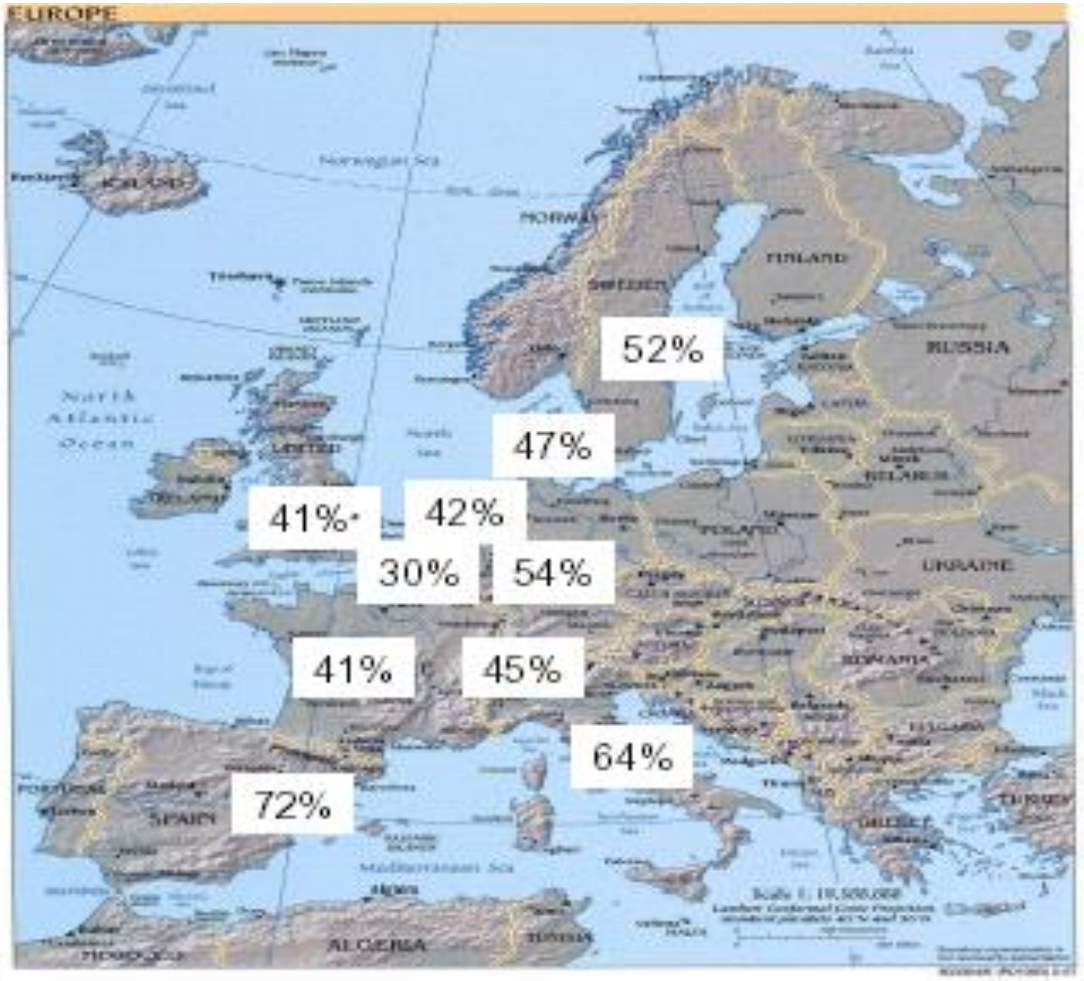
Νέος ασθενής με HIV λοίμωξη: τι να κάνω?

Σαμπατάκου Ελένη
Αν. Καθηγήτρια Παθ/γίας Λοιμώξεων
Β Παν/κή Παθολογική
Πανεπιστήμιο Α

Ποσοστά “late presenters” προσερχόμενοι σε Κέντρα το 2008

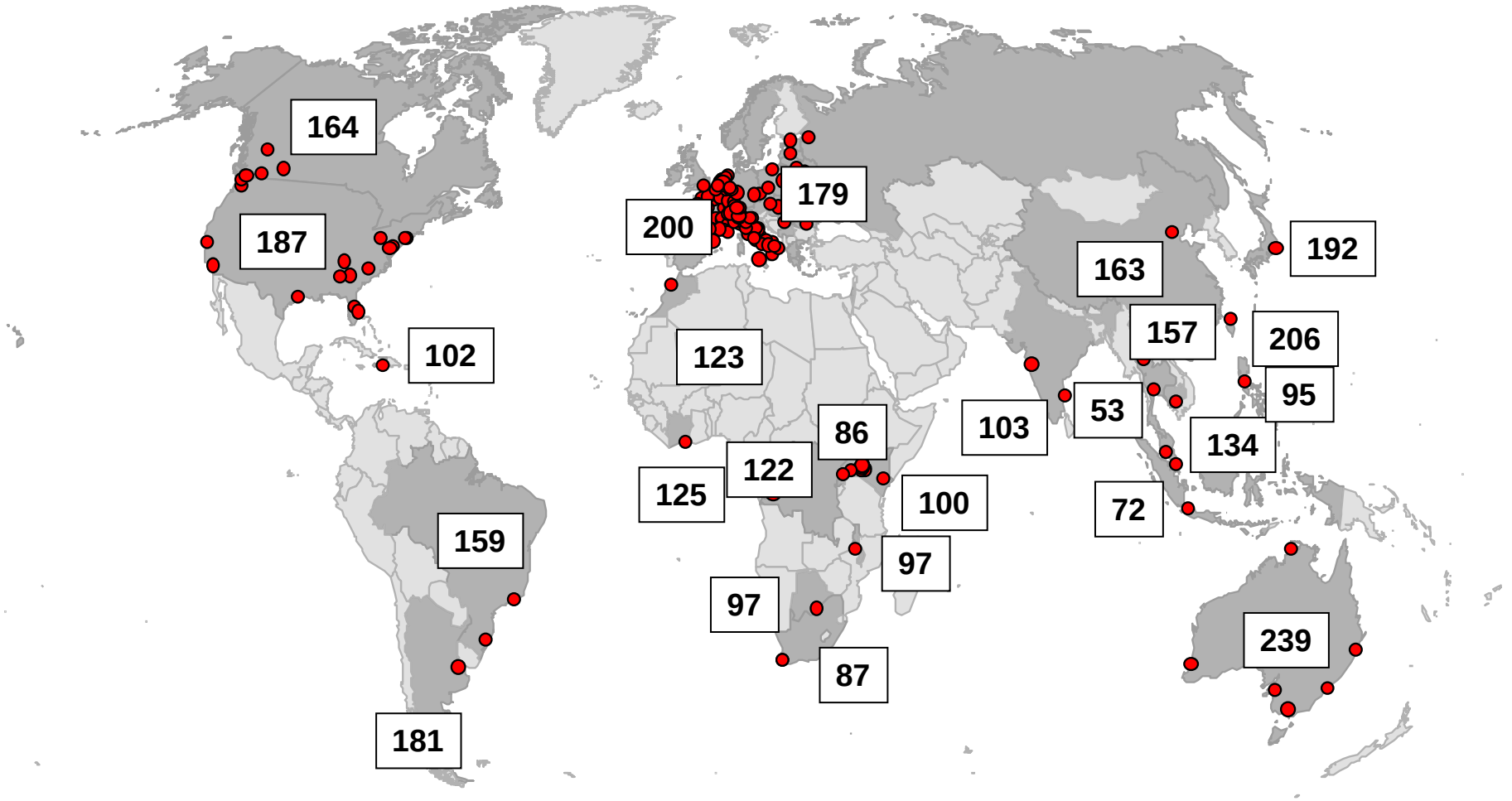


*: 2007

Thanks to:
ATHENA (**F de Wolf**)
Brussels St Pierre Cohort (**S deWit**)
Barcelona cohort (**J Gatell**)
CHIC (**C Sabin**)
ClinSurv HIV (**O Hamouda**)
DHCS (**F Engsig**)
EuroSIDA (**J Reekie**)
FHDH ANRS CO4 (**D Costagliola**)
ICONA (**A d'Arminio Monforte**)
Swedish Cohort (**J Brännström**)
SHCS (**B Ledergerber**)

CD4 count at start of ART, 2003-2005

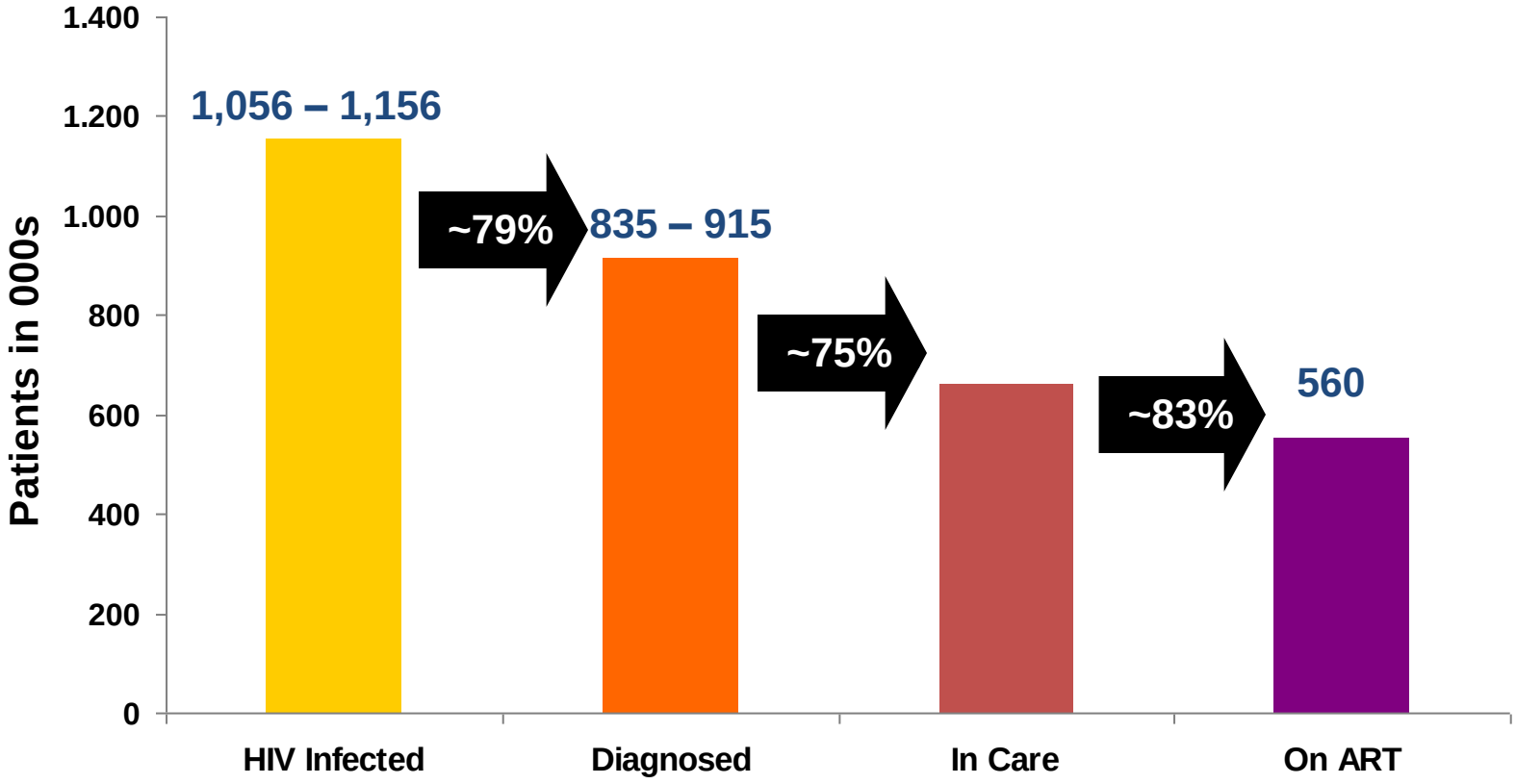
42 countries, 176 sites, 33,008 patients



Numbers are median CD4 counts

U.S. HIV Market Dynamics

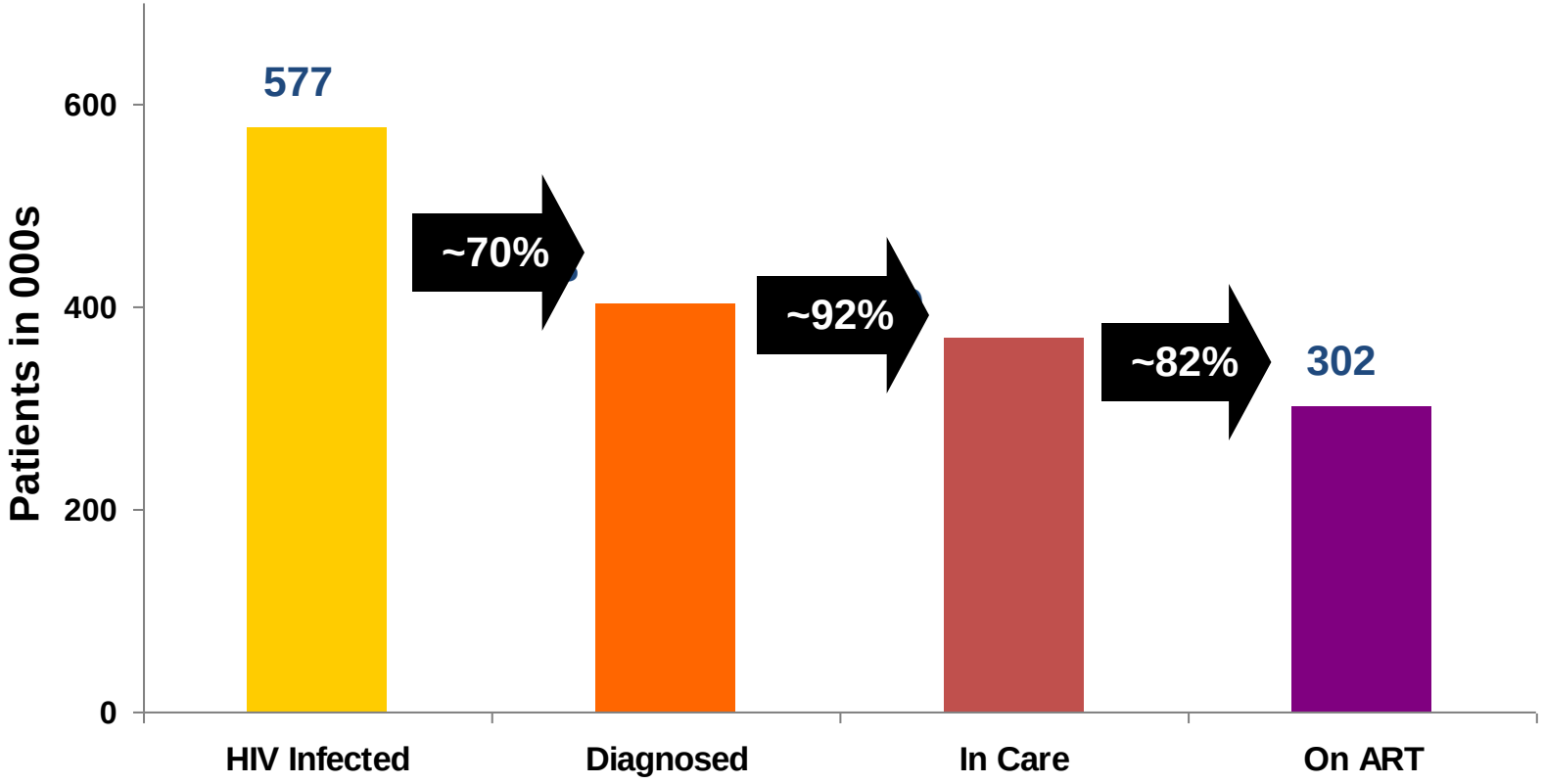
Significant Opportunity Remains in Increasing Diagnosis and Bringing Patients onto Therapy



Sources:
* February, 2009 CDC estimates as of the end of 2006
** Synovate Healthcare U.S. HIV Monitor Q3 2008

EU Big 5 HIV Market Dynamics

Similar Dynamics as Seen in the U.S. with Strong Support in the EU for Increased Testing Initiatives and Early Treatment



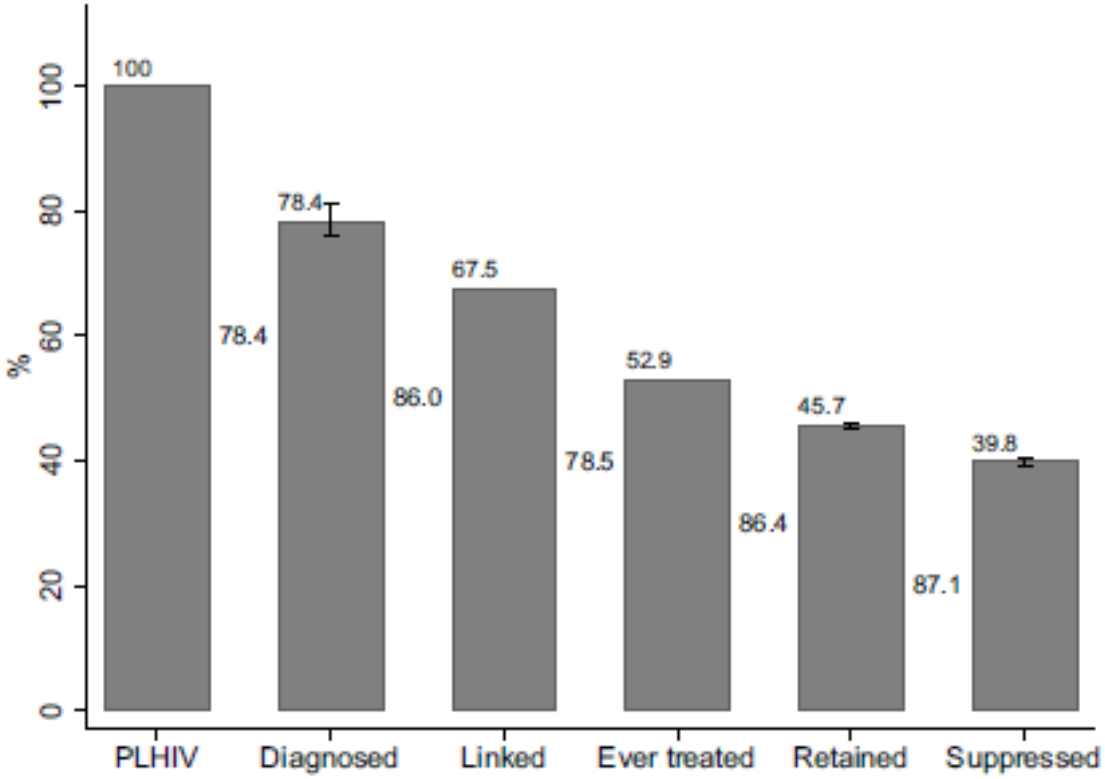
Sources:
* National Surveillance Units per country & ECDC
** IMS/GERS & Synovate Q3 2008

PLOS ONE | https://doi.org/10.1371/journal.pone.0207355 November 15, 2018

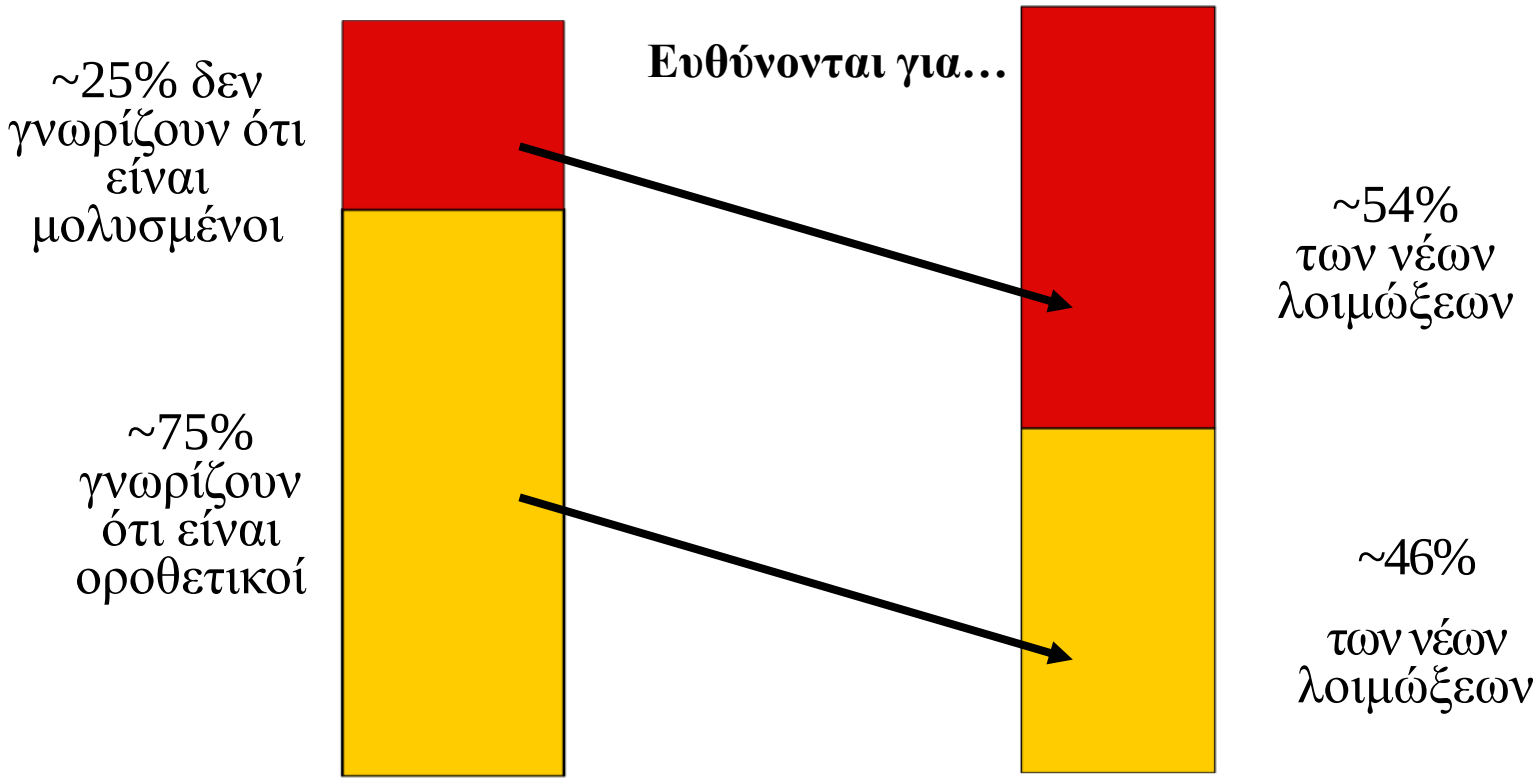
RESEARCH ARTICLE

HIV cascade of care in Greece: Useful insights from additional stages

Georgia Vourli[1+], Georgios Nikolopoulos[2], Vasilios Paparizos[3], Athanasios Skoutelis[4], [5], [6], Antonios Papadopoulos[7], Maria Chini[8], [10], Georgios Chrysos[11], Helen Sambatakou[12], [14], Dimitra Paraskeva[15], Nikos Dedes[16], HIV Prevention Group[¶]



Οι περισσότερες νέες λοιμώξεις μεταδίδονται από άτομα που δεν γνωρίζουν την οροθετικότητά τους



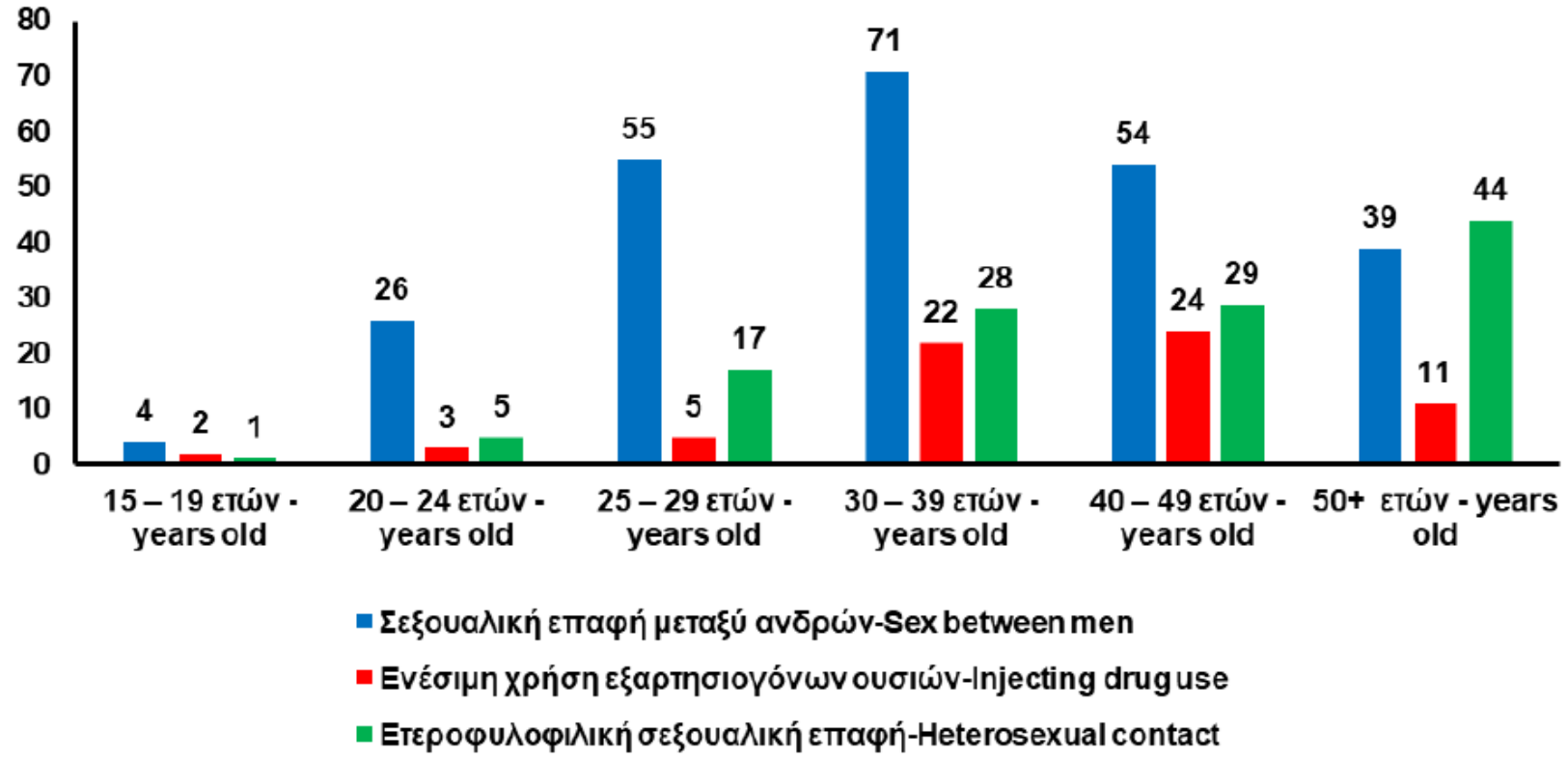
G. Marks et al. AIDS 2006

Νέες διαγνώσεις HIV λοίμωξης κατά ηλικιακή ομάδα κατά τη διάγνωση και κατηγορία μετάδοσης στην Ελλάδα (1/1/2022 - 31/12/2022)

ΕΘΝΙΚΟΣ ΟΡΓΑΝΙΣΜΟΣ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ

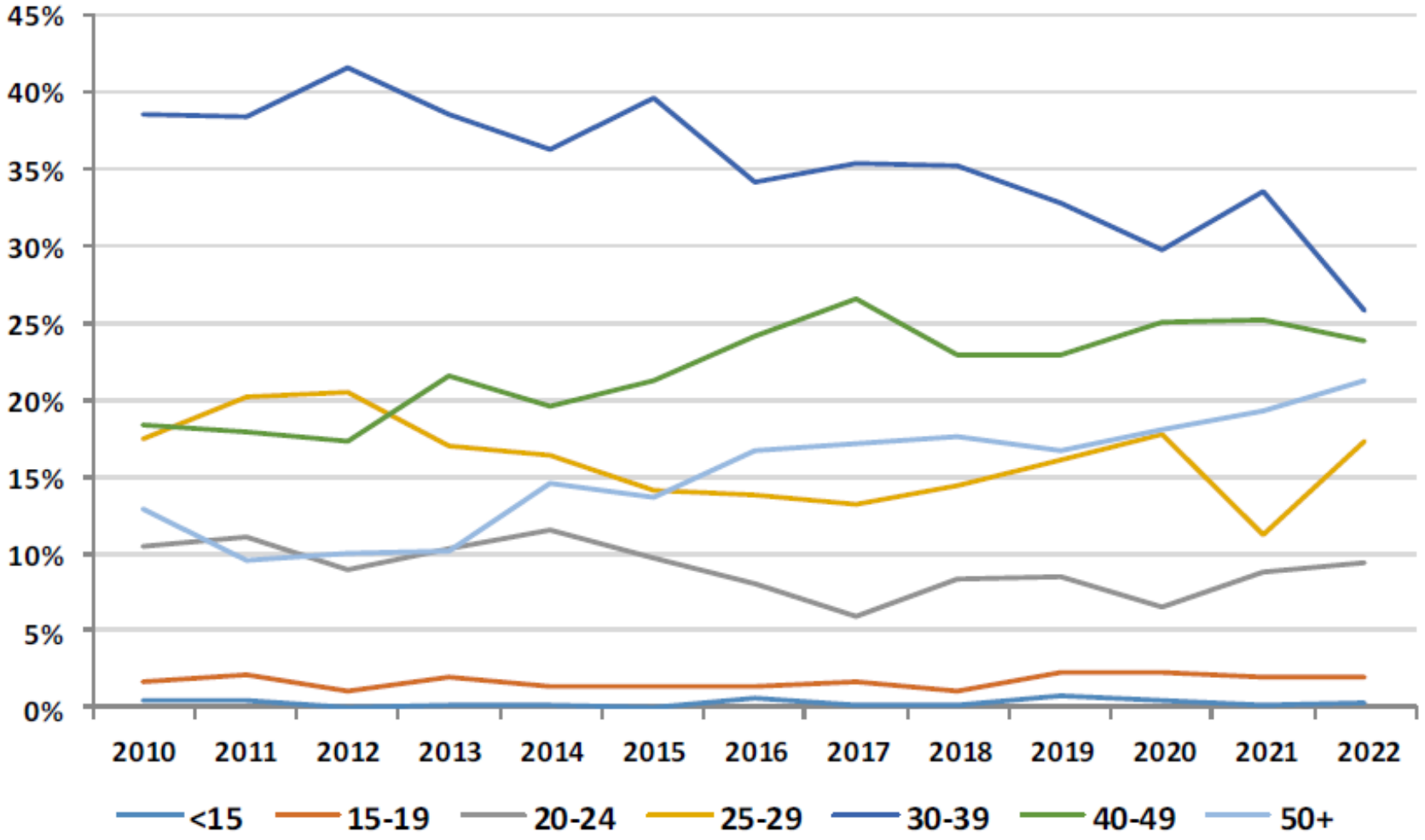
Το 2022 διαγνώστηκαν και δηλώθηκαν **565** νέα περιστατικά HIV, εκ των οποίων 450 (79,6%) αφορούσαν σε άνδρες και 115 (20,4%) σε γυναίκες

Ο συνολικός αριθμός των περιστατικών HIV και AIDS έως τις 31/12/2022 **19.899** [16.378 (82,3%) άνδρες, 3.480 (17,5%) γυναίκες]



Ποσοστιαία κατανομή των νέων διαγνώσεων HIV λοίμωξης κατά ηλικιακή ομάδα κατά τη διάγνωση στην Ελλάδα έως 31/12/2022

ΕΘΝΙΚΟΣ ΟΡΓΑΝΙΣΜΟΣ ΔΗΜΟΣΙΑΣ ΥΓΕΙΑΣ



CDC Recommendations for HIV Testing in Healthcare Settings

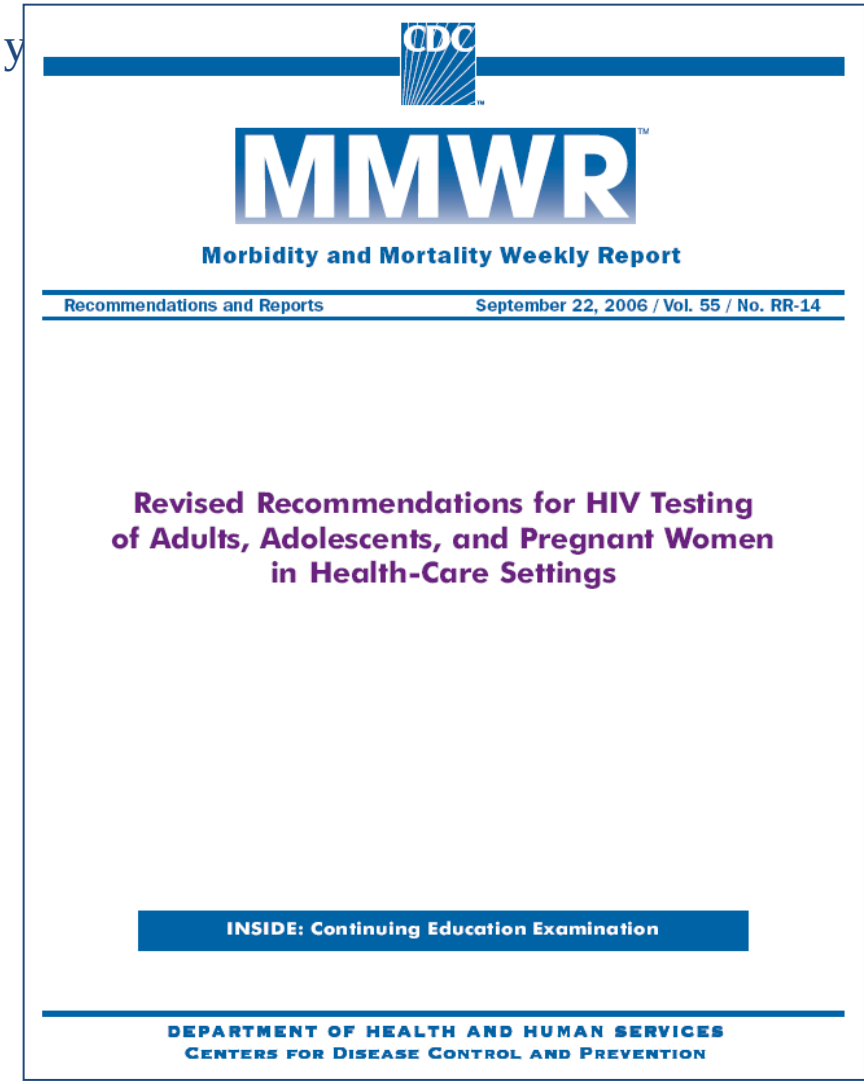
Routine voluntary testing for patients ages 13 to 64 y
Not based on patient risk

Opt-out testing
No separate consent for HIV
Resulting in increases in HIV testing rates

Pretest counseling not required

Repeat HIV testing left to discretion of provider, based on risk

Within the US, 34 states are neutral to supportive of the CDC guidelines while 11 states have taken steps to reduce regulatory barriers
6 states passed legislation (2007)



Branson BM, et al. MMWR Recomm Rep. 2006;55 (RR-14):1-17.

HIV in Europe
Working Together for Optimal Testing and Earlier Care

HepHIV 2014
5-7 OCTOBER BARCELONA
HIV and Viral Hepatitis: Challenges of Timely Testing and Care

Which Conditions are Indicators for HIV testing across Europe?:Results from the HIDES II Study

Dr. Galyna Kutsyna on behalf of the HIDES Study Group

HIDES (HIV Indicator Diseases Across Europe Study)
A project under the HIV in Europe initiative


I'm GAY,
NIGERIAN
& REAL!

Age is Not a Condom

Αρχική εκτίμηση πρωτοδιαγνωσθέντος HIV(+) ασθενούς

Πλήρες ιατρικό ιστορικό

Οικογενειακό ιστορικό (πρώιμη CVD, ΣΔ, υπέρταση, ΧΝΝ)

Χρόνια φαρμακευτική αγωγή

Συννοσηρότητες

Ιστορικό εμβολιασμών

Ψυχοκοινωνική εκτίμηση

Τρέχον " lifestyle" (χρήση αλκοόλ, κάπνισμα, διατροφή, άσκηση, χρήση φαρμάκων)

Εργασία, κοινωνικό status

Υπαρξη νευρογνωσιακών διαταραχών, κατάθλιψη

Οικογενειακό status: σύντροφος, παιδιά

Σεξουαλική και αναπαραγωγική υγεία

Στυτική δυσλειτουργία, σεξουαλική συμπεριφορά υψηλού κινδύνου

Status συντρόφου και ενημέρωση , μέτρα αντισύλληψης

Εκτίμηση HIV-ασθενών στην αρχική και επόμενες επισκέψεις

	Assessment	At HIV diagnosis	Prior to starting ART	Follow-up frequency	Comment	See page
HISTORY						
Medical	Complete medical history including:	+	+	First visit	On transfer of care repeat assessment	
	• Family history (e.g. premature CVD, diabetes, hypertension, CKD)	+		First visit	Premature CVD: cardiovascular events in a first degree relative (male < 55, female < 65 years)	54, 55-56
	• Concomitant medicines (i)	+	+	Every visit		
	• Past and current co-morbidities	+	+	Every visit		
	• Vaccination history	+		Annual	Measure antibody titres and offer vaccinations where indicated, see Vaccination	
Psychosocial	Current lifestyle (alcohol use, smoking, diet, exercise, drug use)	+	+	6-12 months	Adverse lifestyle habits should be addressed more frequently	53
	Employment	+	+	Every visit	Provide advice and support if needed Provide counselling if needed	
	Social and welfare	+	+			
	Psychological morbidity	+	+			
	Partner and children	+			Test partner and children if at risk	
Sexual and Reproductive Health	Sexual history	+		6-12 months	Address issues concerning sexual dysfunction Risk of sexual transmission should be addressed	80-83
	Safe sex	+				
	Partner status and disclosure	+			Recommend starting ART in serodifferent couples	
	Conception issues	+	+			
	Hypogonadism (including menopause)	+	+	As indicated	Persons with complaints of sexual dysfunction	80, 82
POST-REPRODUCTIVE HEALTH						
Menopause		+	+	Annual/as indicated	Screen for perimenopause symptoms in women ≥ 40 years.	80

Εργαστηριακός έλεγχος σχετικός με την HIV λοίμωξη

- HIV-VL
- Γονοτυπική αντοχή και υπότυπος
- R5 τροπισμός
- Απόλυτος αριθμός CD4, %, CD4/CD8
- HLA-B*5701 (Screening πριν την έναρξη ABC)
- Έλεγχος για συλλοιμώξεις (HBV, HCV, HAV, STDs)
- Screening για TB
- Εκτίμηση κινδύνου για CVD (Framingham score)
- Ηπατική, νεφρική λειτουργία, οστική πυκνότητα
- Εμβολιασμοί…

Εργαστηριακός έλεγχος σχετικός με την HIV λοίμωξη

HIV DISEASE						
Virology	Confirmation of HIV Ab pos	+		3-6 months	More frequent monitoring of HIV-VL at start of ART Perform genotypic resistance test before starting ART if not previously tested or if at risk of super-infection	11-13
	Plasma HIV-VL	+	+			
	Genotypic resistance test and sub-type	+	+/-	At virological failure		
	R5 tropism (if available)		+/-		Screen if considering R5 antagonist in regimen	
Immunology	CD4 absolute count and %, CD4/CD8 ratio (optional: CD8 and %)	+	+	3-6 months	Annual CD4 count if stable on ART and CD4 count > 350 cells/μL (ii) CD4/CD8 ratio is a stronger predictor of serious outcomes	11-13
	HLA-B*57:01 (if available)	+	+/-		Screen before starting ABC containing ART, if not previously tested, pages 11-12, 24	
CO-INFECTIONS						
STIs	Syphilis serology	+		Annual/ as indicated	Consider more frequent screening if at risk	14, 80
	STI screen	+		Annual/ as indicated	Screen if at risk and during pregnancy	

ΕΘΝΙΚΟ ΚΑΙ ΚΑΠΟΔΙΣΤΡΙΑΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
ΙΑΤΡΙΚΗ ΣΧΟΛΗ
ΕΡΓΑΣΤΗΡΙΟ ΥΓΙΕΙΝΗΣ, ΕΠΙΔΗΜΙΟΛΟΓΙΑΣ ΚΑΙ ΙΑΤΡΙΚΗΣ ΣΤΑΤΙΣΤΙΚΗΣ
ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΑΝΑΦΟΡΑΣ ΡΕΤΡΟΪΩΝ

ΕΛΕΓΧΟΣ ΓΟΝΟΤΥΠΙΚΗΣ ΑΝΤΟΧΗΣ ΣΕ ΑΝΤΙΡΕΤΡΟΪΚΗ ΘΕΡΑΠΕΙΑ

ΑΡΧΙΚΑ (Επίθετο - Ονομα) : ΜΠ. ΚΩ. **ΗΜ/ΝΙΑ ΓΕΝ:** 8/1/1965 **ΦΥΛΟ:** APPEN

ΑΡΙΘΜΟΣ ΑΤΟΜΟΥ: HIVRES -000014

ΑΡ.ΚΕΕΛΠΝΟ:

ΗΜ/ΝΙΑ ΛΗΨΗΣ ΔΕΙΓΜΑΤΟΣ: 14/11/2011 ΩΡΑ: **ΠΑΡΑΛΑΒΗ :** 14/11/2011 ΩΡΑ:

ΙΑΤΡΟΣ: ΣΑΜΠΑΤΑΚΟΥ Ε.

ΝΟΣΟΚΟΜΕΙΟ/ΜΟΝ. ΥΓΕΙΑΣ: ΙΠΠΟΚΡΑΤΕΙΟ-ΜΕΛ

Εγινε RT-PCR στην περιοχή της πρωτεάσης (PR) και στο τμήμα (κωδικόνια 35 - 244) της αντίστροφης μεταγραφάσης (RT).
Στη συνέχεια ταυτοποιήθηκε η νουκλεοτιδική αλληλουχία των παραπάνω περιοχών και ανιχνεύθηκαν οι ακόλουθες μεταλλαγές που συνδέονται με ανθεκτικότητα σε αντιρετροϊκή θεραπεία :

Περιοχή Αντίστροφης Μεταγραφάσης (RT)

E138A,K70G,M184V

Περιοχή Πρωτεάσης (PR)

H69K,I13V,I62V,K20R,L89M,M36I,V77I

Εκτιμώμενη ανθεκτικότητα σε σχέση με τις παρατηρούμενες μεταλλαγές.

Φάρμακο	Χαρακτηρισμός	Φάρμακο	Χαρακτηρισμός	Φάρμακο	Χαρακτηρισμός	Φάρμακο	Χαρακτηρισμός
NELFINAVIR	S	KALETRA	S	ZIDOVUDINE	S	EFAVIRENZ	S
ATAZANAVIR	S	SAQUINAVIR/R	S	DIDANOSINE	I	NEVIRAPINE	S
FOSAMPRENAVIR	S	INDINAVIR/R	S	LAMIVUDINE	R	ETRAVIRINE	S
		TIPRANAVIR/R	S	STAVUDINE	S		
		DARUNAVIR/R	S	ABACAVIR	I		
		ATAZANAVIR/R	S	TENOFOVIR	I		
		FOSAMPRENAVIR/R	S	EMTRICITABINE	R		

Επεξήγηση

R Ισχυρή αντοχή ή στη διαδικασία ανάπτυξης ισχυρής αντοχής.

ΕΘΝΙΚΟ ΚΑΙ ΚΑΠΟΔΙΣΤΡΙΑΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
ΙΑΤΡΙΚΗ ΣΧΟΛΗ
ΕΡΓΑΣΤΗΡΙΟ ΥΓΙΕΙΝΗΣ, ΕΠΙΔΗΜΙΟΛΟΓΙΑΣ ΚΑΙ ΙΑΤΡΙΚΗΣ ΣΤΑΤΙΣΤΙΚΗΣ

ΕΛΕΓΧΟΣ ΤΡΟΠΙΣΜΟΥ ΤΟΥ HIV-1

ΑΡΧΙΚΑ (Επίθετο - Ονομα) : ΜΠ. ΚΩ. **ΗΜ/ΝΙΑ ΓΕΝ:** 8/1/1965 **ΦΥΛΟ:** ΑΡΡΕΝ

ΑΡΙΘΜΟΣ ΑΤΟΜΟΥ: HIVTROP -000079

ΑΡ.ΚΕΕΛΠΝΟ:

ΗΜ/ΝΙΑ ΛΗΨΗΣ ΔΕΙΓΜΑΤΟΣ: 24/1/2012 **ΩΡΑ:** **ΠΑΡΑΛΑΒΗ :** 24/1/2012 **ΩΡΑ:**

ΙΑΤΡΟΣ: ΣΑΜΠΑΤΑΚΟΥ Ε.

ΝΟΣΟΚΟΜΕΙΟ/ΜΟΝ. ΥΓΕΙΑΣ: ΙΠΠΟΚΡΑΤΕΙΟ-ΜΕΛ

ΣΥΜΠΕΡΑΣΜΑ : Κατόπιν ταυτοποίησης της νουκλεοτιδικής αλληλουχίας της περιοχής V3 της πρωτεΐνης gp120 από δείγμα HIV-RNA βρέθηκε ότι ο ιός έχει τροπισμό για τον συνυποδοχέα CXCR4.

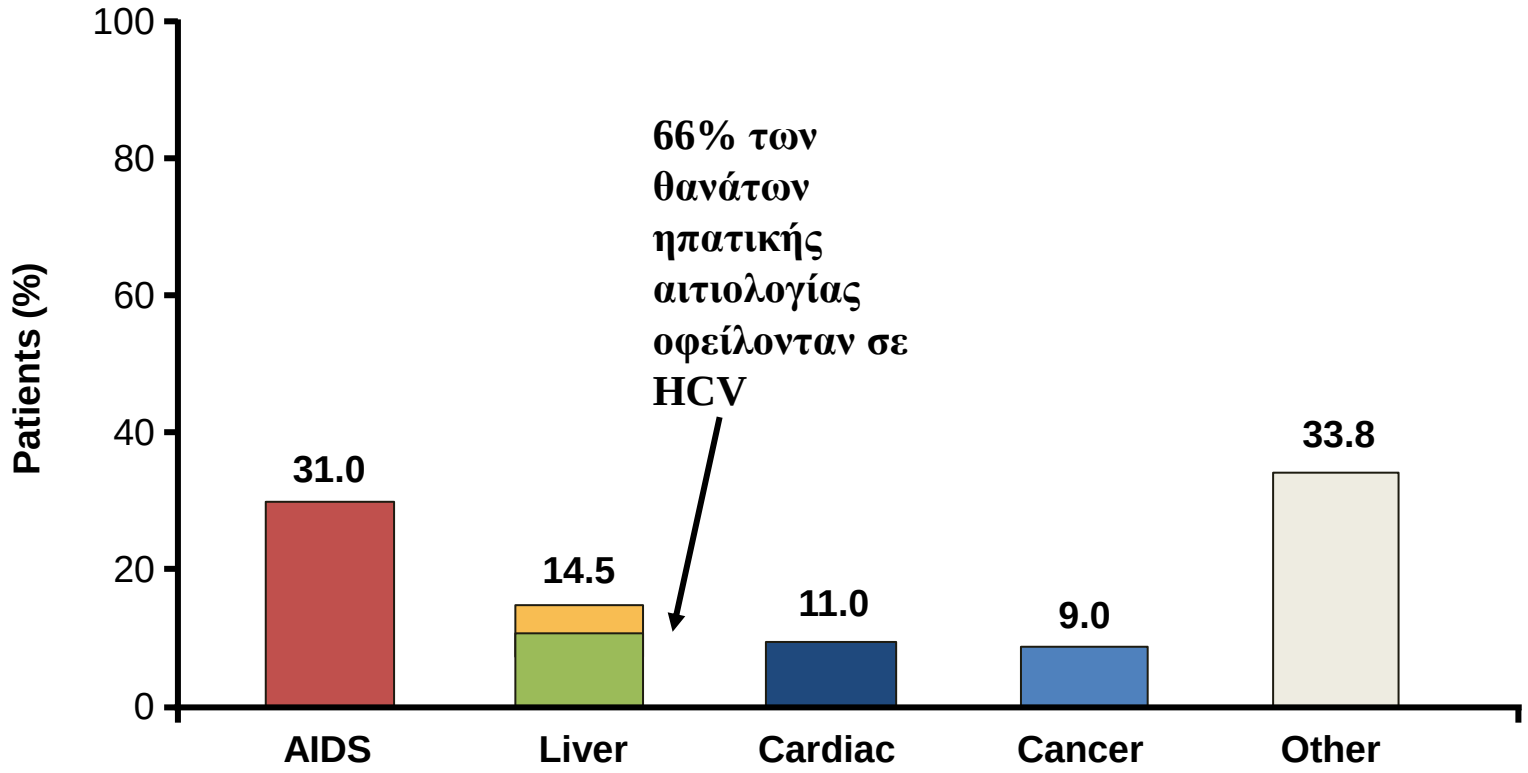
screening για TB, ηπατίτιδες

	Assessment	At HIV diagnosis	Prior to starting ART	Follow-up frequency	Comment	See page
Viral Hepatitis	HAV screen	+		As indicated	Screen if ongoing risk (e.g. MSM); vaccinate if non-immune	79, 95-97
	HBV screen	+	+		Annual screen if ongoing risk; vaccinate if non-immune. Use ART containing TDF or TAF in vaccine non-responders	
	HCV screen	+			Further screen based on risk behaviour and local epidemiology. Measure HCV-RNA if HCV Ab pos or if recently acquired infection suspected	
	HDV screen			As indicated	All Persons with positive HBs-Ag should also be screened for HDV co-infection	95, 103
	HEV screen			As indicated	Screen persons with symptoms consistent with acute hepatitis, unexplained flares of aminotrans-ferases or elevated liver function tests, neuralgic amyotrophy, Guillain-Barré, encephalitis or protein-uria. Include anti-HEV IgG and IgM and NAT for HEV-RNA in blood and if possible in stool	103
Tuberculosis	CXR	+		Re-screen if exposure	Consider routine CXR in persons from high TB prevalence populations. Some national guidelines consider the ethnicity, CD4 count and ART usage to define indication for latent tuberculosis infection screening. Use of PPD/IGRA depending on availability and local standard of care. IGRA should, however, be tested before PPD if both are to be used, given the potential for a false positive IGRA after PPD. See Diagnosis and Treatment of TB in PLWH	20, 114
	PPD	+				
	IGRA in selected high-risk populations (if available)	+				

screening για άλλες συλλοιμώξεις

	Assessment	At HIV diagnosis	Prior to starting ART	Follow-up frequency	Comment	See page
Others	Varicella zoster virus serology	+			Offer vaccination where indicated	99
	Measles/Rubella serology	+			Offer vaccination where indicated	
	Toxoplasmosis serology	+				
	CMV serology	+				
	Cryptococcus antigen	+/-			Consider screening for cryptococcus antigen in serum in persons with CD4 count < 100 cells/µL	
	Leishmania serology	+/-			Screen according to travel history/origin	
	Tropical screen (e.g. Schistosoma serology)	+/-			Screen according to travel history/origin	
	Influenza virus	+		Annual	In all persons with HIV, see Vaccination	99
	Streptococcus pneumoniae	+			No recommendations available regarding the need for a booster dose, see Vaccination	99
	Human papilloma virus	+		As indicated	Vaccinate all persons with HIV with 3 doses between ages 9 and 40. If HPV infection is established, efficacy of vaccine is questionable, see Vaccination	99
	SARS-CoV-2				In a pandemic situation, vaccinate irrespective of CD4 count and HIV-VL according to national guidelines	99

Αιτία θανάτου σε 1246 HIV(+) ασθενείς D:A:D Study (N = 23,441)



Sulkowski MS. J Hepatol. 2008;48:353-367. Weber R, et al. Arch Intern Med. 2006;166:1632-1641.

Μεγαλώνοντας με τον HIV…..

Ανακατανομή λίπους

Δυσλιπιδαιμία

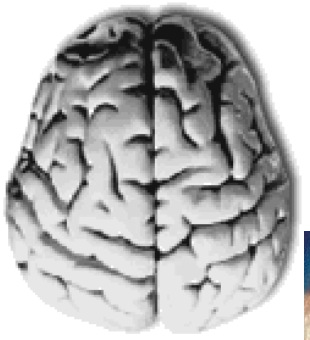
Σακχαρώδης διαβήτης

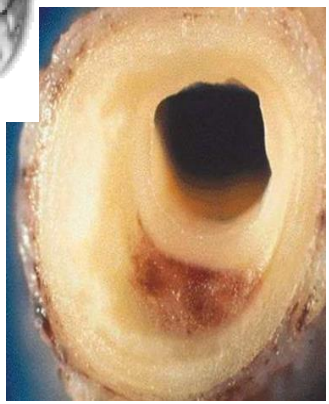
> Κίνδυνος ΣΝ

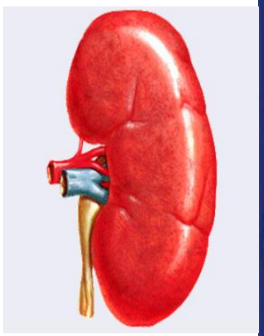
Νεφρική νόσος

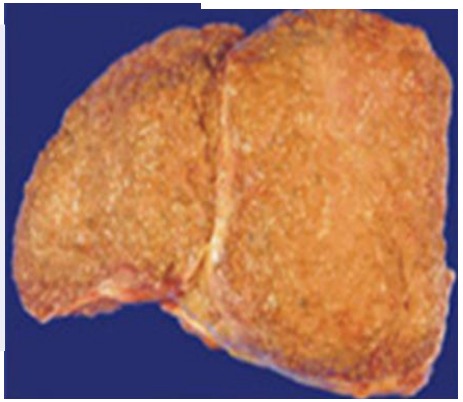
Οστεοπενία, οστεοπόρωση

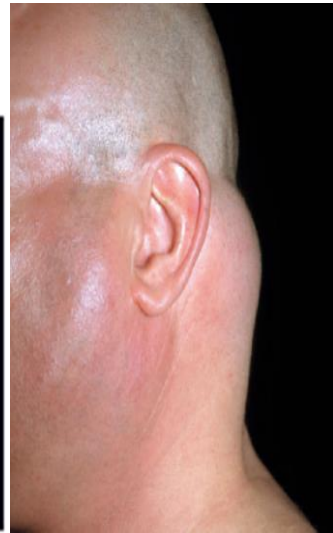
Ηπατοτοξικότητα

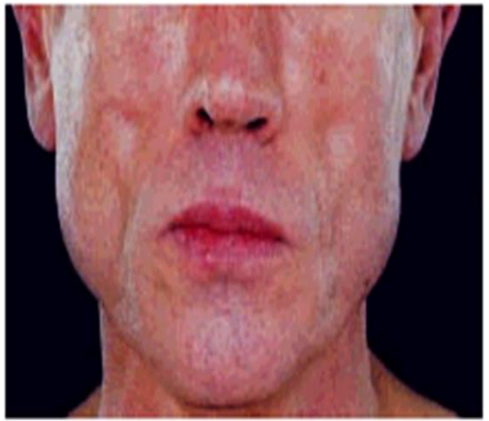


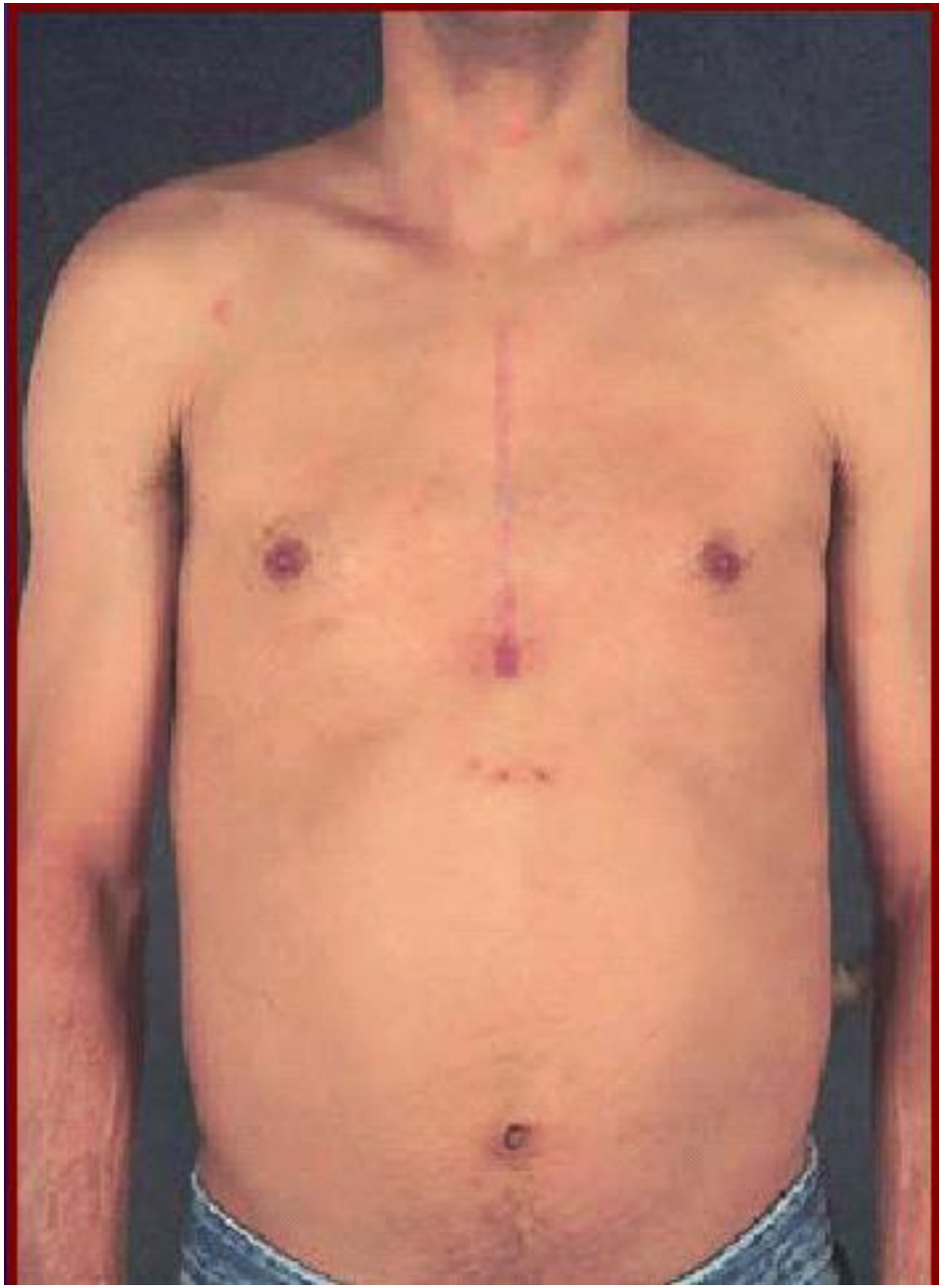




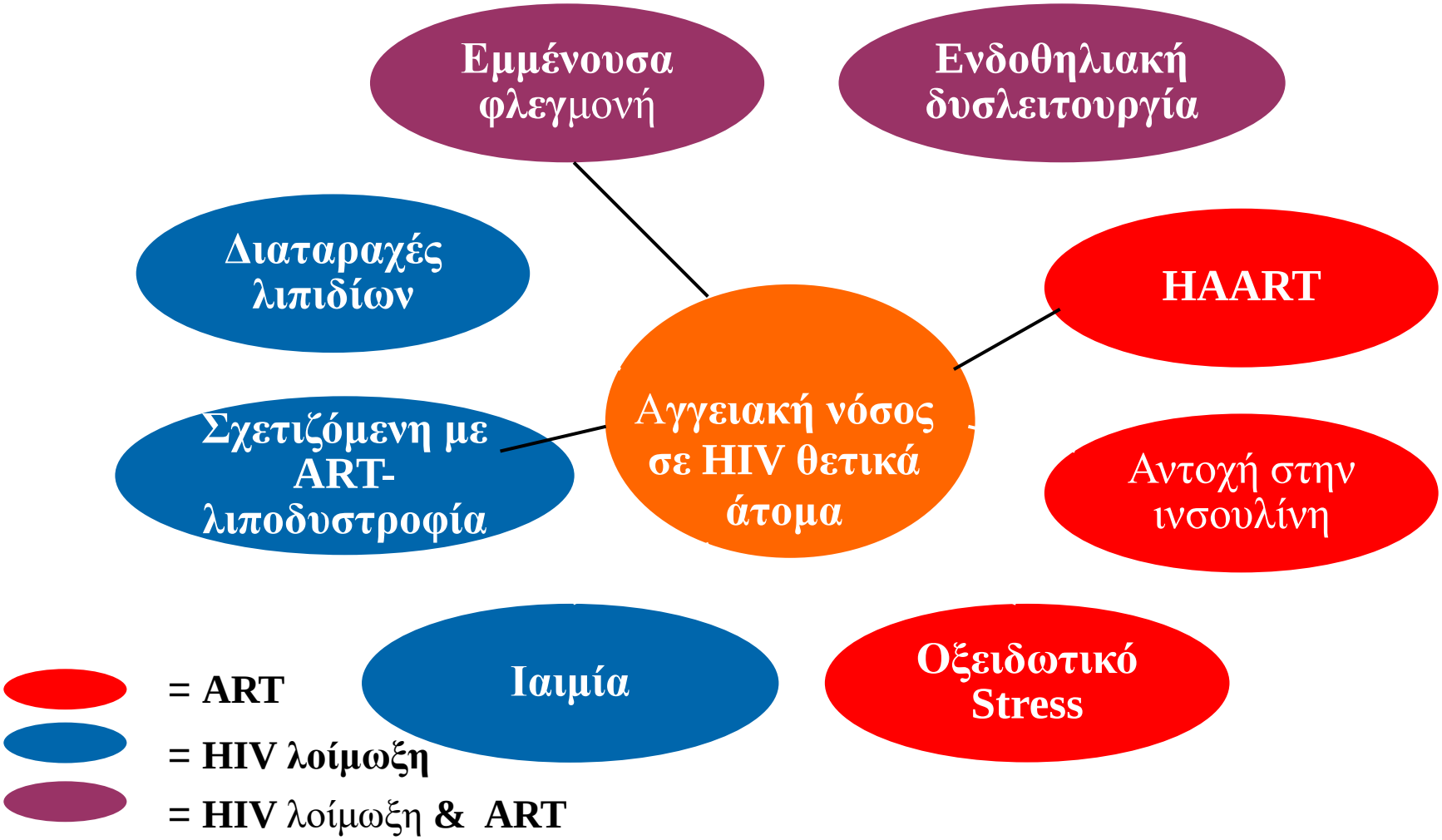




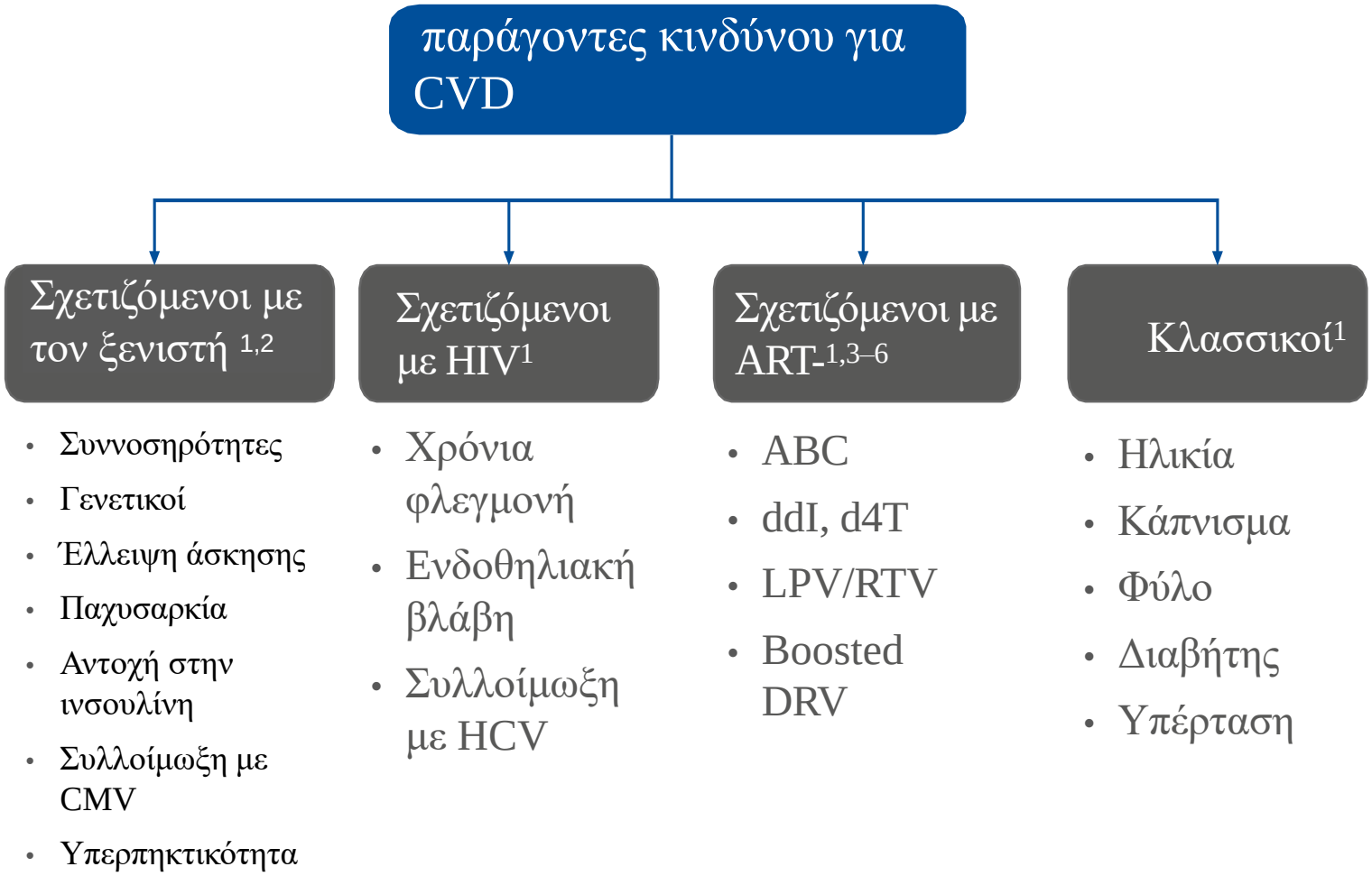




Παράγοντες που σχετίζονται με την HIV λοίμωξη που μπορεί να συμβάλουν σε καρδιαγγειακή

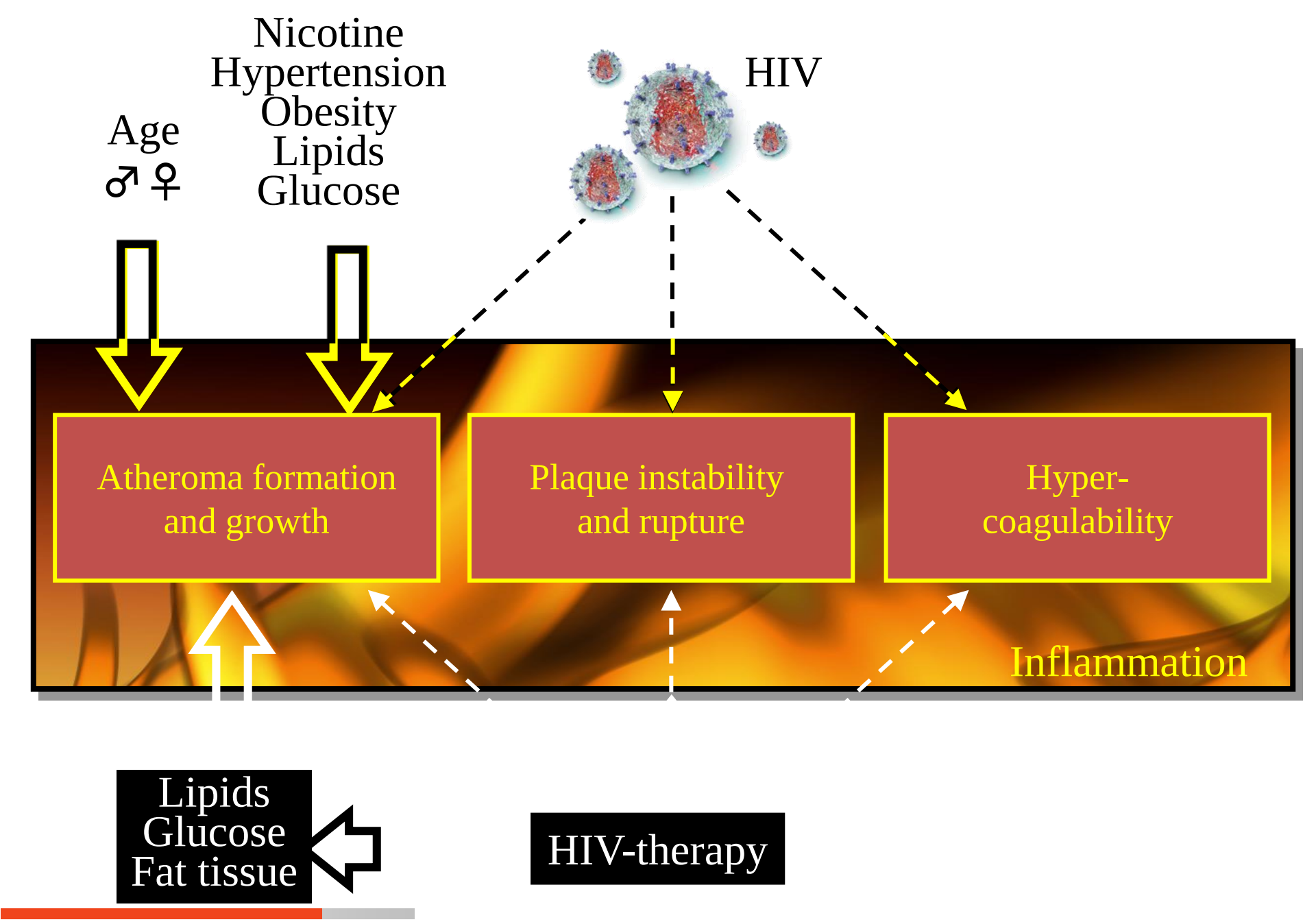


ΠΑΡΑΓΟΝΤΕΣ ΚΙΝΔΥΝΟΥ ΓΙΑ CVD ΣΕ ΑΤΟΜΑ ΜΕ HIV



ABC, abacavir; CMV, cytomegalovirus; CVD, cardiovascular disease; d4T, stavudine; ddI, didanosine; DRV, darunavir; HCV, hepatitis C virus; LPV, lopinavir; PLHIV, people living with HIV; RTV, ritonavir.

1. De Gaetano Donati K, et al. *J Hematol Infect Dis* 2010;2:e2010034; 2. Lichtner M, et al. *J Infect Dis* 2015;211:178–86; 3. Shahbaz S, et al. *World J Cardiol* 2015;7:633–44. 4. Lundgren JD, et al. CROI 2009, #44LB; 5. Ryom L, et al. CROI 2017, #128LB; 6. Elion R. *J Acquir Immune Defic Syndr* 2018;78:62–72.



Behrens & Reiss Curr Opin Infect Dis 2010

Παράγοντες κινδύνου για καρδιαγγειακή νόσο

Μη μεταβλητοί

ηλικία
οικογενειακό ιστορικό
Εθνικότητα
φύλο

Μεταβλητοί

Κάπνισμα

υπέρταση
αυξημένα επίπεδα ολικής και LDL-C
χαμηλά επίπεδα HDL-C
σακχαρώδης διαβήτης

Έλλειψη σωματικής άσκησης
παχυσαρκία

Άλλοι παράγοντες δυνητικά σχετιζόμενοι με την HIV

- Αυξημένα επίπεδα τριγλυκεριδίων
- Φλεγμονώδεις δείκτες
- Δυσλειτουργία ενδοθηλίου
- Αντοχή στην ινσουλινη

Με κόκκινα γράμματα, οι σημαντικοί παράγοντες
Δυνητικά συσχετιζόμενοι με την HIV και την HAART

http://info.med.yale.edu/library/heartbk/3.pdf; Grundy *et al, J Am Coll Cardiol* 1999; 34: 1348–1359, Dubé *et al. Clin Infect Dis* 2003; 37: 613–627; Hackam *et al. JAMA* 2003; 290: 932–940

Artery Research (2009) xx, 1–7

available at www.sciencedirect.com

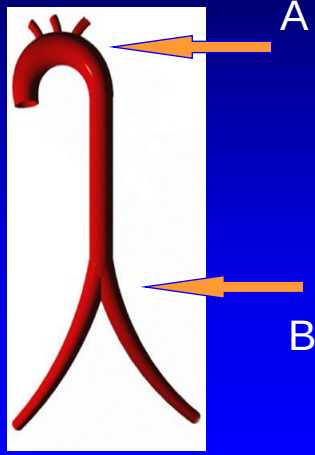
ScienceDirect

journal homepage: www.elsevier.com/locate/artres

Impact of human immunodeficiency virus infection on arterial stiffness and wave reflections in the early disease stages

Charalambos Vlachopoulos [a,*], Helen Sambatakou [b], DimitrisTsiachris [a], Ilias Mariolis [b], Konstantinos Aznaouridis [a], Nikolaos Ioakeimidis [a], Athanasios J. Archimandritis [b], Christodoulos Stefanadis [a]

Pulse Wave Velocity (PWV)



$$PWV = \frac{distance}{time}$$

Non-invasive evaluation

ΣΥΣΧΕΤΙΖΟΜΕΝΟΙ ΜΕ ART ΠΑΡΑΓΟΝΤΕΣ ΚΙΝΔΥΝΟΥ ΓΙΑ ΣΥΝΝΟΣΗΡΟΤΗΤΕΣ

Η χρήση ART μπορεί να συσχετίζεται με την ανάπτυξη συννοσηροτήτων και μακροπρόθεσμων επιπλοκών, όπως:

CV τοξικότητα (έμφραγμα)[1,2]
ABC DRV
LPV/RTV

Νεφροτοξικότητα[3,4]
TDF
κάποιες PIs (ATV/RTV, LPV/RTV)

Οστική νόσος*[5–7]
LPV/RT
V TDF

Αλληλεπιδράσεις
πχ. ART με αντιυπερτασικά και αντικαταθλιπτικά[12]

Νευροψυχιατρικά[8–11]
DTG
EFV
RPV

*Bone toxicity in this context refers to reduction of BMD, leading to increased risk of osteoporotic fractures.
ABC, abacavir; ART, antiretroviral therapy; ATV, atazanavir; BMD, bone mineral density; CV, cardiovascular; DRV, darunavir; DTG, dolutegravir; EFV, efavirenz; LPV, lopinavir; MI, myocardial infarction; PI, protease inhibitor; RTV, ritonavir; RPV, rilpivirine; TDF, tenofovir disoproxil fumarate; PI, protease inhibitor.

1. Lundgren JD, et al. CROI 2009, #44LB; 2. Ryom L, et al. CROI 2017, #128LB; 3. Ryom L, et al. CROI 2012, #865; 4. Nishijima T, et al. AIDS 2014;28:1903–10; 5. Borges A, et al. CROI 2016, #46; 6. Borges AH, et al.
Clin Infect Dis 2017;64:1413–21; 7. Bedimo R, et al. AIDS 2012;26:825–31; 8. Mollan K, et al. *Ann Intern Med* 2014;161:1–10; 9. Hoffman C, et al. *HIV Medicine* 2017:18:56–63: 10. Wohl ID, et al. IDWeek2017. #1687:

Digestive and Liver Disease 48 (2016) 1471–1477

Contents lists available at ScienceDirect

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld

Liver, Pancreas and Biliary Tract

Prevalence and predictors of liver steatosis and fibrosis in unselected patients with HIV mono-infection

Rosa Lombardi[a], Helen Sambatakou[b], Ilias Mariolis[b], Demosthenis Cokkinos[c], George V. Papatheodoridis[d,1], Emmanuel A. Tsochatzis[a,*,1]

[a] *Sheila Sherlock Liver Unit and UCL Institute for Liver and Digestive Health, Royal Free Hospital and UCL, London, UK*
[b] *2nd Department of Internal Medicine, Hippokration General Hospital, Athens, Greece*
[c] *Department of Radiology, Evangelismos General Hospital, Athens, Greece*
[d] *Academic Department of Gastroenterology, Laiko General Hospital, Athens, Greece*

Conclusions: Liver fibrosis can develop in asymptomatic HIV mono-infected patients. This is likely associated with NAFLD and usually manifests with normal transaminases. Non-invasive screening for the presence of NAFLD and fibrosis should be considered in the routine care of such patients.

Νεοδιαγνωσθείς HIV ασθενής

Συγχορηγούμενα φάρμακα?
Συννοσηρότητες
Συλλοιμώξεις (HCV, HBV, TB)?
Κληρονομικό ιστορικό?
Έξεις, συνήθειες?
Ψυχιατρική κατάσταση?
Ετοιμότητα για έναρξη, συμμόρφωση στην HAART?

Περίπτωση ασθενούς I

Ασθενής 47 ετών με νεοδιαγνωσθείσα HIV λοίμωξη τελικού σταδίου C3 (πνευμονία από *Pneumocystis jirovecii*)

Ιϊκό φορτίο: 120.000 cop/ml, CD4: 120

Υπερλιπιδαιμία (tot cholest: 240mg/dl, HDL: 39mg/dl)

ΑΠ: 136/90mmHg (δεν λαμβάνει αντιυπερτασική αγωγή)

Καπνιστής ~ 25 pack-yrs

BMI:29

Γονοτυπική αντοχή: wild type

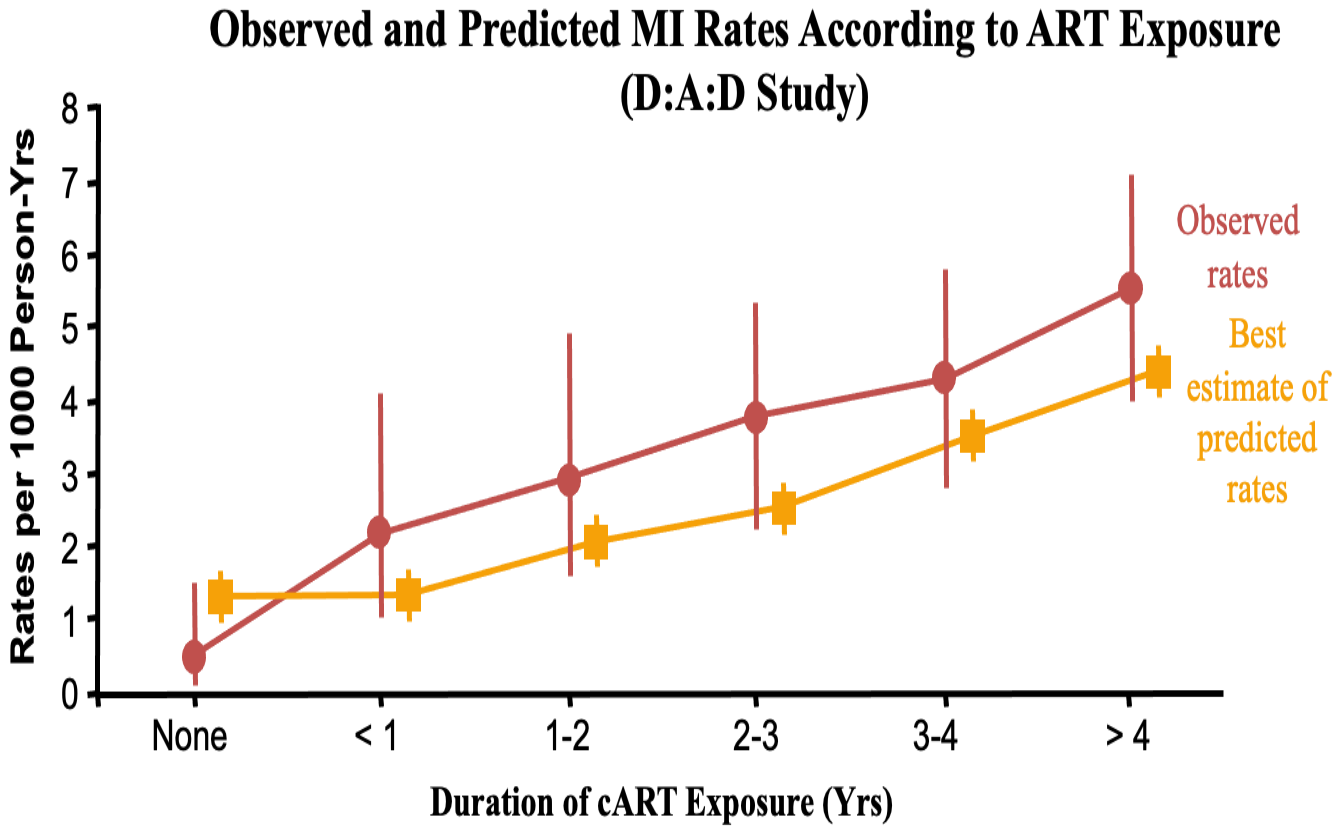
Τι θα προτείνουμε για μεταβολικό σύνδρομο?

Τι είδους HAART θα χορηγήσουμε?

- Τι άλλο συμπληρωματικό έλεγχο χρειαζόμαστε?
- Έχει υπέρταση με βάση μία μέτρηση (συστήνω καταγραφή πρωί-βράδυ για 1 εβδομάδα)?
- Ποιός είναι ο καρδιαγγειακός κίνδυνος?
- Ποιός είναι ο καλύτερος προγνωστικός δείκτης στο γενικό πληθυσμ
- Θα πρέπει να ξεκινήσουμε αντιϋπερτασικά, στατίνες κλπ ή αρχικά δίαιτα, άσκηση, διακοπή καπνίσματος και επαναξιολόγηση?
- Ποιοί είναι οι στόχοι της θεραπείας (φυσιολογικές τιμές?)
- Στην επιλογή α΄γραμμής αντιυπερτασικών πόσο ρόλο παίζει νεαρής ηλικίας σε σχέση με μεσήλικες και άνω?

Ποιος είναι ο καρδιακός κίνδυνος;

Είναι το Framingham score αξιόπιστος δείκτης εκτίμησης κινδύνου σε HIV ασθενείς?



Law MG, et al. HIV Med. 2006;7:218-230.

KA -AT

Information about your risk score:

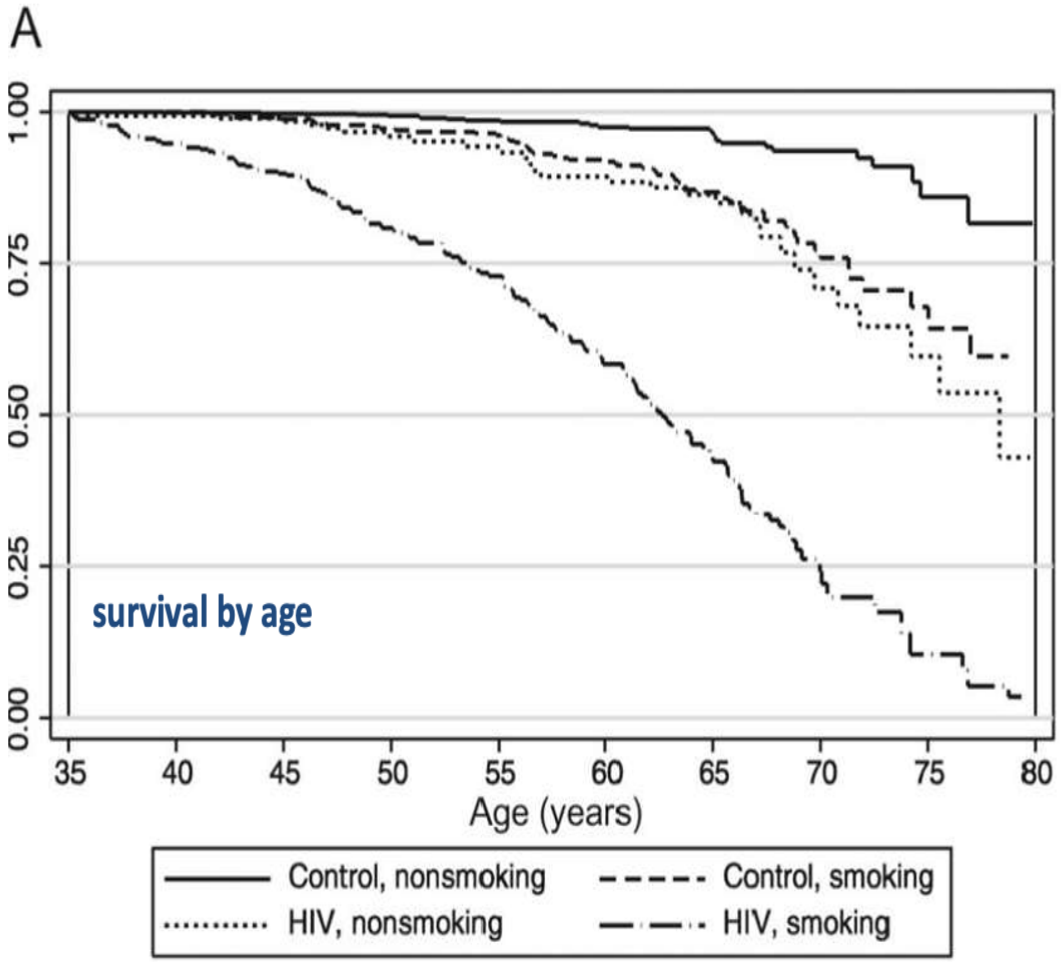
Age:	47
Gender:	male
Total Cholesterol:	240 mg/dL
HDL Cholesterol:	39 mg/dL
Smoker:	Yes
Systolic Blood Pressure:	136 mm/Hg
On medication for HBP:	No
Risk Score*	19% Means 19 of 100 people with this level of risk will have a heart attack in the next 10 years.

* Your risk score was calculated using an equation. Other NCEP products, such as printed ATP III materials, use a point system to determine a risk score that is close to the equation score.

Wednesday, June 29, 2016

Με το κάπνισμα τι γίνεται;

HIV-infected smokers lose more life-years to smoking than to HIV



Helleberg et al. Clin Infect Dis. 2013;56(5):727–34

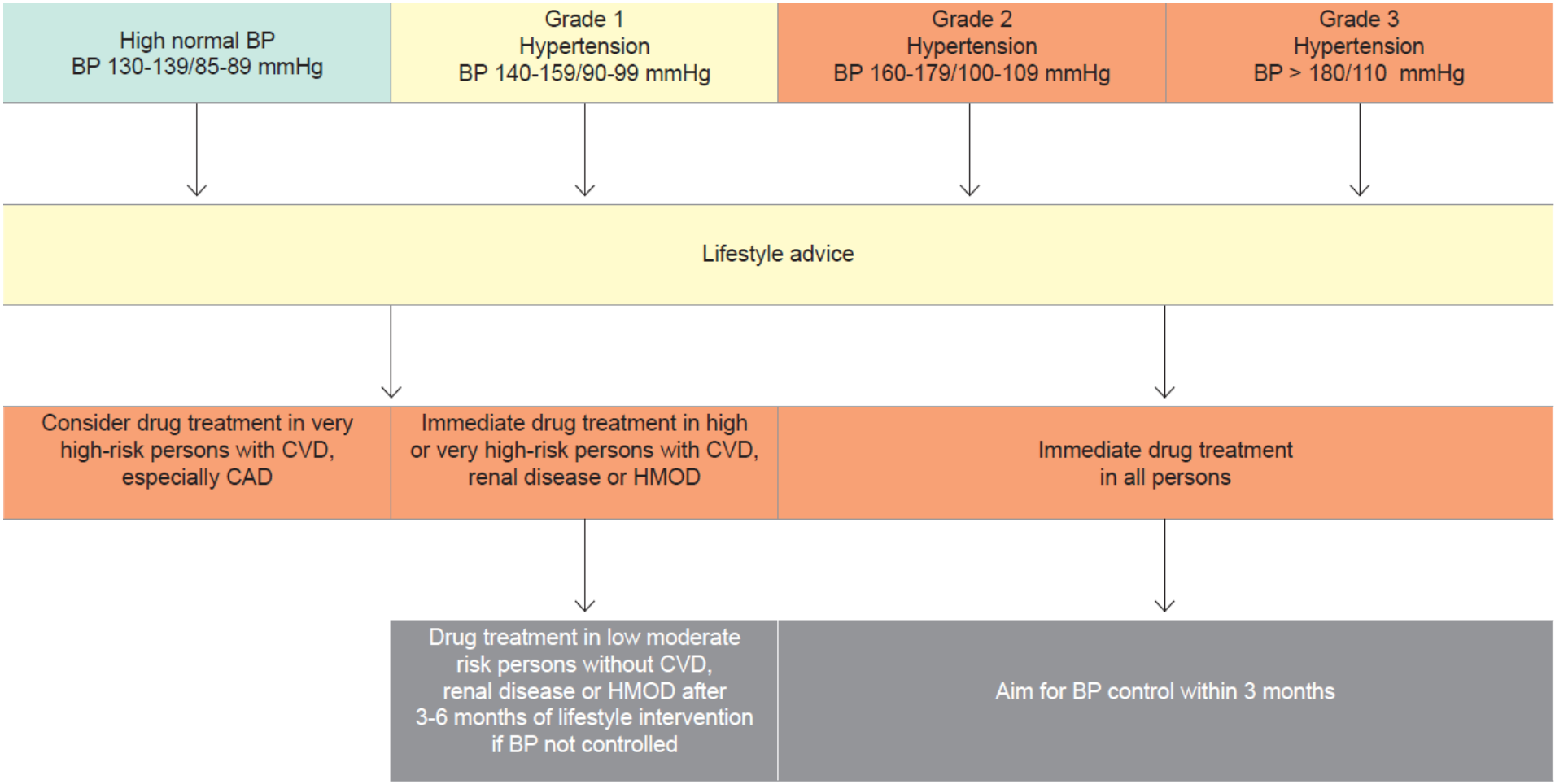
2921 HIV patients and 10 642 controls were followed for 14 281 and 45 122 person-years, respectively

Αφαίρεση του καπνίσματος….

Systolic Blood Pressure:	136 mm/Hg
On medication for HBP:	No
Risk Score*	6%

Means 6 of 100 people with this level of risk will have a heart attack ir

Υπέρταση: Διάγνωση, διαβάθμιση και θεραπεία



Πώς θα ρυθμίσω την αρτηριακή του πίεση;

Hypertension Management in Persons With HIV

< 55 Yrs of Age	≥ 55 Yrs of Age or Black (Any Age)

First Line*†

A: ACE inhibitor or angiotensin receptor blockers	**C:** Dihydropyridine calcium channel blocker‡

Second Line†

White: A + C
Black: A + C or C + thiazide-type diuretic **(D)**

Third Line†

A + C + D + Spirolactone (12.5-50 mg)

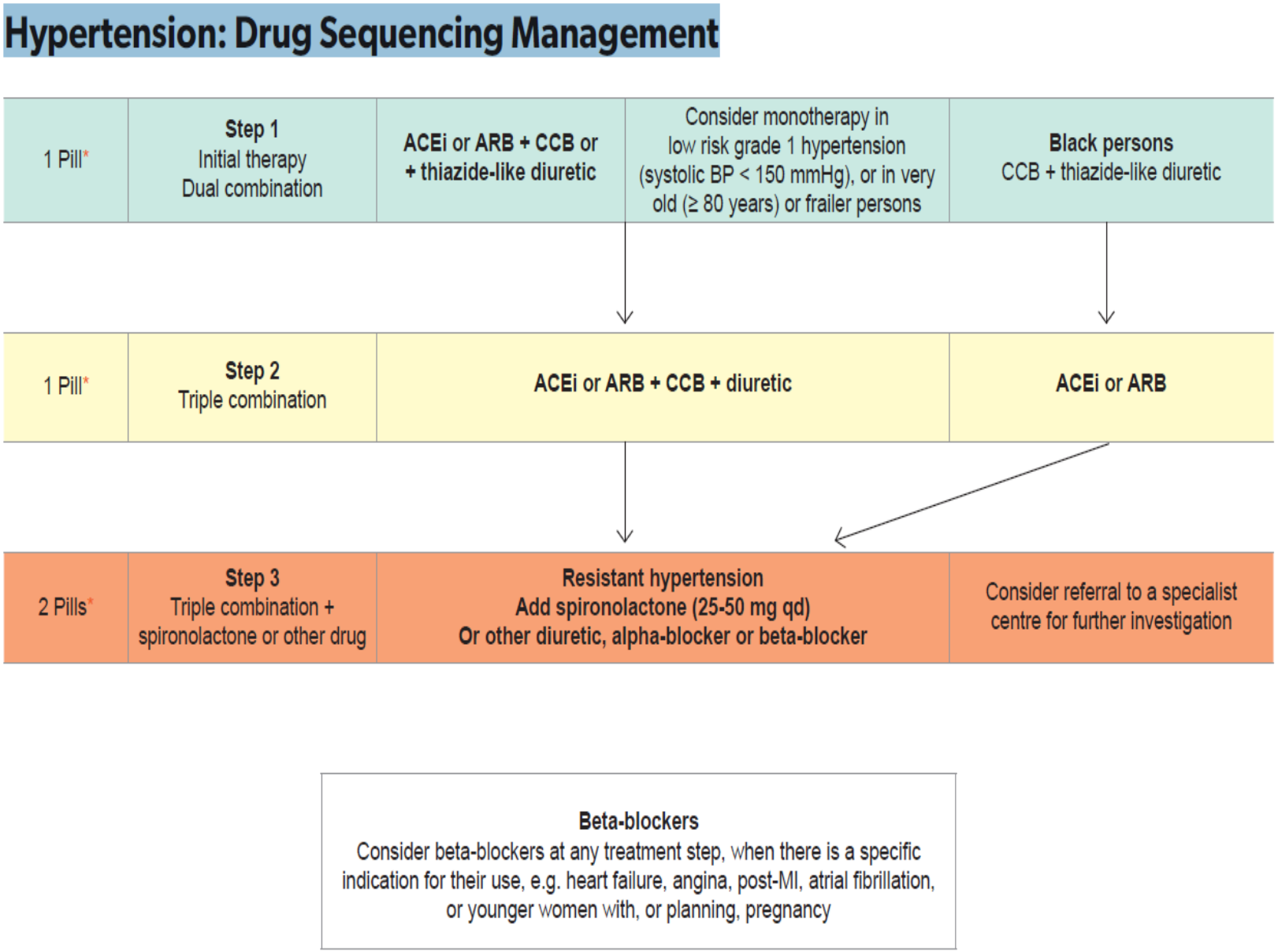
Add α-blocker or β-blocker and refer to specialist

*2 antihypertensive drugs are increasingly recommended as first-line and second-line therapy, particularly if pretreatment SBP is ≥ 160 mm Hg. †Wait 4-6 wks to assess if target is achieved; if not, proceed to next step. ‡If not tolerated or if deemed high risk of heart failure, a thiazide-type diuretic can be used instead. If dihydropyridine calcium channel blocker is preferred but not tolerated, verapamil or diltiazem may be used.

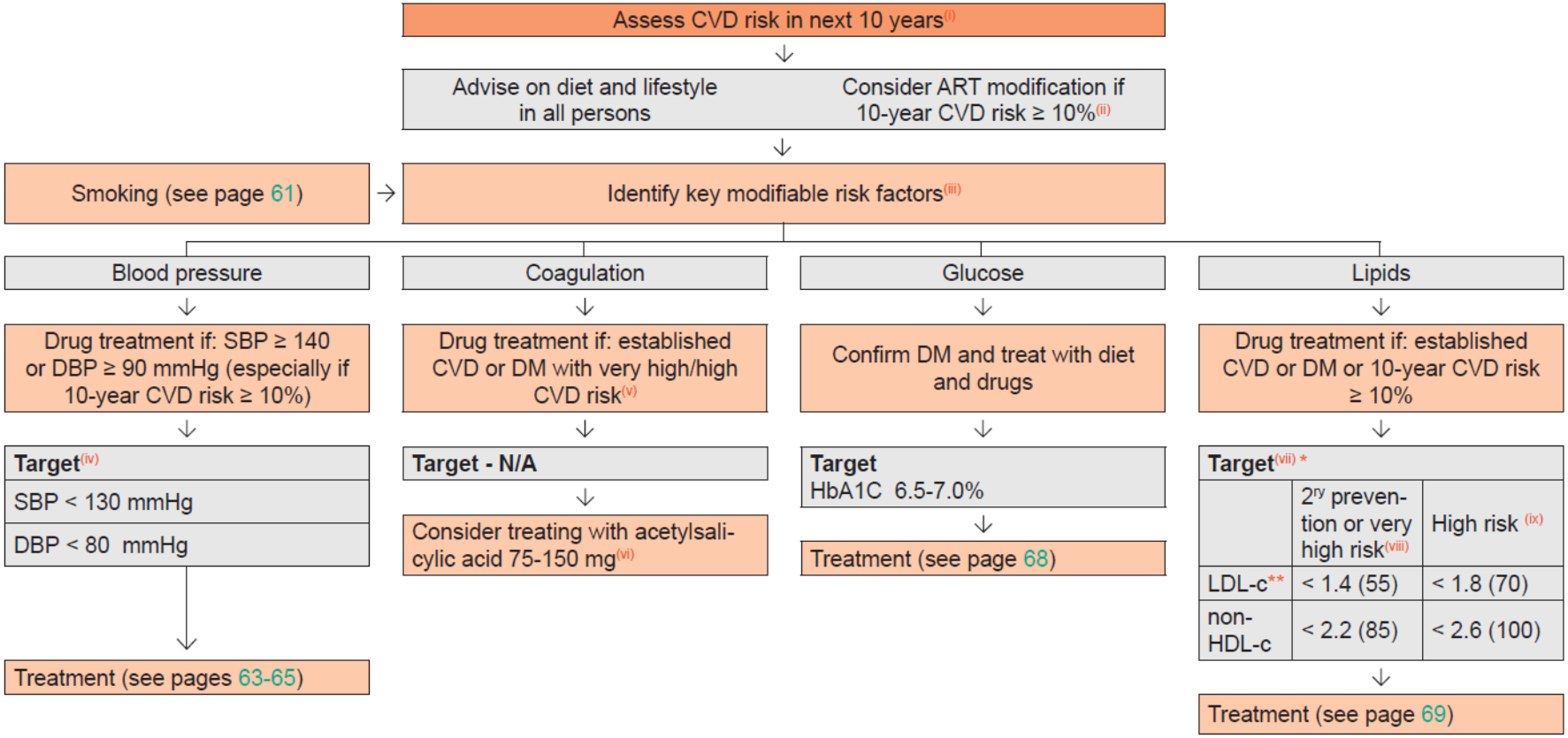
EACS Guidelines v10. November 2019.

Hypertension: Drug Sequencing Management

EACS European AIDS Clinical Society



ΕΥΡΩΠΑΪΚΕΣ ΟΔΗΓΙΕΣ ΓΙΑ ΠΡΟΛΗΨΗ ΚΑΡΔΙΑΓΓΕΙΑΚΗΣ ΝΟΣΟΥ (CVD) ΣΕ ΑΤΟΜΑ ΜΕ HIV



* Fasting or non-fasting samples may be used

** and ≥ 50% reduction from baseline

Use Framingham equation or similar annually in all men with HIV > 40 yrs of age and all women with HIV > 50 yrs of age without CVD.

†Replace with ARV known to cause less metabolic disturbances; consider replacing ZDV or ABC with TDF or use an NRTI-sparing regimen

Πως θα ρυθμίσω την αρτηριακή του πίεση;

Antihypertensives		ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV	FTR	MVC	BIC	CAB oral	CAB/ RPV	DTG	EVG/c	RAL	TAF	TDF
ACE inhibitors	captopril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	cilazapril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	enalapril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	fosinopril	↔	↑	↔	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	lisinopril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	perindopril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	quinapril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	ramipril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	trandolapril	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Angiotensin antagonists	candesartan	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	eprosartan	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	irbesartan	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↓	↔	↔	↔
	losartan	↔	↓a	↔	↓a	↓a	↔	↑b	↑b	↔	↔	↔	↔	↔	↔	↔	↔	↓a	↔	↔	↔
	olmesartan	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔
	telmisartan	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔
	valsartan	↑	↑	↑	↑	↑	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔
β blockers	atenolol	↑c	↔c	↑	↔	↔c	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↑	↑	↔	↔	↔
	bisoprolol	↑c	↑c	↑	↑	↑c	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	carvedilol	↑c	↑↓c	↑	↑↓	↑↓c	↔	↑↓	↑↓	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	labetalol	↑c	↓c	↔	↓	↓c	↔	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	metoprolol	↑c	↑c	↑	↑	↑c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	nebivolol	↑c	↑c	↑	↑	↑c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	oxprenolol	↑c	↓c	↔	↓	↓c	↔	↓	↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	pindolol	↑c	↑c	↑	↑	↑c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	propranolol	↑c	↑c	↑	↑	↑c	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
Calcium channel blockers	amlodipine	↑d	↑d	↑	↑	↑e	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	diltiazem	↑d	↑d	↑	↑	↑e	E	↓69%	↓E	↓	E	E	E	E	↔	E	↔	↑	↔	↔	↔
	felodipine	↑d	↑d	↑	↑	↑e	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	lacidipine	↑d	↑d	↑	↑	↑e	↔	↓	↓	↓	↔f	↔f	↔	↔	↔	↔f	↔	↑	↔	↔	↔
	lercanidipine	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	nicardipine	↑d	↑d	↑	↑	↑e	E	↓	↓E	↓	Ef	Ef	E	↔	↔	Ef	↔	↑	↔	↔	↔
	nifedipine	↑d	↑d	↑	↑	↑e	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	nisoldipine	↑d	↑d	↑	↑	↑e	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	verapamil	↑d	↑d	↑	↑	↑e	E	↓	↓E	↓	E	E	E	E	↔	E	↔	↑	↔	E	E
Diuretics	amiloride	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔	↔
	bendroflu-methiazide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	chlortalidone	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	eplerenone	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	furosemide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	E
	hydrochloro-thiazide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	indapamide	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	torasemide	↔	↓	↔	↓	↓	↔	↑	↑	↔	↔	↑	↔	↔	↔	↔	↔	↓	↔	↔	↔
	xipamide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Others	clonidine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	doxazosin	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↔	↔	↔	↑	↔	↔	↔
	hydralazine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔g	↔	↔	↔	↔	↔	↔	↔	↔h
	methyldopa	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔g	↔	↔	↔	↔	↔	↔	↔	↔
	moxonidine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑?
	prazosin	↑?	↑?	↑?	↑?	↑?	↔	↓?	↓?	↓?	↔	↑	↔	↔	↔	↔	↔	↑?	↔	↔	↔
	sacubitril	↑	↑	↑	↑	↑	↔	↔	↔	↔	↔	↑	E	↔	↔	↔	↔	↔	↔	↔	↑
	spironolactone	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

Αλληλεπιδράσεις ART με στατίνες

Antiretroviral	Contraindicated	Titrate Dose	No Dose Adjustment
RPV[1]			**Atorvastatin** **Pitavastatin**
EVG/COBI/FTC/ TDF[1]	**Lovastatin** **Simvastatin**	**Atorvastatin** **Rosuvastatin**	
DTG[1,2]		**Metformin**	
ATV/RTV[1]	**Lovastatin** **Simvastatin**	**Atorvastatin** **Rosuvastatin**	**Pitavastatin**
DRV/RTV[1]	**Lovastatin** **Simvastatin**	**Atorvastatin** **Pravastatin** **Rosuvastatin**	**Pitavastatin**
EFV[1]		**Atorvastatin** **Simvastatin** **Pravastatin** **Rosuvastatin**	**Pitavastatin**
RAL[1]			
ATV/COBI or DRV/COBI	**Lovastatin** **Simvastatin**		

1. DHHS Guidelines.

www.hiv-druginteractions.org

UNIVERSITY OF LIVERPOOL

Interaction Report

Report ID: DE EY
Date Produced: 09 June 2016

Antiretroviral Treatment	Co-medications
Cobicistat (with ATV or DRV)	Clopidogrel
Darunavir	Diltiazem
	Fish oils
	Perindopril
	Rosuvastatin
	Trazodone

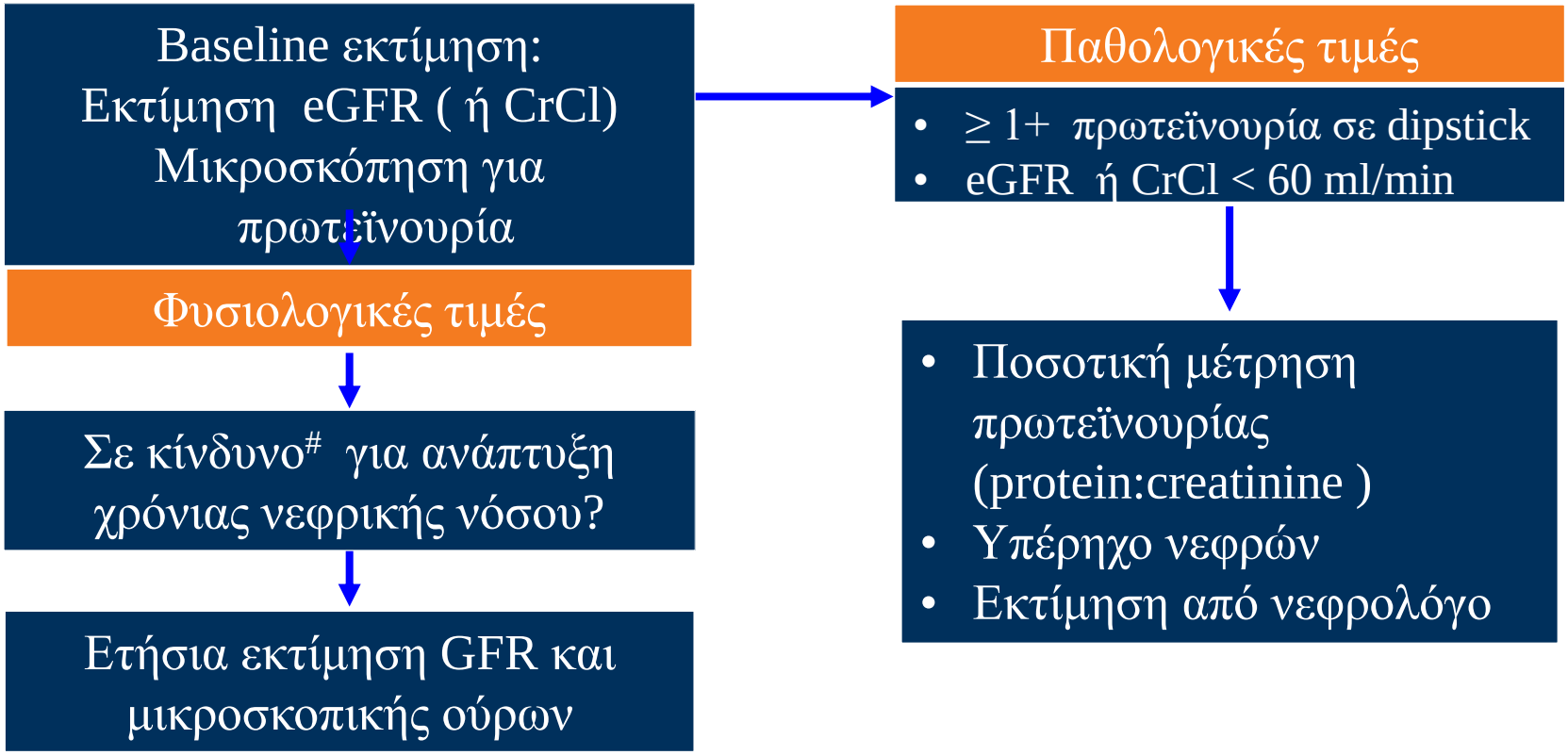
Έλεγχος για συννοσηρότητες (1)

	Assessment	At HIV diagnosis	Prior to starting ART	Follow-up frequency	Comment	See page
Haematology	FBC	+	+	3-12 months		
	Haemoglobinopathies	+			Screen at risk persons	
	G6PD	+			Screen at risk persons	
Body Composition	Body mass index	+	+	Annual		67
Cardiovascular Disease	Risk assessment (iii)	+	+	Annual	Should be performed in all men > 40 years and women > 50 years without CVD	68
	ECG	+	+/-	As indicated	Consider baseline ECG prior to starting ARVs associated with potential conduction problems	
Hypertension	Blood pressure	+	+	Annual		69-70
Lipids	TC, HDL-c, LDL-c, TG (iv)	+	+	Annual	Repeat in fasting state if used for medical intervention (i.e. ≥ 8 h without caloric intake)	76
Glucose	Serum glucose	+	+	Annual	Consider oral glucose tolerance test / HbA1c if fasting glucose levels of 5.7-6.9 mmol/L (100-125 mg/dL)	73-74
Pulmonary Disease	Respiratory symptoms and risk factors (xii)	+	+	Annual	If severe shortness of breath is reported with preserved spirometry, echocardiography may be performed to rule out heart failure and/or pulmonary hypertension	116
	Spirometry			As indicated	Spirometry should be performed in all symptomatic persons (xii)	
Liver Disease	Risk assessment (v)	+	+	Annual		86-91
	ALT/AST, ALP, Bilirubin	+	+	3-12 months	More frequent monitoring prior to starting and on treatment with hepatotoxic drugs	
	Staging of liver fibrosis			12 months	In HCV and/or HBV co-infected persons and/or persons with HIV at risk for NAFLD (as per algorithm on page 82) —> every 2-3 years (e.g. FibroScan, serum fibrosis markers)	86-91
	Hepatic ultrasound			6 months	Persons with liver cirrhosis (xiii)	86-91

Έλεγχος για συννοσηρότητες (2)

	Assessment	At HIV diagnosis	Prior to starting ART	Follow-up frequency	Comment	See page
Renal Disease	Risk assessment[vi]	+	+	Annual	More frequent monitoring if eGFR < 90 mL/min, CKD risk factors present[vi] and/or prior to starting and on treatment with nephrotoxic drugs[ix]	81-82
	eGFR (CKD-EPI)[vii]	+	+	3-12 months		
	Urine dipstick analysis[viii]	+	+	Annual	Every 6 months if eGFR < 60 mL/min or rapid decline in eGFR, if proteinuria ≥ 1+ and/or eGFR < 60 mL/min perform UA/C or UP/C[viii]	
Bone Disease	Bone profile: calcium, PO_4, ALP	+	+	6-12 months		78-80
	Risk assessment[x] (FRAX®[xi] in persons > 40 years)	+	+	2 years	Consider DXA in specific persons, see page 78 for details	
Vitamin D	25(OH) vitamin D	+		As indicated	Screen at risk persons	79
Cognitive impairment	Screening questionnaire	+	+	As indicated	Screen all persons without highly confounding conditions. If abnormal or symptomatic, see algorithm page 114 for further assessment.	114
Anxiety	Questionnaire	±	±	As indicated	Consider screening at each routine HIV clinic visit	110-111
Depression	Questionnaire	+	+	As indicated	Consider screening at each routine HIV clinic visit	106-107
Older persons	Polypharmacy review			Annual	Perform periodic medicines review	120-121
	Frailty			Annual	Screen with Gait walking speed, Short Physical Performance Battery (SPPB), FRAIL Scale (FS) or Clinical Frailty Scale (CFS)	122-123
	Falls			Annual		124
Cancer	Mammography			1-3 years	Women 50-74 years	65
	Cervical PAP or liquid based cytology			1-3 years	Women with HIV > 21 years, as per national guidelines	
	Rectal exam, anal cytology and anoscopy			1-3 years	MSM and persons with HPV-associated dysplasia	
	Ultrasound and alpha-foetoprotein			6 months	Controversial; persons with cirrhosis and persons with HBV co-infection at high risk of HCC[xiii]	
	Prostate cancer (PSA)			1-2 years	Controversial; men > 50 years with a life expectancy >10 years	
	Others			As indicated	Lung cancer and colorectal cancer screening according to local screening programmes	

Screening για νεφρική νόσο σε HIV (+) ασθενείς



 # παράγοντες κινδύνου για ΧΝΝ: έγχρωμος, Σ.Δ., υπέρταση, HCV, CD4 counts < 200 cells/mm³, HIV RNA > 4000 copies/ml

Gupta SK, et al. Clin Infect Dis 2005; 40:1559–158

***Infectious Diseases Society of America**

CrCl Cutoffs for Single-Tablet Regimens

Single-Tablet Regimen	FDA Approved for Pts With CrCl, mL/min
EVG/COBI/TDF/FTC[1]	≥ 70
EFV/TDF/FTC[2]	≥ 50
RPV/TDF/FTC[3]	≥ 50
DTG/ABC/3TC[4]	≥ 50
EVG/COBI/TAF/FTC[5]	≥ 30

ΑΝΤΙΜΕΤΩΠΙΣΗ ΚΑΙ ΠΡΟΛΗΨΗ CVD ΣΕ ΑΤΟΜΑ ΜΕ HIV

Στρατηγικές:

- Αξιολόγηση και αντιμετώπιση των κλασσικών παραγόντων κινδύνου[1]
- Διακοπή καπνίσματος[1,2–4]
- Αλλαγές lifestyle/και συστηματική άσκηση[1]
- **Εκτίμηση για ανάγκη χρήσης στατίνης**[1,5] (ανάλογα με HIV (-) άτομα
- **Βελτιστοποίηση της ART**
  - Έναρξη ART σε ART-naïve ασθενείς με HIV[1]
  - Αλλαγή σε ομάδα ART με γνωστή μείωση κινδύνου για CV και/ή καλύτερο μεταβολικό προφίλ [1]
  - Αντιμετώπιση τυχόν αλληλεπιδράσεων[1]

ART, antiretroviral therapy; CV cardiovascular; CVD, cardiovascular disease; DDI, drug–drug interaction; PLHIV, people living with HIV.

1. EACS Guidelines, Version 12.0, October 2023. Available at: www.eacsociety.org/files/guidelines_9.0-english.pdf. Last accessed: April 2020; 2. Bedimo R, et al. ID Week 2017, #2473; 3. Helleberg M, et al. *Clin Infect Dis* 2013;56:727–34; 4. Veterans Health Administration. HIV Provider Smoking Cessation Handbook. July 2012; 5. Althoff K, et al. CROI 2017. #619.

REPRIEVE: Phase 3 study (12 countries)

HIV Treatment

Pitavastatin to Prevent CVD in PLWH

N=7,769

PLWH on stable ART aged 40–75 years with low-to-moderate risk of ASCVD

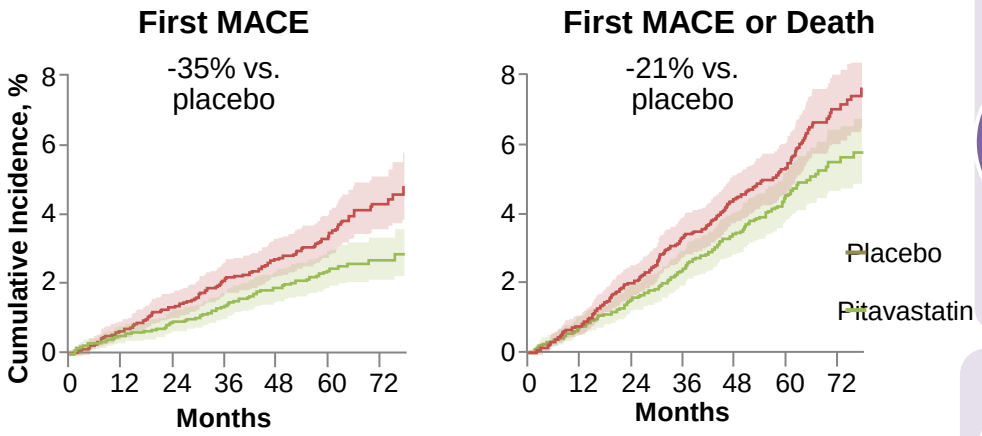
- Pitavastatin 4 mg QD (n=3,888)
- Placebo (n=3,881)

Outcome

Occurrence of major adverse cardiovascular events (MACE)

March 26, 2015–July 31, 2019

Treatment Effect of Pitavastatin on MACE



Cumulative incidence of event, %

Placebo	0.00	0.66	1.38	2.14	2.74	3.36	4.36
Pitavastatin	0.00	0.56	0.95	1.35	1.89	2.41	2.73

No. at risk

Placebo	3,881	3,693	3,506	3,356	2,997	2,182	959
Pitavastatin	3,888	3,647	3,475	3,364	2,997	1,947	1,052

Cumulative incidence of event, %

Placebo	0.00	0.80	2.03	3.34	4.44	5.35	7.06
Pitavastatin	0.00	0.77	1.58	2.39	3.40	4.54	5.54

No. at risk

Placebo	3,881	3,693	3,506	3,356	2,997	1,975	919
Pitavastatin	3,888	3,647	3,475	3,364	2,998	1,948	1,027

- Trial was stopped early by the DSMB for efficacy after a mean follow-up of 5.1 years (no unexpected safety concerns were reported)
- Efficacy generally consistent among subgroups
- Effect on CV risk reduction was larger than predicted based on the impact of LDL lowering alone (potential additional mechanisms involved beyond LDL lowering)

- Incidence of non-fatal SAEs was similar in the pitavastatin and placebo groups (4.16 and 4.13, respectively)
- Pitavastatin was well tolerated with low discontinuation rate versus placebo (2% vs. 1%)

PLWH who received pitavastatin had a lower risk of major adverse cardiovascular events than those who received placebo over a median follow-up of 5.1 years

(AS)CVD, (atherosclerotic) cardiovascular disease; DSMB, Data Safety Monitoring Board; MACE, major adverse cardiovascular events

Grinspoon SK, et al. N Engl J Med 2023 [Epub ahead of print]. doi: 10.1056/NEJMoa2304146. These findings were presented at IAS: Grinspoon S, et al. IAS 2023, Symposium SY06.

RESEARCH SUMMARY

Pitavastatin to Prevent Cardiovascular Disease in HIV Infection

Grinspoon SK et al. DOI: 10.1056/NEJMoa2304146

CLINICAL PROBLEM

In persons with HIV infection, the risk of atherosclerotic cardiovascular disease is twice that in the general population. Randomized studies of primary prevention strategies in this population are needed.

CLINICAL TRIAL

Design: A phase 3, multinational, randomized, placebo-controlled trial assessed the efficacy and safety of pitavastatin for the prevention of cardiovascular events in persons with HIV infection and low-to-moderate risk of atherosclerotic cardiovascular disease.

Intervention: 7769 participants between the ages of 40 and 75 years (median screening LDL cholesterol, 108 mg/dl) receiving stable antiretroviral therapy were assigned to receive oral pitavastatin calcium (4 mg) (3888 participants) or placebo (3881 participants) daily. The primary outcome was the occurrence of a major adverse cardiovascular event — cardiovascular death, myocardial infarction, hospitalization for unstable angina, stroke, transient ischemic attack, peripheral arterial ischemia, revascularization, or death from an undetermined cause, as measured in a time-to-event analysis.

RESULTS

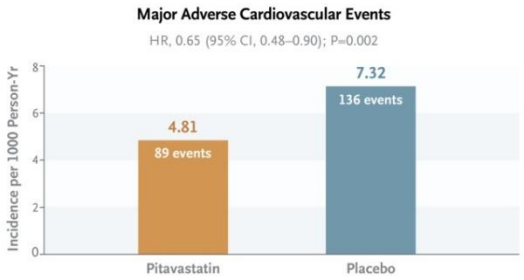
Efficacy: During a median follow-up of 5.1 years, the incidence of major adverse cardiovascular events was significantly lower in the pitavastatin group than in the placebo group.

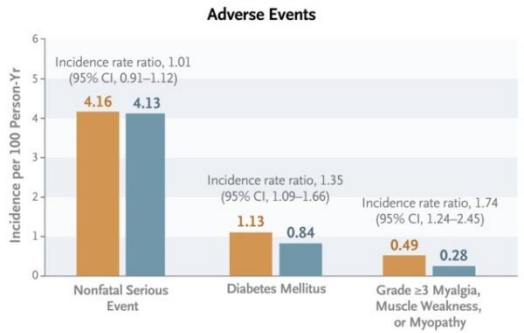
Safety: The incidence of nonfatal serious adverse events was similar in the two groups. Participants in the pitavastatin group were more likely than those in the placebo group to have newly diagnosed diabetes mellitus and grade ≥3 myalgia, muscle weakness, or myopathy.

LIMITATIONS AND REMAINING QUESTIONS

- Although other statins that do not interact with HIV medications may have similar protective effects, the results reported are specific to pitavastatin.
- Other strategies that lower LDL cholesterol may be useful in this population and need to be compared with statin therapy with respect to efficacy, safety, and cost.

Links: Full Article | NEJM Quick Take | Editorial





CONCLUSIONS

In persons with HIV infection receiving stable antiretroviral therapy and at low-to-moderate cardiovascular risk, daily treatment with pitavastatin resulted in a significantly lower risk of major adverse cardiovascular events than placebo over approximately 5 years of follow-up.

Ετοιμότητα για έναρξη, συμμόρφωση στην HAART
(adherence vs compliance)

i. Χαρακτηριστικά νόσου
ii. Κοινωνική στήριξη
iii. Σχέση ασθενούς-γιατρού
iv. Πηγές πληροφόρησης
v. Περιβάλλον παροχής υγείας

Επιλογή αρχικής HAART. Σε ποιόν ασθενή?

- Έναρξη σε πρόσφατη λοίμωξη
- Έναρξη σε ασθενή με συννοσηρότητες
- Έναρξη σε ασθενή με προχωρημένη HIV λοίμωξη

Επιλογή αρχικής θεραπείας

Παράγοντες του φαρμάκου

Αριθμός χαπιών, μέγεθος, συχνότητα και διατροφικές ανάγκες

αποτελεσματικότητα

Προφίλ ανοχής/τοξικότητας

Παράγοντες ασθενούς

Προ θεραπείας **αριθμός CD4+ κυττάρων**

Συννοσηρότητες (καρδιαγγειακός κίνδυνος, ψυχιατρική νόσος)

Συγχορηγούμενα φάρμακα (αντιφυματικά, PPI για γαστρίτιδα,….), συλλοίμωξη

Προτίμηση ασθενούς, συμμόρφωση

Προοπτική εγκυμοσύνης

Παράγοντες του ιού

Ύπαρξη πρωτογενούς αντοχής

HIV-1 RNA προ της έναρξης

International Guidance on First-line ART

DHHS[1]	IAS-USA[2]	EACS[3]	WHO[4]
Recommended Initial Regimens for Most PWH ▪ BIC/FTC/TAF ▪ DTG/ABC/3TC* ▪ DTG + XTC + (TAF or TDF) ▪ DTG/3TC†	*Recommended Initial Regimens for Most PWH* ▪ BIC/FTC/TAF ▪ DTG + FTC/TAF or XTC/TDF ▪ DTG + 3TC†‡	*Recommended* ▪ BIC/FTC/TAF ▪ DTG/ABC/3TC* ▪ DTG + FTC/TAF or XTC/TDF ▪ RAL + FTC/TAF or XTC/TDF ▪ DTG + 3TC§ ▪ DOR + FTC/TAF or XTC/TDF or DOR/3TC/TDF	*Recommended* ▪ DTG + XTC/TDF *Alternative* ▪ EFV + 3TC + TDF

*Only if HLA-B*5701 negative. †Except when HIV-1 RNA >500,000 copies/mL, HBV coinfected, or ART to be started before
RT genotypic resistance testing or HBV testing results available. ‡"Perhaps" not recommended for patients with a CD4+ cell count <200 cells/mm^3. §Only if HBsAg negative and HIV-1 RNA <500,000 copies/mL.

1. DHHS. Guidelines for the use of antiretroviral agents in adults and adolescents living with HIV.
2. Saag. JAMA. 2020;324:1651. 3. EACS Guidelines v11.0, October 2021. 4. who.int/publications/i/item/9789240031593.

Initial Combination Regimen for ART-naïve Adult PLWH

EACS European AIDS Clinical Society

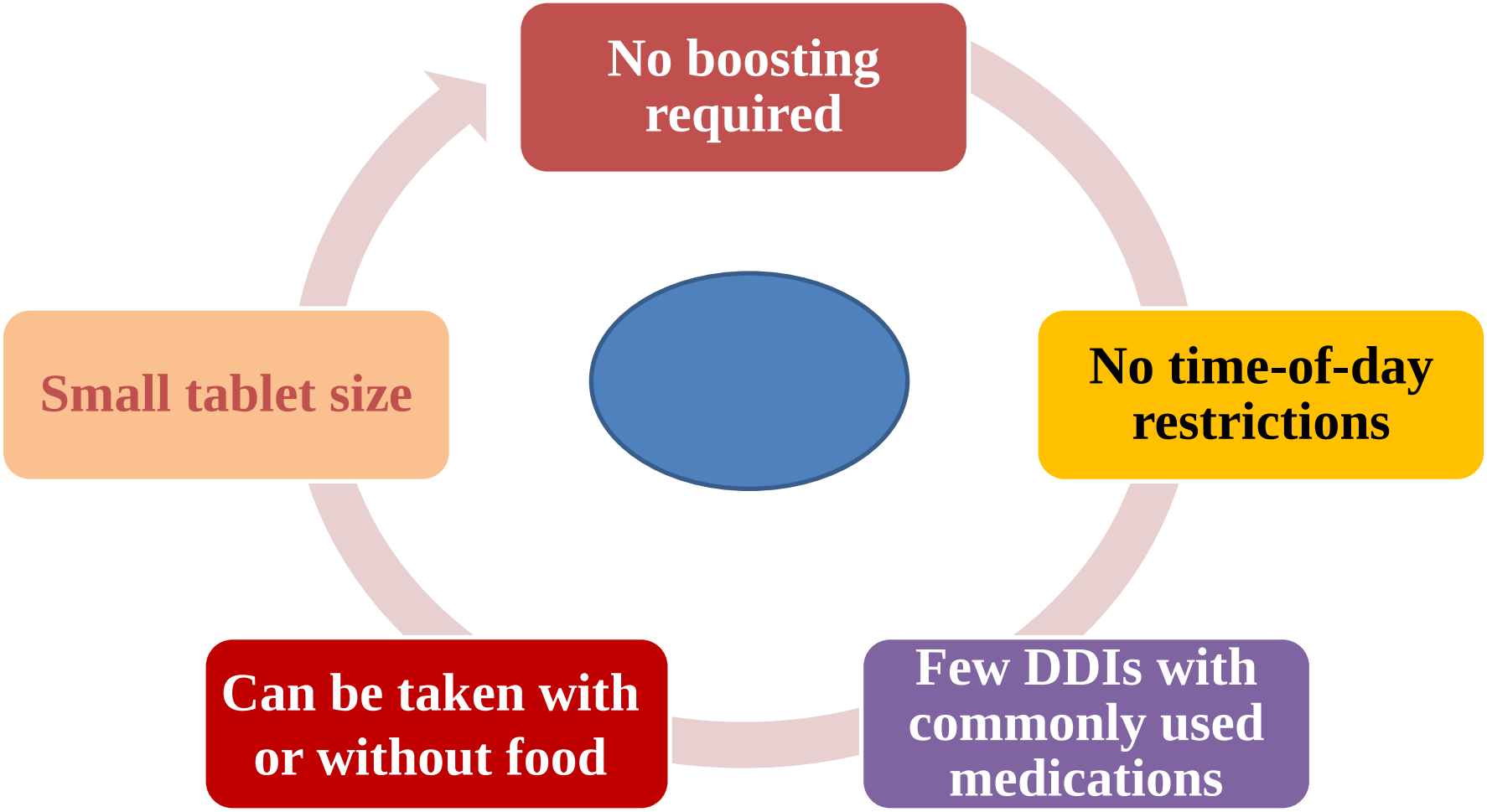
Regimen	Main requirements	Additional guidance (see footnotes)
Recommended regimens		
2 NRTIs + INSTI		
ABC/3TC + DTG ABC/3TC/DTG	HLA-B*57:01 negative HBsAg negative	I (ABC: HLA-B*57:01, cardiovascular risk) II (Weight increase (DTG))
TAF/FTC/BIC		II (Weight increase (BIC, TAF))
TAF/FTC or TDF/XTC + DTG		II (Weight increase (DTG, TAF)) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing)
TAF/FTC or TDF/XTC + RAL qd or bid		II (Weight increase (RAL, TAF)) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing) IV (RAL: dosing)
1 NRTI + INSTI		
XTC + DTG or 3TC/DTG	HBsAg negative HIV-VL < 500,000 copies/mL Not recommended after PrEP failure	II (Weight increase (DTG)) V (3TC/DTG not after PrEP failure)
2 NRTIs + NNRTI		
TAF/FTC or TDF/XTC + DOR or TDF/3TC/DOR		II (Weight increase (TAF)) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing) VI (DOR: caveats, HIV-2)

EACS European AIDS Clinical Society

Initial Combination Regimen for ART-naïve Adult PLWH (cont')

Regimen	Main requirements	Additional guidance (see footnotes)
Alternative regimens		
2 NRTIs + NNRTI		
TAF/FTC or TDF/XTC + EFV or TDF/FTC/EFV	At bedtime or 2 hours before dinner	II (Weight increase (TAF) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing) VII (EFV: neuro-psychiatric adverse events. HIV-2 or HIV-1 group 0)
TAF/FTC or TDF/XTC + RPV or TAF/FTC/RPV or TDF/FTC/RPV	CD4 count > 200 cells/μL HIV-VL < 100,000 copies/mL Not on gastric pH increasing agents With food	II (Weight increase (TAF)) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing) VIII (RPV: HIV-2)
2 NRTIs + PI/r or PI/c		
TAF/FTC or TDF/XTC + DRV/c or DRV/r or TAF/FTC/DRV/c	With food	II (Weight increase (TAF)) III (TDF: prodrug types. Renal and bone toxicity. TAF dosing) IX (DRV/r: cardiovascular risk) X (Boosted regimens and drug-drug interactions)

CONVENIENCE BEYOND ONCE-DAILY DOSING



Clinical Infectious Diseases

EDITORIAL COMMENTARY

Rapid Antiretroviral Therapy: Time for a new Standard of Care

Susa Coffey,[1] Jason Halperin,[2] Aadia I. Rana,[3] and Jonathan A. Colasanti[4,5]

Clinical Infectious Diseases® 2020;

Short report

Same day HIV diagnosis and antiretroviral therapy initiation affects retention in Option B+ prevention of mother-to-child transmission services at antenatal care in Zomba District, Malawi

Adrienne K Chan[1,2,3], Emmanuel Kanike[1], Richard Bedell[1], Isabel Mayuni[1], Ruth Manyera[1], William Mlotha[4],

Results and discussion: A total of 10,528 women were newly registered at ANC between October 2011 and March 2012 in 23 rural health facilities (12 were Model 1 and 11 Model 2). HIV status was ascertained in 8,572 (81%) women. Among 914/8,572 (9%) HIV-positive women enrolling at ANC, 101/914 (11%) were already on ART; of those not on treatment, 456/813 (56%) were started on ART. There was significantly higher ART uptake in Model 1 compared with Model 2 sites (63% vs. 51%; $p = 0.001$), but significantly lower ART retention in Model 1 compared with Model 2 sites (79% vs. 87%; $p = 0.02$). Multivariable analysis showed that initiation of ART on the same day as HIV diagnosis, but not model of care, was independently associated with reduced retention in the first six months (adjusted odds ratio 2.27; 95% CI: 1.34–3.85; $p = 0.002$).

Conclusions: HIV diagnosis and treatment on the same day was associated with reduced retention on ART, independent of the level of PMTCT service integration at ANC.

Clinical Infectious Diseases® 2018;66(7):1027–34

Clinical Infectious Diseases

MAJOR ARTICLE

IDSA Infectious Diseases Society of America

hivma hiv medicine association

OXFORD

Trends in the San Francisco Human Immunodeficiency Virus Epidemic in the "Getting to Zero" Era

Susan Scheer,[1] Ling Hsu,[1] Sandra Schwarcz,[1] Sharon Pipkin,[1] Diane Havlir,[2] Susan Buchbinder,[2,3,5] and Nancy A. Hessol[2,4]

[1]HIV Epidemiology Section, San Francisco Department of Public Health, and Departments of [2]Medicine, [3]Epidemiology and Biostatistics, and [4]Clinical Pharmacy, University of California, and [5]Bridge HIV, San Francisco Department of Public Health

These initiatives included the San Francisco Department of Public Health (SFDPH) recommendation for **universal antiretroviral therapy (ART)** irrespective of CD4+ lymphocyte count (CD4 cell count) in **2010**, increased **coverage** of and targeted
HIV testing beginning in **2011** (Tracey Packer, SFDPH, personal communication), same-day initiation of ART at HIV diagnosis
in 2012 [2], and **scale-up of HIV PrEP** to prevent HIV acquisition for high risk HIV-negative adults beginning in 2013

ART is recommended in all adult persons with HIV, irrespective of CD4 counts[I]

EACS European AIDS Clinical Society

i ART is recommended irrespective of the CD4 count. In certain situations (i.e lower CD4 count or pregnancy), there is a greater urgency to start ART immediately

- In persons with OIs, ART initiation may have to be deferred, see page 134, for ART initiation in the presence of specific OIs. For ART initiation in persons with TB, see page 20
- A possible exception to immediate start of ART might be HIV controllers, persons with high CD4 counts and HIV-VL < 200 copies/mL, although even in such persons ART initiation has been shown to increase CD4 count, decrease inflammation, lower the risk of clinical events and prevent HIV transmission
- Genotypic resistance testing is recommended prior to initiation of ART, ideally at the time of HIV diagnosis. Genotypic testing should not delay ART initiation (it may be re-adjusted after genotypic test results)
- If ART needs to be initiated before genotypic testing results are available, it is recommended to select a first-line regimen with a high barrier to resistance, preferably a second generation INSTI or alternatively a PI/b
- Whether rapid, possibly same-day ART start is proposed to newly diagnosed persons or postponed until complementary assessments depends on the setting and medical circumstances, medical indications to start ART more urgently and risk of loss from care. To reduce loss to follow-up between diagnosis and ART initiation, structural barriers delaying the process should be addressed

Vaccination

Infection	
Influenza Virus	Yearly
Human Papilloma Virus (HPV)	Vaccinate with 3 doses for all HIV-positive persons up to age 9 / age 40 if MSM. Use 9-valent vaccine if available.
Hepatitis B Virus (HBV)	Vaccinate if seronegative. Repeat doses until anti-HBs antibodies ≥ 10 IU/L / ≥ 100 IU/L
Hepatitis A Virus (HAV)	Vaccinate if seronegative. Weaker immune response expected with HAV/HBV co-vaccine.
Neisseria meningitidis	Use conjugated vaccine (2 doses 1-2 months apart) if available. Booster every five years if exposure continues. Polysaccharide vaccine not recommended anymore

Ανταπόκριση σε εμβολιασμό έναντι HBV σε συλλοίμωξη

87% σε CD4 > 500

33% σε CD4 200-500

Σε ασθενείς με χαμηλό αριθμό CD4 (< 200/μL) και HIV ιαιμία, θα πρέπει προ του εμβολιασμού να γίνεται έναρξη ART

Σε CD4 200-500, συστήνονται 4 δόσεις εμβολίου:

Μήνας 0, 1, 2, and 6-12

Σε μη ανταπόκριση, επανάληψη με 40 μg (διπλή δόση)

Απώλεια προστατευτικών αντισωμάτων έως 30% /έτος

Soriano et al, AIDS 2005, 19:221-240

Tenaldi et al, Clin Inf Dis 2004'38:1478-1484.

Vaccination

Streptococcus pneumoniae	One dose of conjugated(iii) 13-valent vaccine (CPV-13) for all individuals, also if pre-vaccinated with PPV-23 polysaccharide vaccine. No general recommendation for any booster dose.
Varicella Zoster Virus (VZV)	Vaccinate if seronegative
Yellow Fever Virus	Contraindicated if past or current haematological neoplasia or thymus affection (thymoma, resection/radiation). Booster q 10 years.

Drug-drug Interactions between Antimalarial Drugs and ARVs

EACS European AIDS Clinical Society

	Antimalarial drugs	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	EFV	ETV	NVP	RPV	MVC	BIC	DTG	EVG/c	RAL	ABC	FTC	3TC	TAF	TDF
First line and second line drugs	amodiaquine	↔	↑	↔	↑	↑	↑[c]	↓?	↓29%[c]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	artemisinin	↑	↑	↑	↑	↑	↓ =50%	↓D	↓D	D	D	D	↔	↑	↔	↔	↔	↔	↔	↔
	atovaquone	↔	↓46%[a]	↔	↓[a]	↓74%[a]	↓75%[a]	↓E55%[a]	↓[a]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	chloroquine	↔[b]	↔[b]	↔	↔	↔[b]	↔	↔	↔	↔[e]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	clindamycin	↑	↑	↑	↑	↑	↓	↓	↓	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔
	doxycycline	↔	↔	↔	↔	↔	↓?	↓?	↓?	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	lumefantrine	↑[b]	↑[b]	↑	↑	↑[b]	↓ =40%	↓	↓D46%	↔[e]	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔
	mefloquine	↑[b]	↑[b]	↑	↑	↑[b]	↓	↓	↓	↔[e]	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔
	primaquine	↔	↔	↔	↔	↔	↔[d]	↔[d]	↔[d]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	proguanil	↔	↓41%[a]	↔	↓[a]	↓38%[a]	↓44%[a]	↓E55%[a]	↓[a]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	pyrimethamine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	E	E	↔	↔
	quinine	↑[b]	↑[b]	↑	↑	↑[b]	↓	↓	↓	↔[e]	E	↔	↔	↑	↔	↔	↔	↔	↔	↔
	sulfadoxine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	E	E	↔	↔

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HIV Medicine (2011), 12, 594–601

ORIGINAL RESEARCH

Acute systemic inflammation induced by influenza A (H1N1) vaccination causes a deterioration in endothelial function in HIV-infected patients

C Vlachopoulos,[1] P Xaplanteris,[1] H Sambatakou,[2] E Mariolis,[2] A Bratsas,[1] E Christoforatou,[1] A Miliou,[1] K Aznaouridis[1] and C Stefanadis[1]

Conclusions

Acute systemic inflammation induced by vaccination against the influenza A/H1N1 virus resulted in a deterioration in endothelial function in HIV-infected patients, and this effect was sustained for at least 48 h. Our findings may have important implications in view of the high cardiovascular risk that HIV infection carries. The effect of the novel vaccine on endothelial function should be weighed against the immunological protection that it confers.

Recommended Regimens for Rapid ART

DHHS[1]

Recommended Regimens
BIC/FTC/TAF
DTG + (TAF or TDF) + (3TC or FTC)
(DRV/RTV or DRV/COBI) + (TAF or TDF) + (3TC or FTC)
Regimens Not Recommended
NNRTI-based regimens or DTG/3TC due higher rate of transmitted NNRTI and NTRI drug resistance
Regimens requiring ABC until HLA-B*5701 test results received

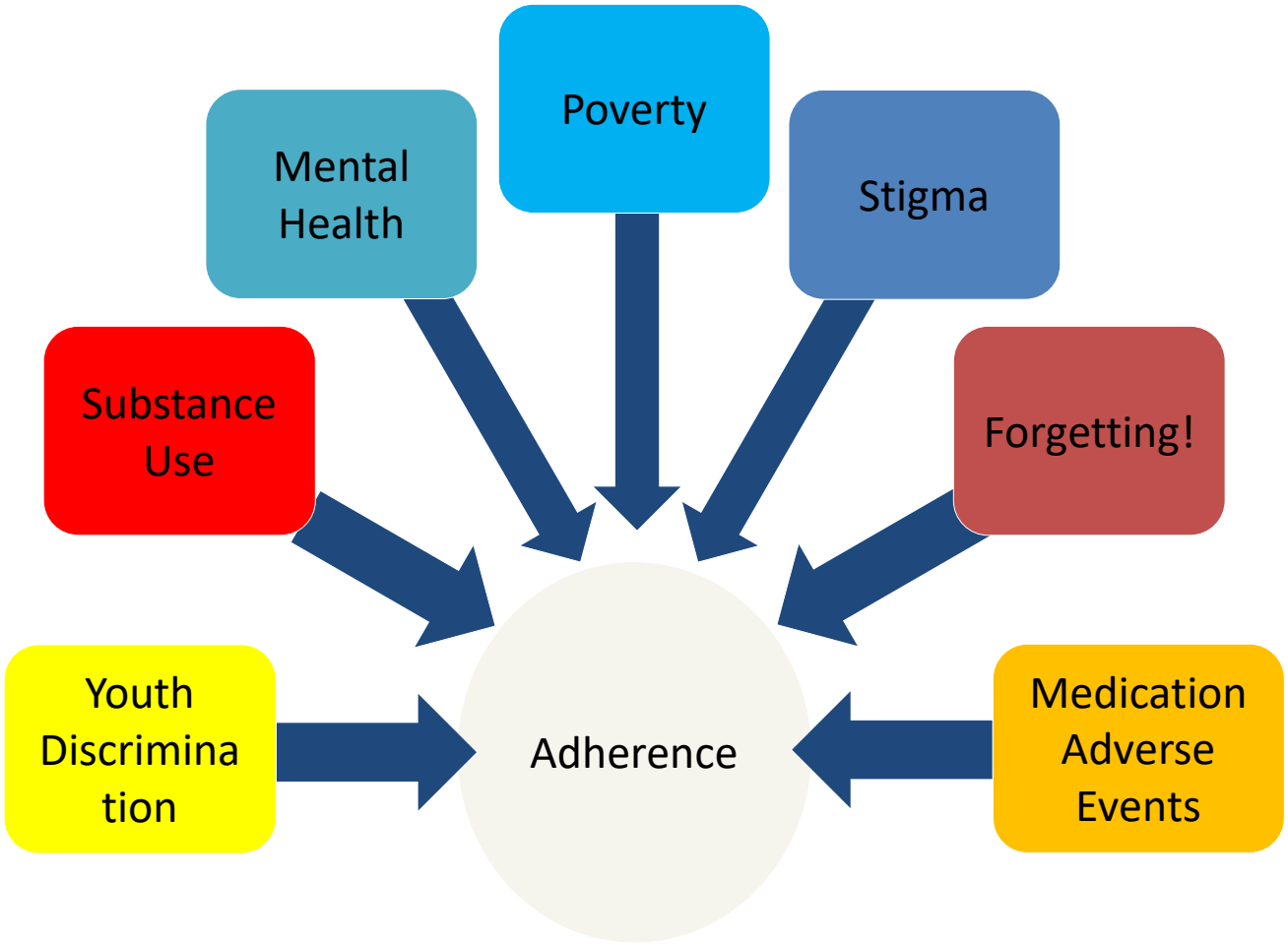
EACS[2]

Recommended Regimens
BIC/FTC/TAF
DTG + TDF/FTC, TAF/FTC, TDF/3TC, or ABC/3TC
Boosted PI + TDF/FTC, TAF/FTC, TDF/3TC, or ABC/3TC
Regimens Not Recommended
DTG/3TC requires evaluation of baseline laboratory test results before initiation

1. DHHS Guidelines. June 2021. 2. EACS Guidelines. v 10.1 October 2020.

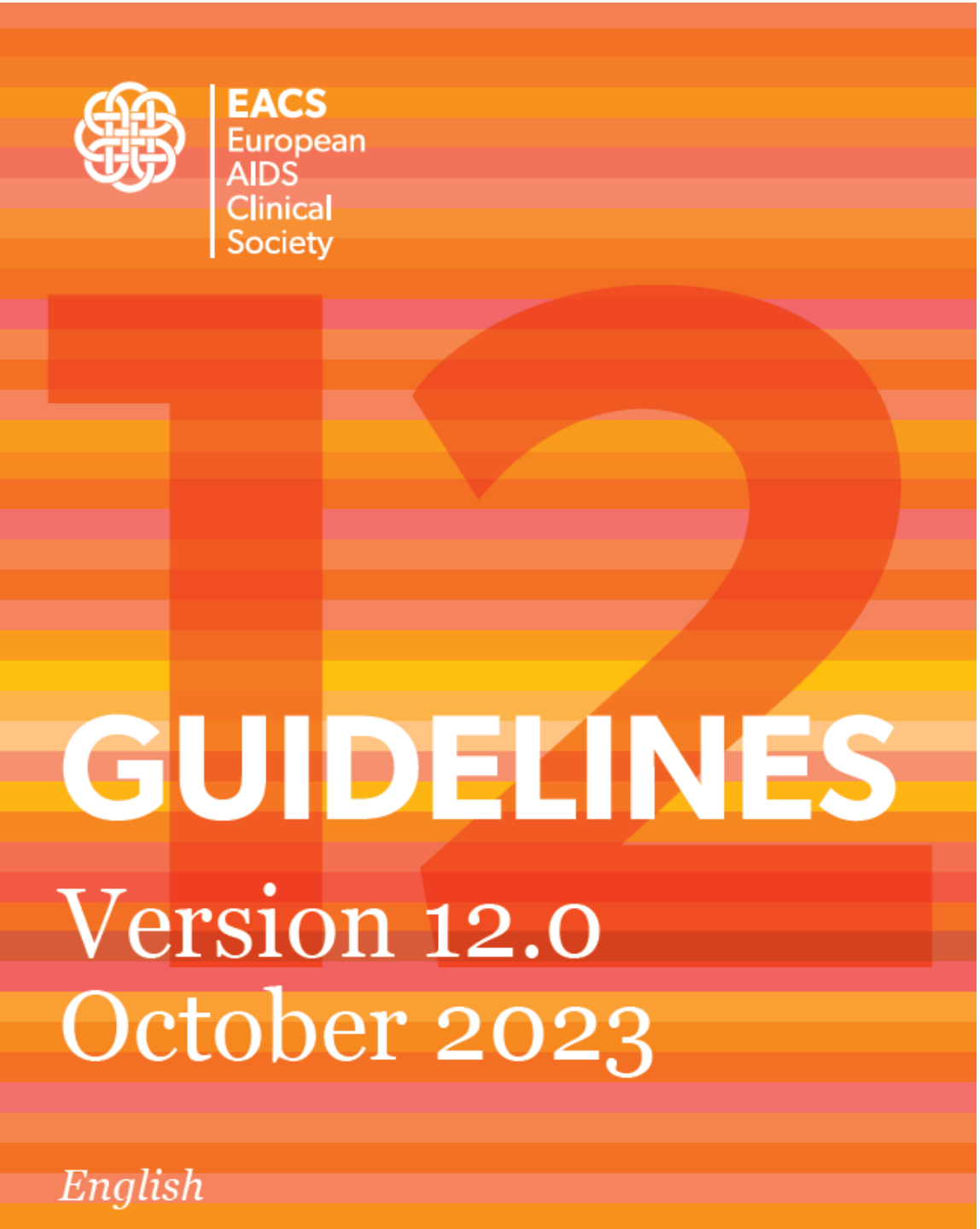
Slide credit: clinicaloptions.com

Assessing Barriers to Care and Treatment



Η HIV λοίμωξη την εποχή της COVID-19: Η νέα πραγματικότητα

Πώς θα προμηθευτώ χωρίς διακοπή τα φάρμακά μου?
Πόσο βοηθάει η τηλεϊατρική?
Πώς θα γίνει αλλαγή ART?
Πώς θα παρακολουθούμαι για τις συννοσηρότητές μου?



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Αλγόριθμοι διάγνωσης, θεραπείας και αντιμετώπισης HIV και συννοσηροτήτων σε HIV ασθενείς

Person-centered approach and differentiated service delivery

Integrated Healthcare

Integrated Services Go Beyond Treatment and Management of HIV[1,2]

- CV and metabolic disease care (e.g., hypertension, diabetes)
- Mental health and addiction counseling
- Care frameworks for healthy aging
- Sexual and reproductive health
- Social and peer support

Considerations vs. Separated Services[1]

- Loss of specialization and overburdening of healthcare workers
- Success of integration strategies is dependent on geographical areas and HIV populations

“ The **good physician treats** the **disease**; the **great physician treats the patients** who have the disease[3] ”

Sir William Osler (1849–1919)

Integrated healthcare is key to enable PLWH to access services beyond HIV

1. Bulstra A, et al. PLoS Med 2021;18:e1003836; 2. Lazarus JV, et al. Nat Commun 2021;12:4450; 3. Centor RM. MedGenMed 2007;9:59