HIV among MSM in the UK – source of most new infections are from undiagnosed men: more testing = less new infections

- Observed increases in HIV incidence in last 10 years despite gradual larger ART coverage
- More condom-less sexual behaviour
- Source of new infections in 2010:
 - 82% undiagnosed infection; diagnosed ART naive 10%, diagnosed ART experienced 7%
- If testing frequency increased to 68% of all MSM/yr (compared with currently 25%/yr)
 - Incidence projected to be reduced by 25%

Use of ART to reduce transmission: CD4 threshold vs coverage

- Main determinant is coverage
 - If all infected on ART - very few transmissions
 - Realistic goal: rate of reproduction < 1
 - Required coverage remains to be defined
 - If most transmissions occur prior to diagnosis, elevating CD4 count for when to start ART not effective
 - Testing strategies are critical
 - If source of infection is often very recently infected persons, not even the best testing strategy will work

Summary

- Ongoing HIV transmission remains major public health challenge across Europe
 - Main reasons are
 - Risk behaviour modifications unchecked
 - Major source of transmission: persons not yet diagnosed
 - Challenge: reduce % not yet diagnosed
- Large number of HIV tests are performed
 - Not sufficiently targeted to communities with higher HIV prevalence
 - Normalisation of approach to testing
 - Ensure safe and effective transfer of HIV+ to care
 - Ensure that care provided in attracting and state-of-