associazione NADIR onlus

PROGRAMMA SEMINARIO 2016

SALUTE E PERSONA CON HIV: NUOVI ORIZZONTI

Ridefiniamo gli obiettivi di salute oltre la viremia plasmatica non rilevabile

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DI MODENA E REGGIO EMILIA

Evolution of HIV care:

PRE-HAART 1985–1995	EARLY-HAART 1995–2005	LATE-HAART 2005–2016
		
CLINICAL SETTING Infectious diseases (OI)	Virology (resistance)	Internal medicine (HANA)
Driving force for ARV development Efficacy	Lack of toxicities	Long term tolerability
WHAT WE ASK TO ARV Lack of short terms SAE	Safety and tolerability	Reduce chronic inflammation
CARE OBJECTIVE Reduce mortality	Increase life expectancy	Ageing well with HIV

Mortality rate vs Life expectancy

Life expectancy

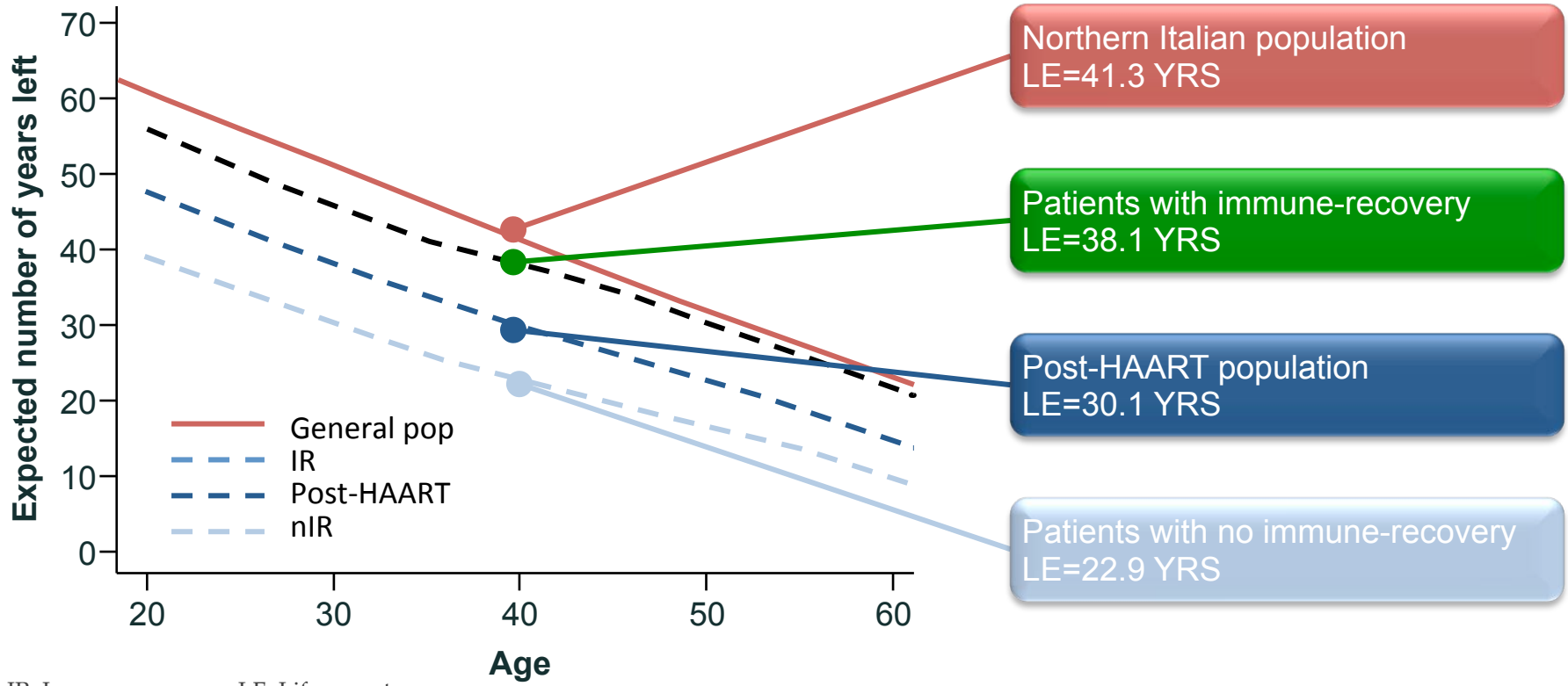
Mortality

LE at any exact age is the average number of years of life remaining for persons who have attained that age.

Life expectancy close to normal population as rate of immune recovery improves in Italy

9,671 patients analysed in **Northern Italy** to assess the impact of immune-recovery on life expectancy of HIV patients undergoing cART

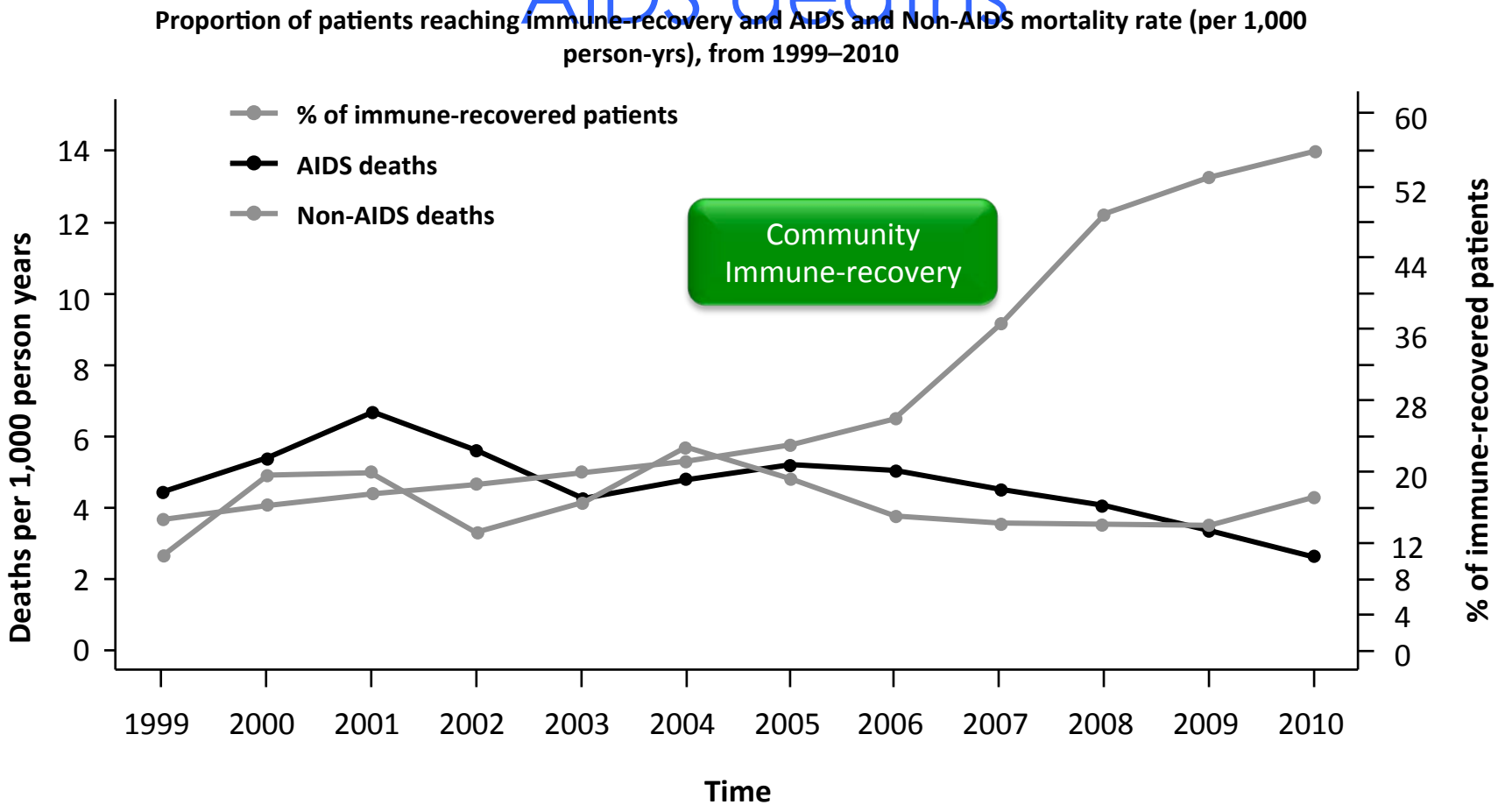
Patients with immune-recovery: Patients who started cART with a nadir CD4 count ≤350 cells/mm^3 and who had attained a CD4 count ≥500 cells/mm^3 by the censoring date



IR: Immune recovery; LE: Life expectancy

Guaraldi G, et al. J Acquir Immune Defic Syndr. 2014;65:175–81.

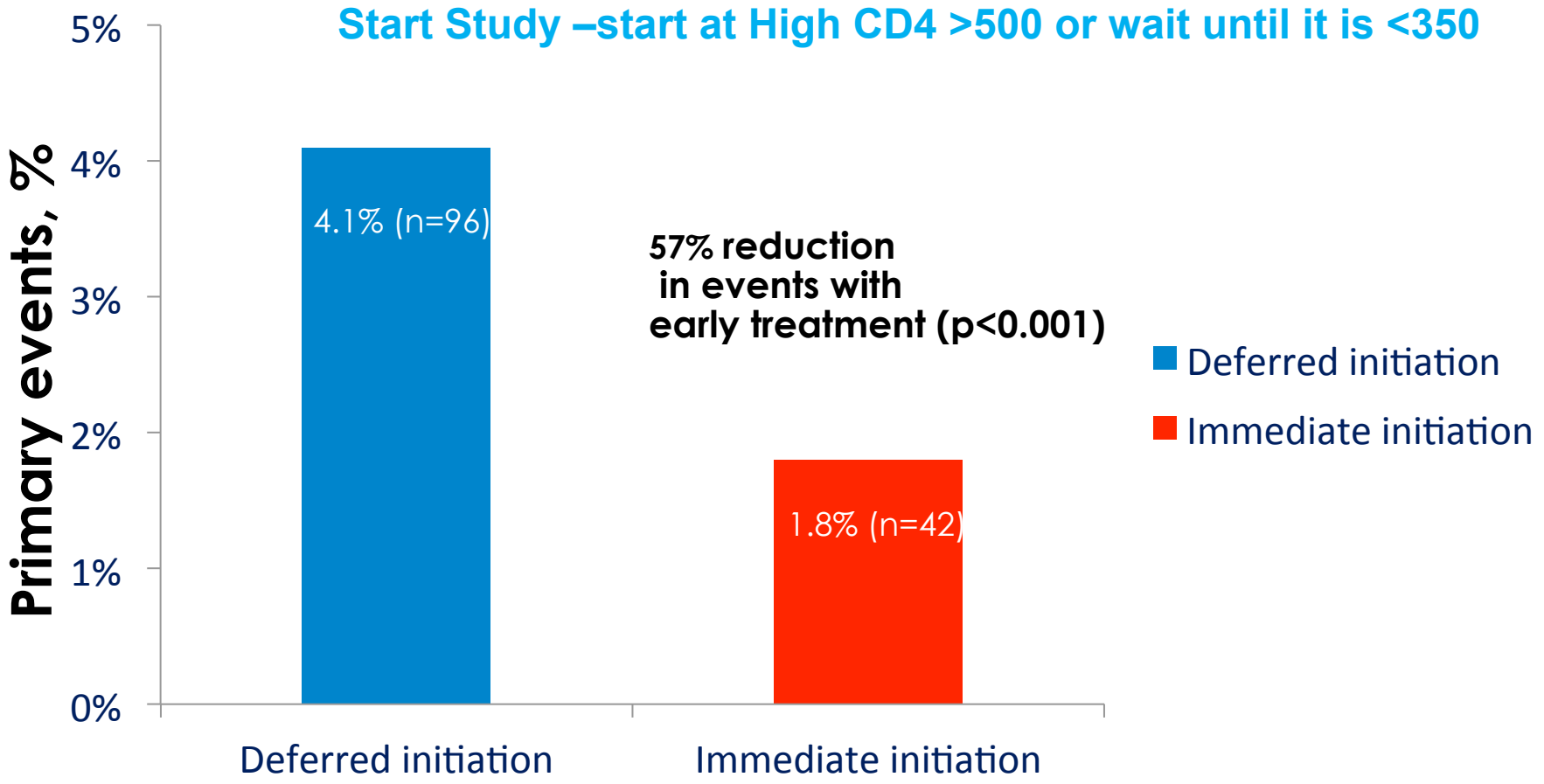
Increased IR associated with a decreased AIDS deaths but not non-AIDS deaths



IR: Immune recovery

Guaraldi G, et al. J Acquir Immune Defic Syndr. 2014;65:175–81.

Hazard of developing AIDS, serious non-AIDS events, or death

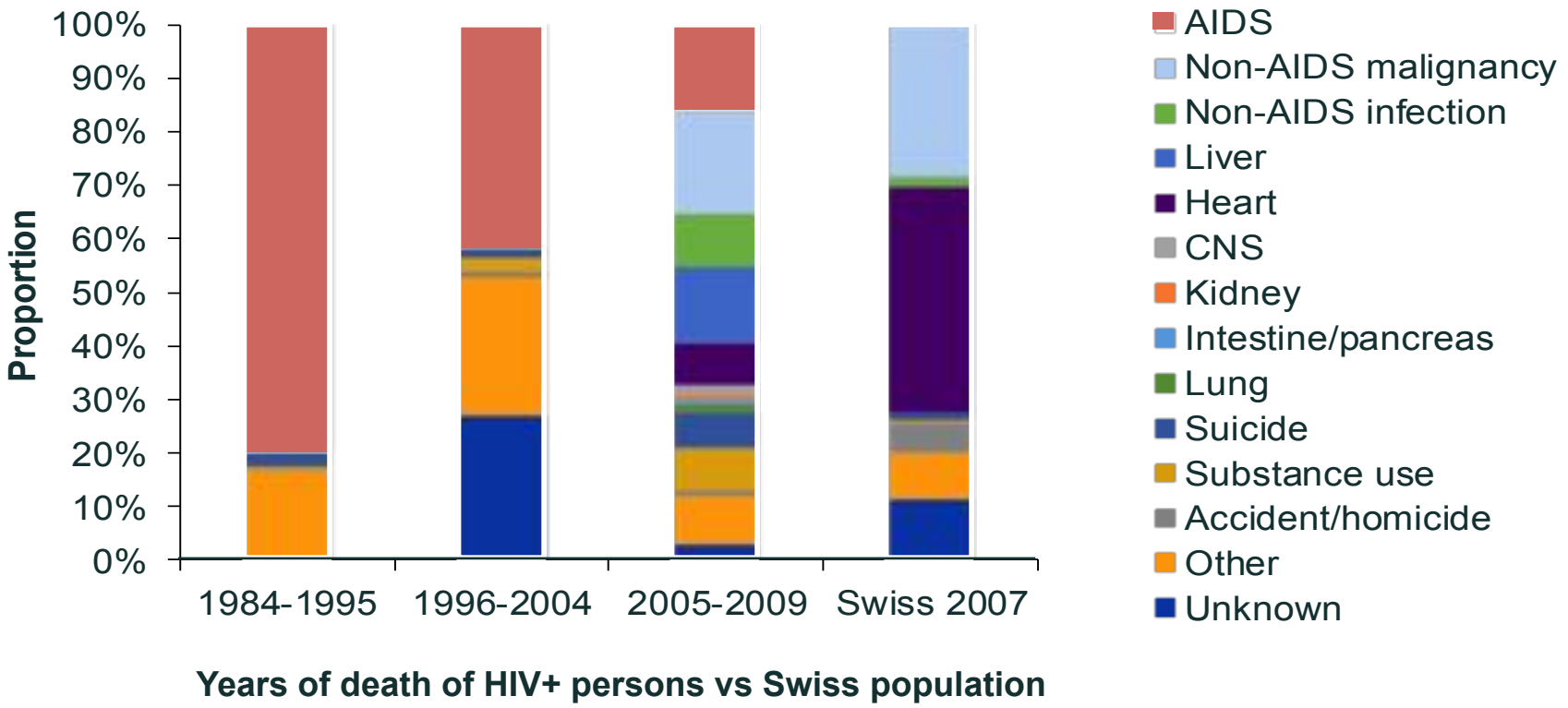


"Combination antiretroviral therapy (ART) should be recommended for all HIV-positive persons regardless of CD4+ count."

Lundgren JD et al. IAS 2015, Vancouver, CAN. Oral # MOSY03
INSIGHT START Study Group. N Engl J Med 2015; DOI: 10.1056/NEJMoa1506816

Swiss HIV Cohort: AIDS death decreases while non-AIDS causes of death is increasing

Causes of death in participants in the Swiss HIV Cohort Study across three time periods, and in the Swiss population in 2007[1,2]



1. Ruppik M, et al. CROI 2011; Abstract 789. Available at: http://www.natap.org/ (accessed May 2014); 2. Weber R, et al. HIV Med. 2013;14:195–207.

Glucose metabolism impairment

Dyslipidaemia

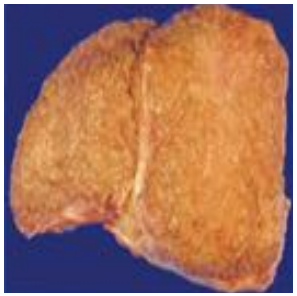
Abnormalities of body composition

Moving from LIPODYSTROPHY to HIV related non-infectious Co-MORBIDITIES

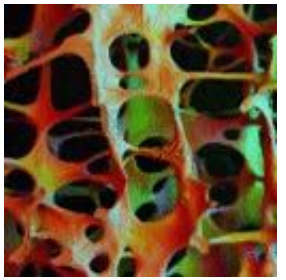
Body image alterations

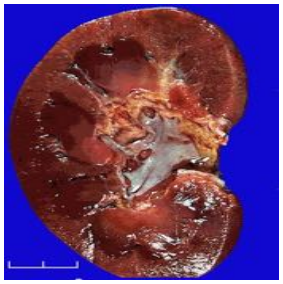
HAND

CVD



Hepatic steatosis

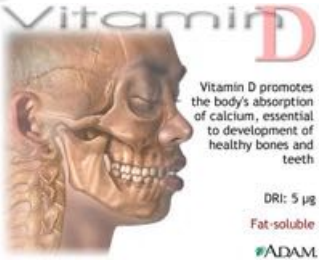




Bone & Kidney disease

Depression

HT



Vit D

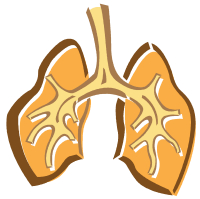
T2D

Cancer

Sexual Dysfunction

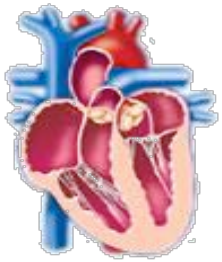
EACS Guideline Recommendations for Screening for Comorbidities*

Cancer
- Mammography
- Cervical PAP
- Anoscopy and PAP (MSM)
- Ultrasound and alpha-foetoprotein
- Others



Pulmonary disease
CXR and spirometry

Neurocognitive impairment
Screening questionnaire
Depression
Questionnaire

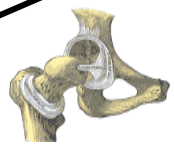


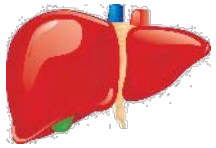
Cardiovascular disease
- Risk assessment (Framingham score) in all men >40 and women >50 years without CVD
- ECG prior to ARVs in certain patients

Hypertension
Blood pressure

Lipids
TC, HDL-c, LDL-c and TG

Renal disease
- Risk assessment
- eGFR (aMDRD)
- Urine dipstick analysis





Liver disease
- Risk assessment
- ALT/AST, ALP
- Bilirubin

Bone disease
- Bone profile; calcium, PO^4, ALP
- Risk assessment (FRAX in persons >40 years)

Vitamin D
25(OH) vitamin D

Glucose
Oral glucose tolerance test/HbA1c

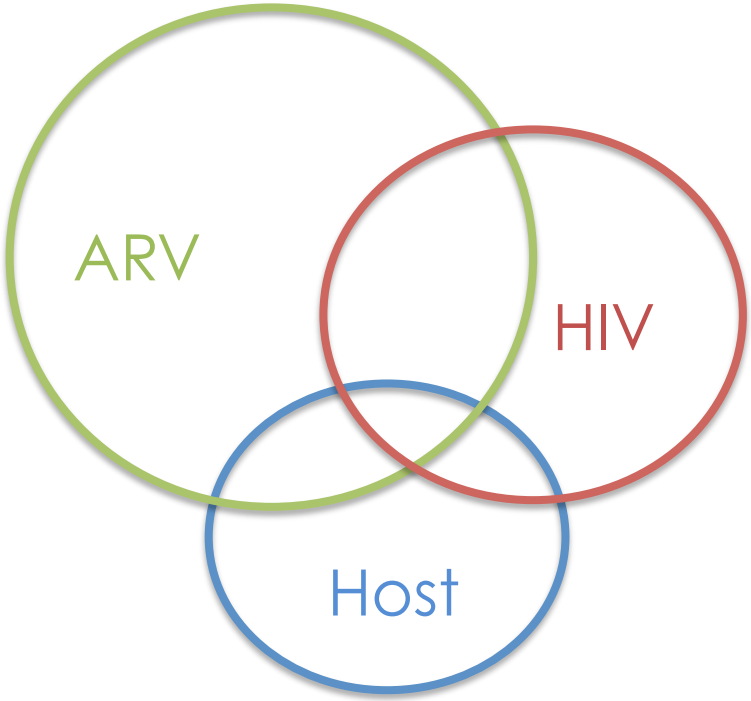
Body composition
BMI

Haematology
- FBC
- Haemoglobinopathies
- G6PD

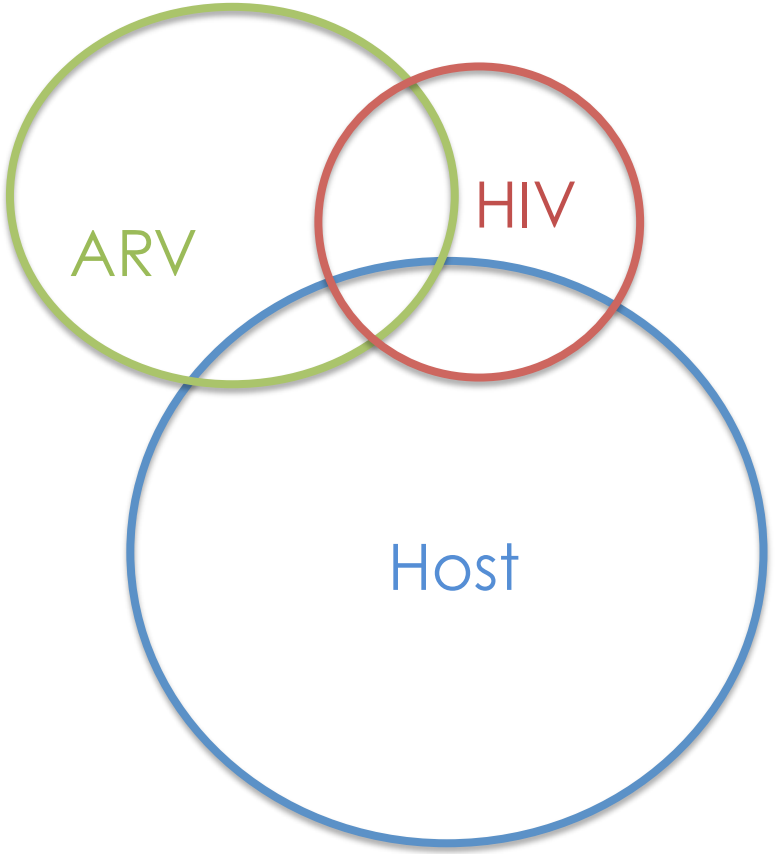
* See guidelines for detail on follow-up frequency, subgroups to be screened and further information

EACS guideline version 7.0, October 2013; Available at:: http://www.eacsociety.org/Portals/0/Guidelines_Online_131014.pdf (accessed Apr 2014).

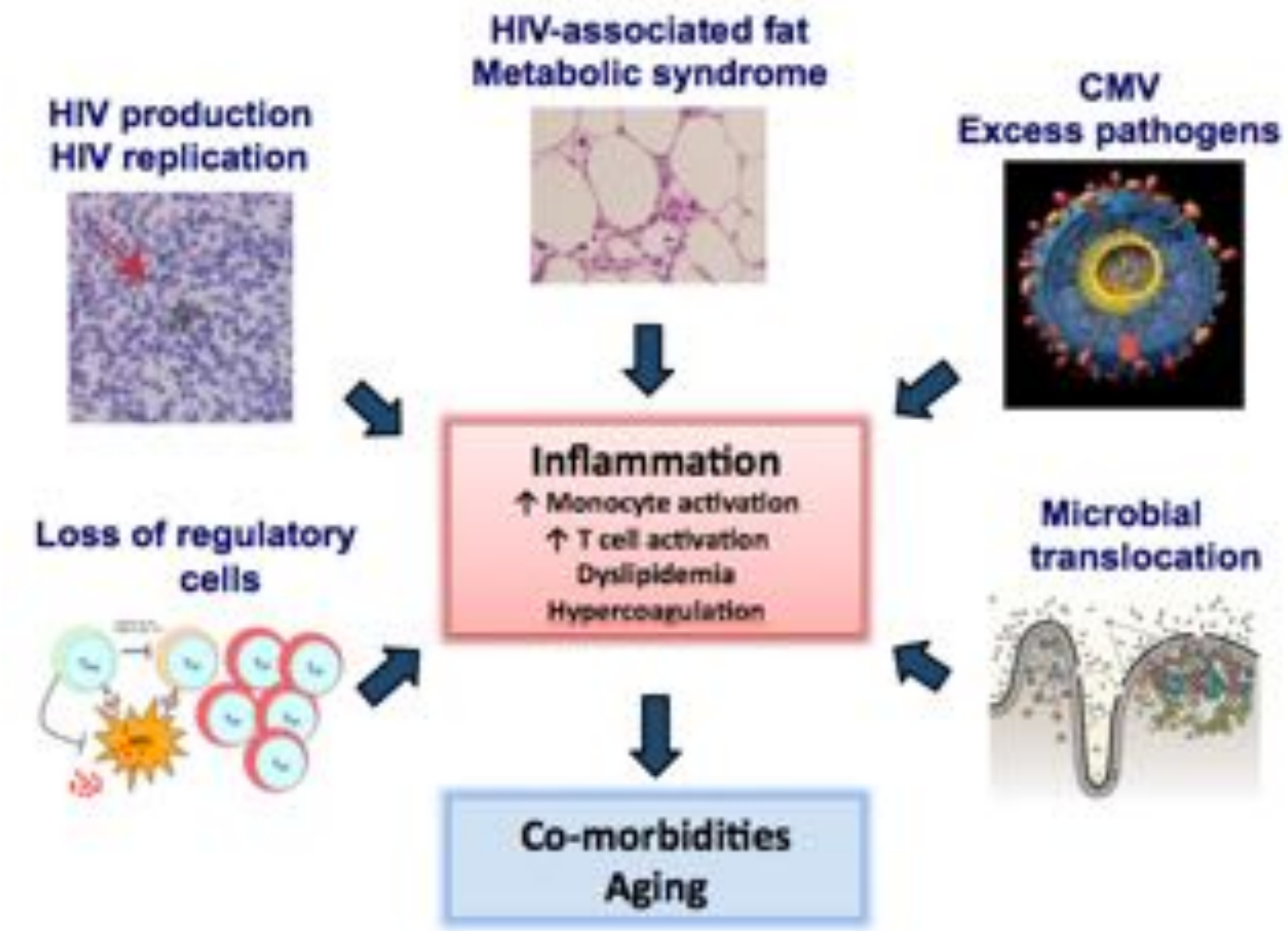
HIV Associated Non AIDS (HANA) conditions



New and less toxic ARVT alter the interplay between Host, HIV and ARV toxicities in the development of HANA

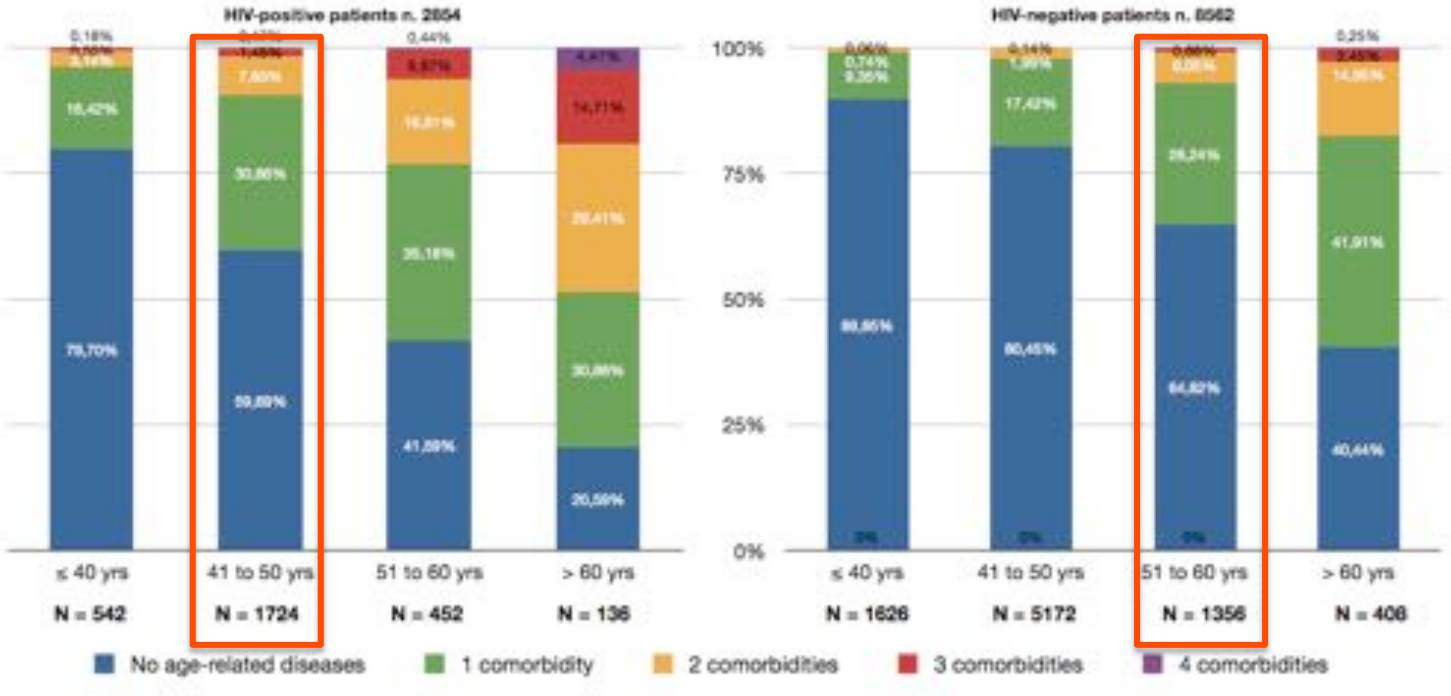



Where does chronic
inflammation come from?



Courtesy by Deeks
S

Poly-patology prevalence in cases and controls, stratified by age categories



Pp 3.9% 9.0% 20.0% 46.9% **Pp 0.5% 1.9% 6.6% 18.7%**

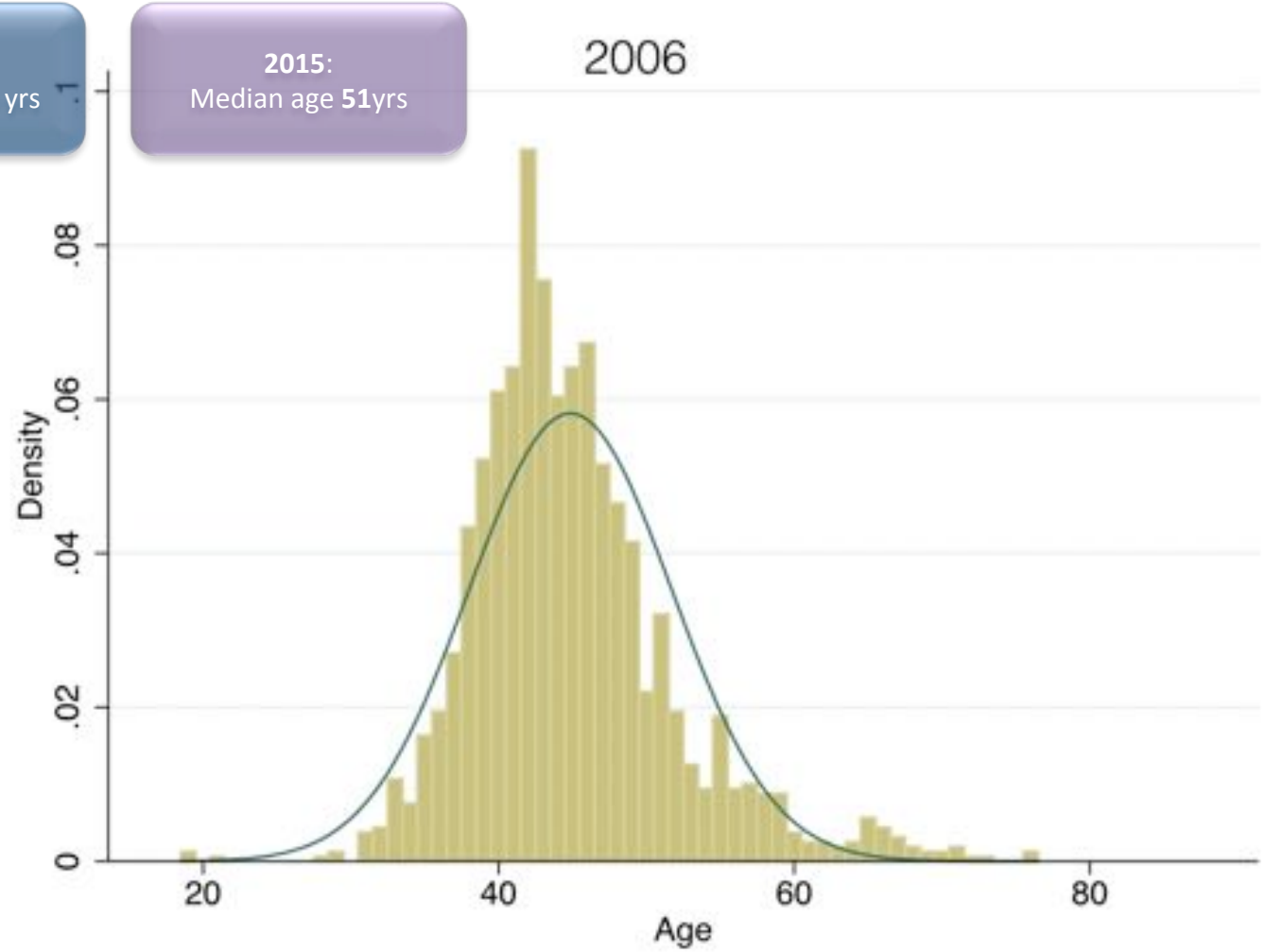
Pp prevalence was higher in cases than controls in all age strata (all p-values <0.001)
Pp prevalence seen cases aged 41-50 was similar to that observed among controls aged 51-60 controls (p=0.282)

The age profile of people living with HIV is changing

Age distribution of HIV+ patients attending MHMC

2006:
Median age **40** yrs

2015:
Median age **51**yrs



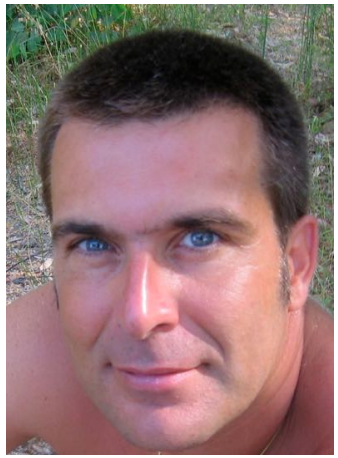
Guaraldi G, personal comunication 2016

Where is the bias?

- HIV-positive patients' average age is constantly increasing;
- HIV-specialist physician' average age is constantly increasing;

… this is a matter of fact

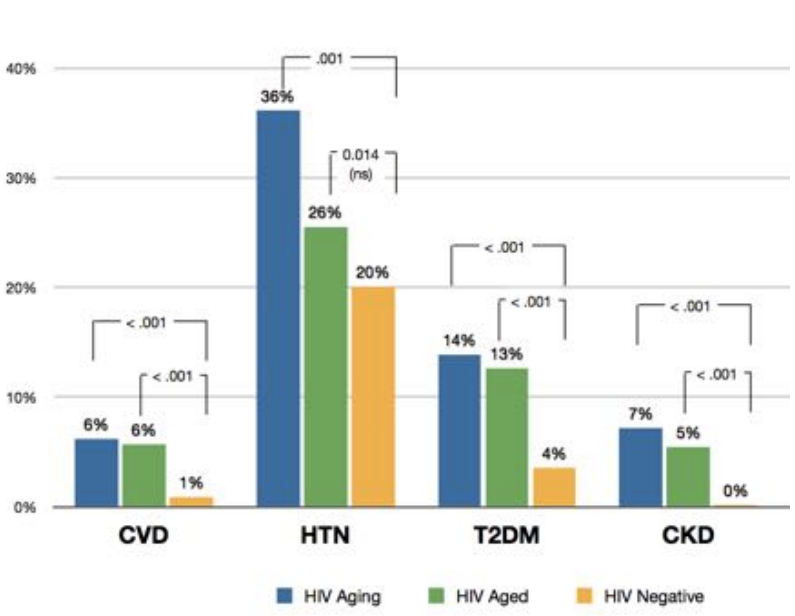
5 years

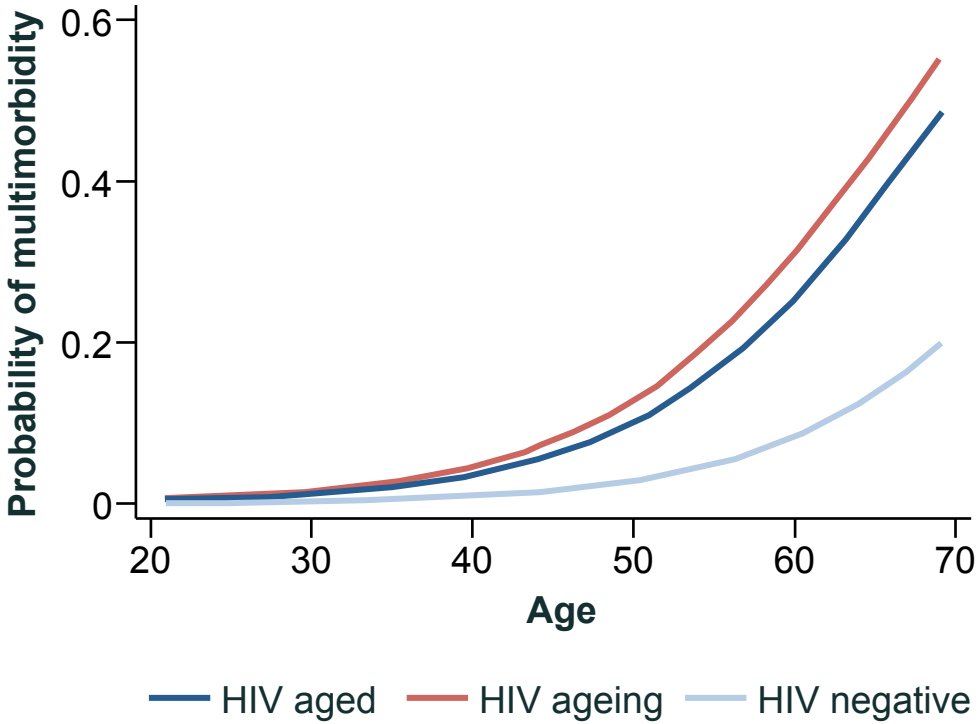


25 years

50 years, just YESTURDAY

Aging vs aged patients: Prevalence and probability for multimorbidities increases with HIV duration

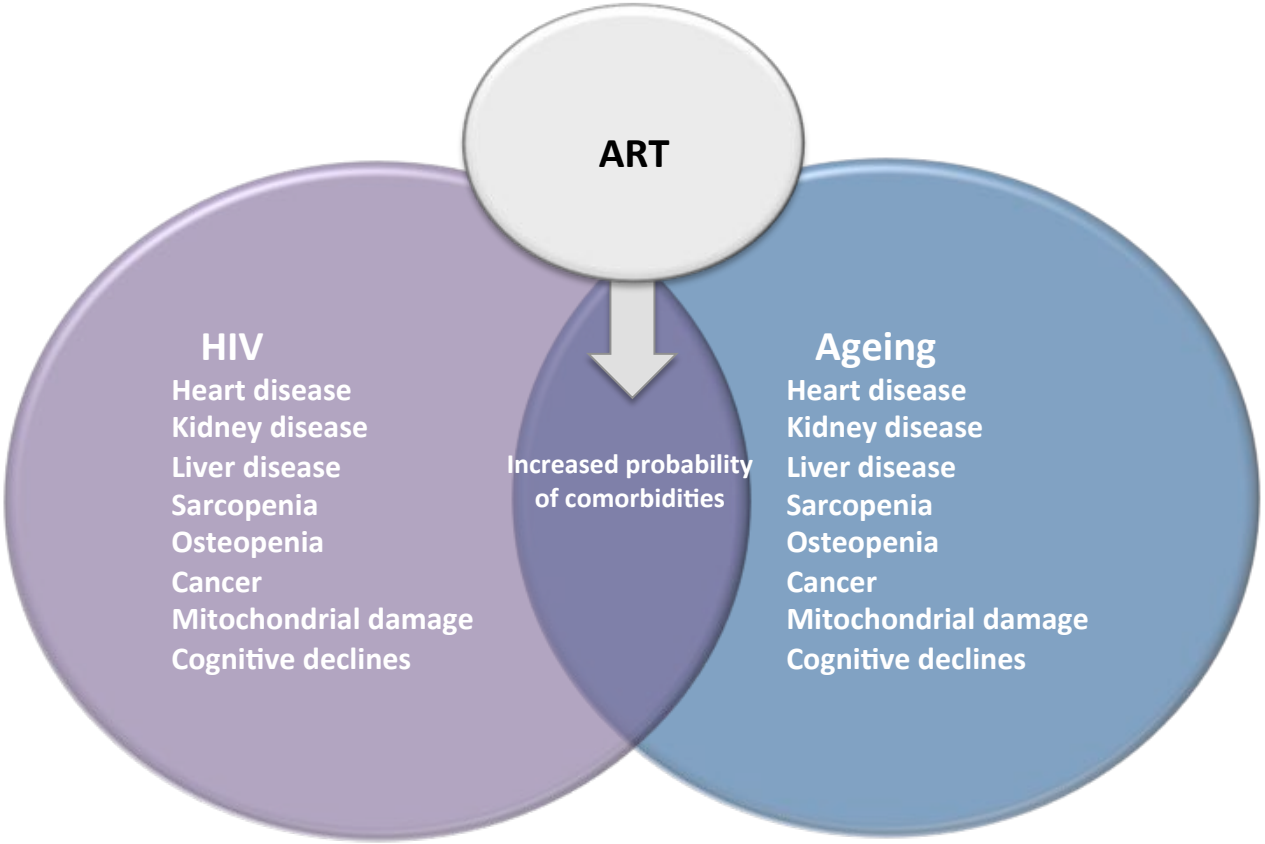




At any age, long-term infected people (ageing patients) had a 5-fold accentuated risk of multimorbidity than HIV-negative controls, while more recently infected people (aged patients) had an intermediate risk compared with the control group

Guaraldi G, et alPLoS One. 2015 Apr 13;10(4):e0118531

Interactions between HIV, ageing and HIV drugs can increase the risk of co-morbidities in HIV infection



Adapted from: Vance DE. Am J Nurs 2010;110(3):42-47.

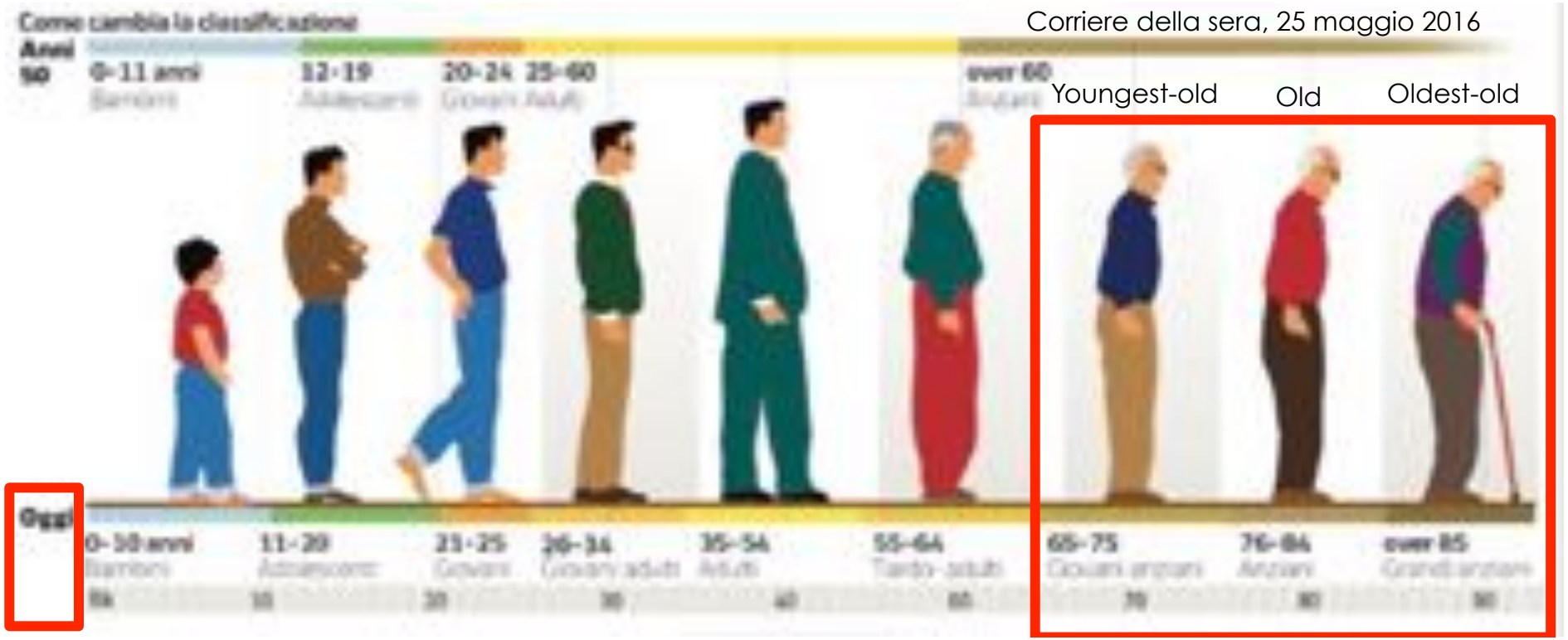
ART = Antiretroviral therapy

A geriatric definition of old-Age:

65-75 YRS: Youngest old

76-84 YRS: Old

>85: Oldest-old



Corriere della sera, 25 maggio 2016

HIV Geriatric epidemiological surveillance is missing

agehiv cohort study

500 HIV patients >50 years
>65 years: 57 pateints

MHMC

3583 HIV patients >50 years
>65 years: 295 pateints

VETERANS AGING COHORT STUDY

POPPY
Pharmacokinetic and clinical observations in people over 50

1000 HIV patients >50 years

COBRA
CO-MORBIDITY IN RELATION TO AIDS

200 HIV patients >50 years

MULTICENTER AIDS COHORT STUDY
MACS

Aging with HIV: Emerging importance of chronic comorbidities in patients over 75

N(%)	Elderly [50-75[n=12748	Geriatric ≥75 n=430	P. value
Diabetes	1195 (9.4)	96 (22.3)	< 0.001
Hypertension	2685 (21.1)	182 (42.3)	< 0.001
Hyperlipidemia	2700 (21.2)	120 (27.9)	0.001
Cardio-vascular disease	1081 (8.5)	89 (20.7)	< 0.001
Stroke	319 (2.5)	27 (6.3)	< 0.001
Osteoporosis	626 (4.9)	36 (8.4)	0.002
Neoplasia	1526 (12)	97 (22.6)	< 0.001
Renal failure*	594 (4.7)	60 (14)	< 0.001
Depression	2114 (16.6)	65 (15.1)	NS
Liver fibrosis	620 (4.9)	10 (2.3)	0.021
Number of AANC			< 0.001
- 0-1	9058 (71.1)	197 (45.8)	
- 2-3	3147 (24.7)	173 (40.2)	
- ≥4	543 (4.3)	60 (14)	

Allavena, C et al CROI 2014 Feb 23-24 Boston

Table 4 **Antiretroviral history and current ART regimen**

	Elderly [50-75[N=12 748	Geriatric ≥75 N=450	P. value
Age at ART initiation, median [IQR]	44.1 [37.5-50.7]	64.5 [60-70]	**< 0.001**
Age at ART initiation by strata, n (%)			**< 0.001**
<50 year-old	9024 (72.6)	0 (0)	
[50-75] year-old	3409 (27.4)	370 (88.1)	
≥75 year-old	0 (0)	50 (11.9)	
ART Status at last visit, n (%)			NS
ART interruption	124 (1)	3 (0.7)	
on ART	12309 (96.6)	417 (97)	
ART-naive	315 (2.5)	10 (2.3)	
Number of ART regimen, median [IQR]	5 [3-9]	6 [3-10]	**0.016**
ART at last visit, n (%)			**0.015**
2 NRTIs + INSTI	1234 (9.7)	43 (10)	
2 NRTIs + PI	280 (2.2)	15 (3.5)	
2 NRTIs + bPI	3311 (26)	95 (22.1)	
2 NRTIs + NNRTI	4182 (32.8)	126 (29.3)	
3 NRTIs	140 (1.1)	10 (2.3)	
NRTI-sparing bPI-based regimen	2024 (15.9)	75 (17.4)	
NRTI and bPI-sparing regimen	1262 (9.9)	56 (13)	
Number of ARV, n (%)			NS
1 or 2 ARVs	1355 (11.0)	60 (14)	
3 ARVs	10101 (82.6)	333 (77.6)	
≥ 4 ARVs	962 (7.8)	26 (6.1)	

Allavena C et al CROI 2016 Feb 22-24 Boston

The GEPPO cohort

GEriatric Patients living with HIV/AIDS: a Prospective multidisciplinary cOhort

A multi-centric study in HIV-positive geriatric patients (>65 years old) in Italy (10 Institutions) with a matched group of HIV-negative subjects (University of Modena)

To describe:

- multimorbidity (MM)
- polypharmacy (PP)
- antiretrovirals' use (ARV)

in elderly patients living with HIV

This study takes advantage of the survival bias unavoidable in any ageing cohort to describe the clinical and HIV characteristic of **HIV ageing champions.**

Material and Methods

- Retrospective;
- HIV-positive subjects aged ≥**65 years** and currently on care were included;
- HIV negative subjects patients were age (±4 years) matched with patients attending an out-patient cardiovascular screening clinic in a University Geriatric Centre.
- Demographic, therapeutic and clinical data were recorded
  - Patients were stratified according to the duration of HIV infection (>20, 10-20 and <10 years);
- **Multimorbidity** (MM) was defined as the presence of 3 or more non-infectious comorbidities;
- **Polypharmacy** (PP) was defined as the presence of 5 or more drug compounds beyond ARVs;
- Multivariate binary logistic regression models were generated Data are expressed as median values (interquartile range).

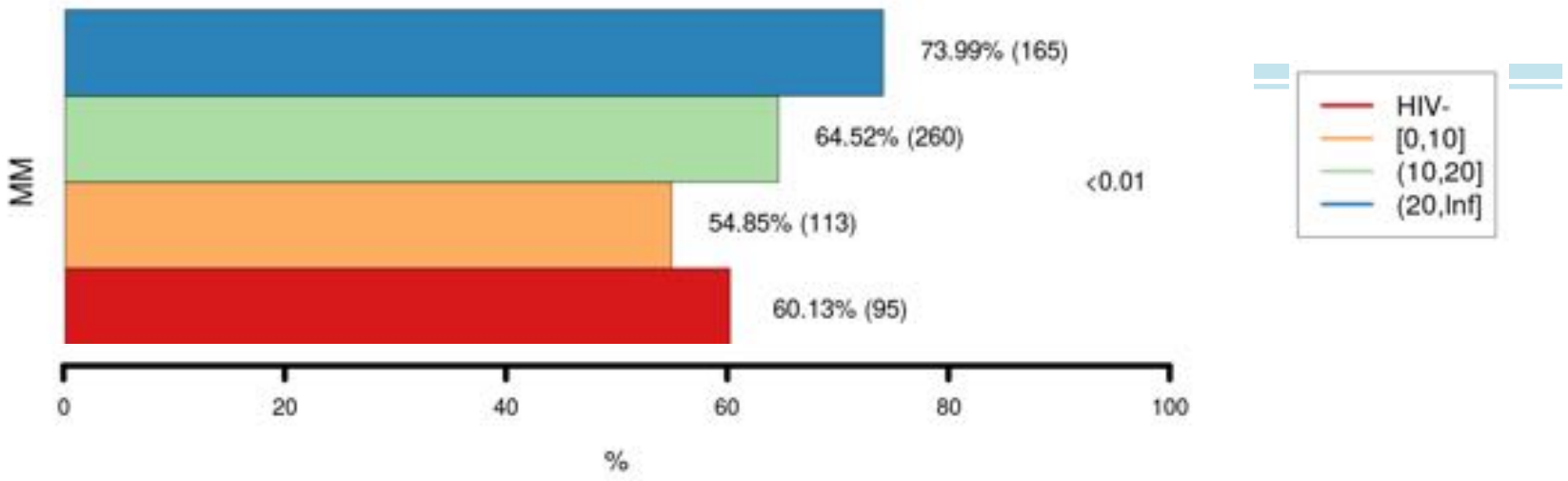
Demografic and clincal caracteristics of study population aged between 65 and 75 years

	Total (n=1111)	HIV- (n=153)	HIV+ (n=958)	HIV- vs HIV+
Variable	Mean (SD)	Mean (SD)	Mean (SD)	P-Value
Sex (F)	177 (15.71%)	24 (15.69%)	150 (15.66%)	1
Age	69.11 (2.62)	68.95 (2.73)	69.12 (2.6)	0.47
BMI	26.52 (9.83)	28.72 (3.92)	26.07 (10.63)	<0.1
Current smoker	261 (27.19%)	28 (19.18%)	230 (28.5%)	0.02
Hypertension	502 (61.9%)	102 (66.67%)	399 (61.2%)	0.24
T2DM	216 (27.07%)	37 (24.18%)	178 (27.86%)	0.41
CVD	143 (18.17%)	33 (21.57%)	110 (17.52%)	0.29
CKD	121 (16.24%)	5 (7.94%)	115 (17.01%)	**0.09**
COPD	59 (7.63%)	17 (11.41%)	41 (6.63%)	0.07
Dislypedemia	502 (68.67%)	37 (56.92%)	463 (70.15%)	**0.04**
Multy-Morbidity	412 (61.31%)	40 (63.49%)	370 (61.36%)	0.84
Poli-Pharmacy	194 (30.27%)	23 (15.03%)	170 (34.98%)	**<0.1**

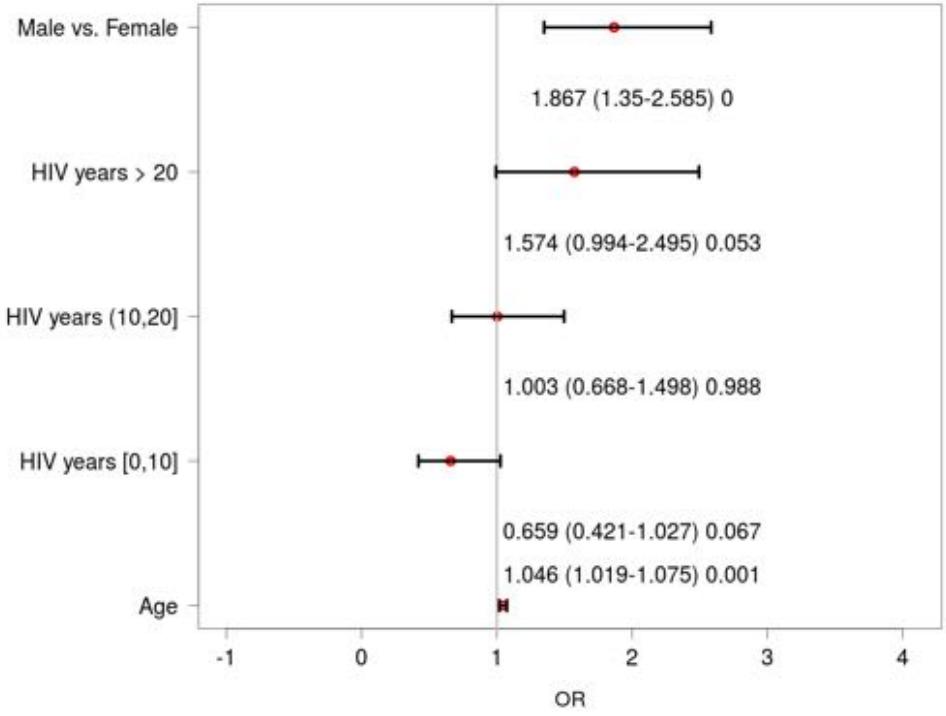
Demografic and clincal caracteristics of study population aged above 75 years

	Total (n=541)	HIV- (n=223)	HIV+ (n=318)	HIV- vs HIV+
Variable	Mean (SD)	Mean (SD)	Mean (SD)	P-Value
Sex (F)	124 (22.7%)	61 (27.34%)	61 (19.18%)	0.03
Age	78.66 (3.43)	78.97 (3.49)	78.44 (3.37)	0.06
BMI	26.22 (4.68)	27.39 (5.12)	25.24 (4.01)	<0.01
Current smoker	57 (12.18%)	18 (9%)	39 (14.72%)	0.08
Hypertension	328 (70.54%)	153 (69.23%)	173 (71.78%)	0.61
T2DM	122 (26.87%)	49 (22.27%)	70 (30.3%)	0.07
CVD	130 (29.28%)	68 (30.91%)	61 (27.48%)	0.49
CKD	83 (23.92%)	11 (10.28%)	72 (30.38%)	<0.01
COPD	66 (15%)	45 (20.55%)	20 (9.13%)	<0.01
Dislypedemia	223 (65.01%)	50 (46.73%)	172 (73.5%)	<0.01
Multy-Morbidity	228 (71.03%)	70 (65.42%)	156 (73.58%)	0.17
Poli-Pharmacy	168 (41.18%)	84 (37.67%)	84 (45.65%)	0.13

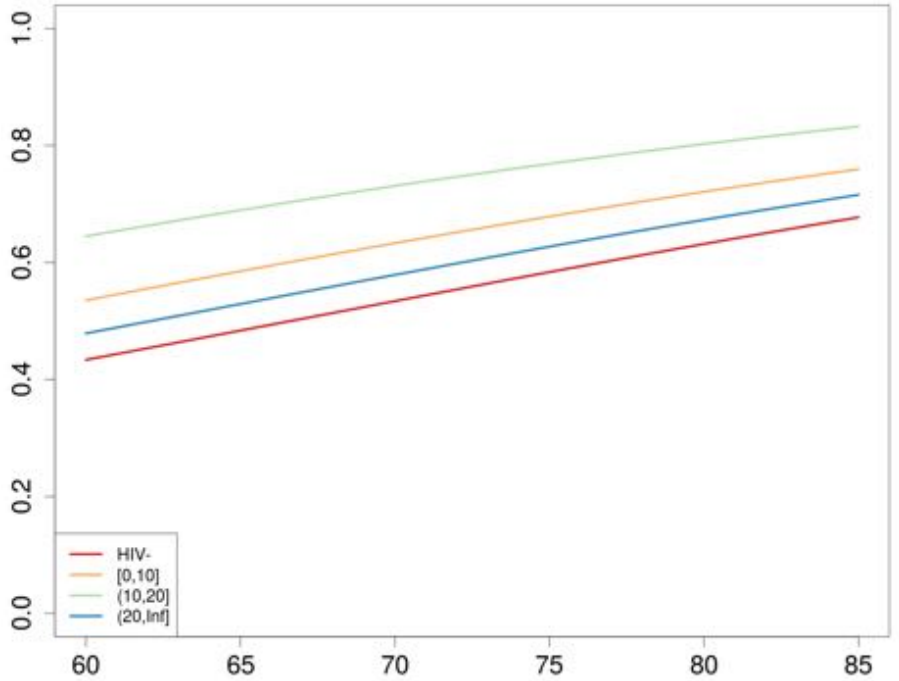
Multy-morbidity predictors and age related probability



Predictors of MM at multivariable logistic regression

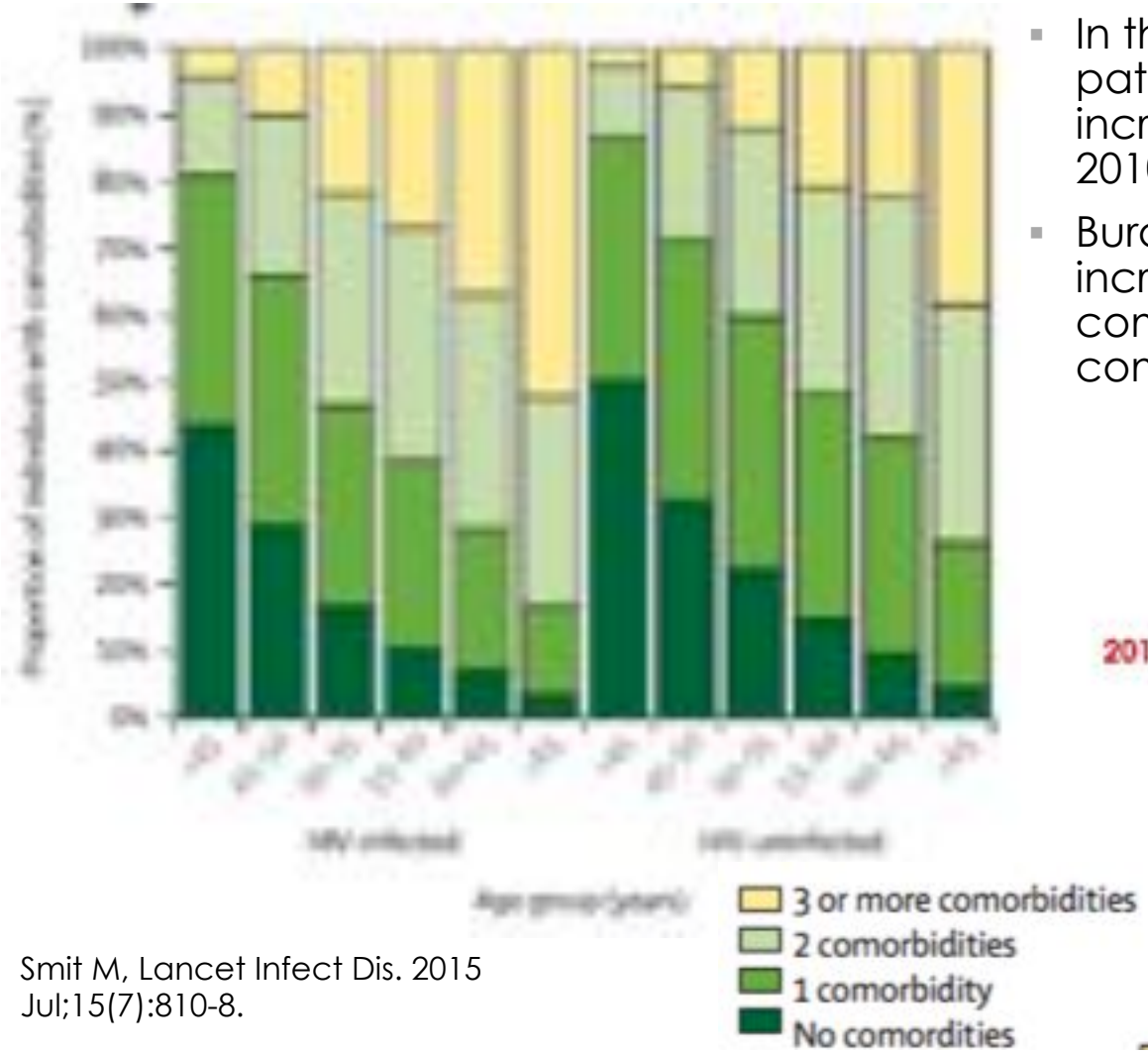


Probability of MM at any age

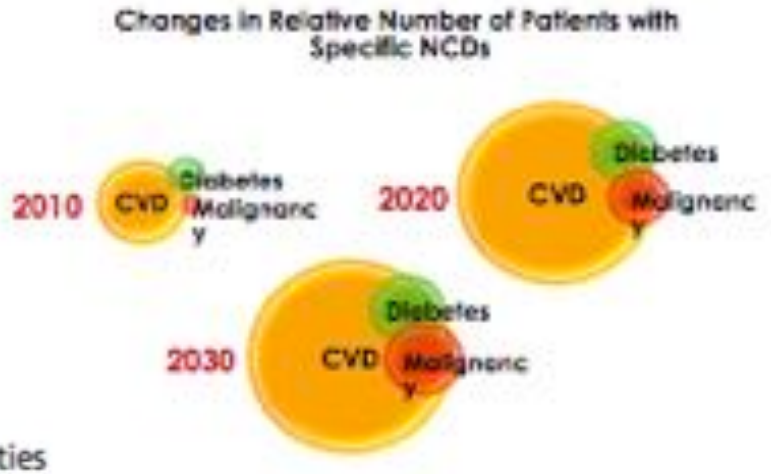


Future challenges for clinical care of an ageing population infected with HIV: a modelling study

Mikaela Smit, Kees Brinkman, Suzanne Geerlings, Colette Smit, Kalyani Thyagarajan, Ard van Sighem, Frank de Wolf, Timothy B Hallett, on behalf of the ATHENA observational cohort



- In the ATHENA cohort, proportion of patients on ART aged ≥50 years old will increase from 28% to 73% between 2010 and 2030
- Burden of NCDs mostly driven by larger increases in cardiovascular disease compared with increases in other comorbidities



Smit M, Lancet Infect Dis. 2015 Jul;15(7):810-8.

While people generally accumulate more health problems with age, not everyone of the same age experiences the same health status or risk for adverse outcomes

83 years old;
HTN, Hyperlipidemia, prior MI

83 years old;
HTN, Hyperlipidemia, prior MI

This variable vulnerability among people of the same chronological age is known as **frailty**

Frailty has been proposed as a measure of biological (opposed to chronological) aging

WYSIWYG!

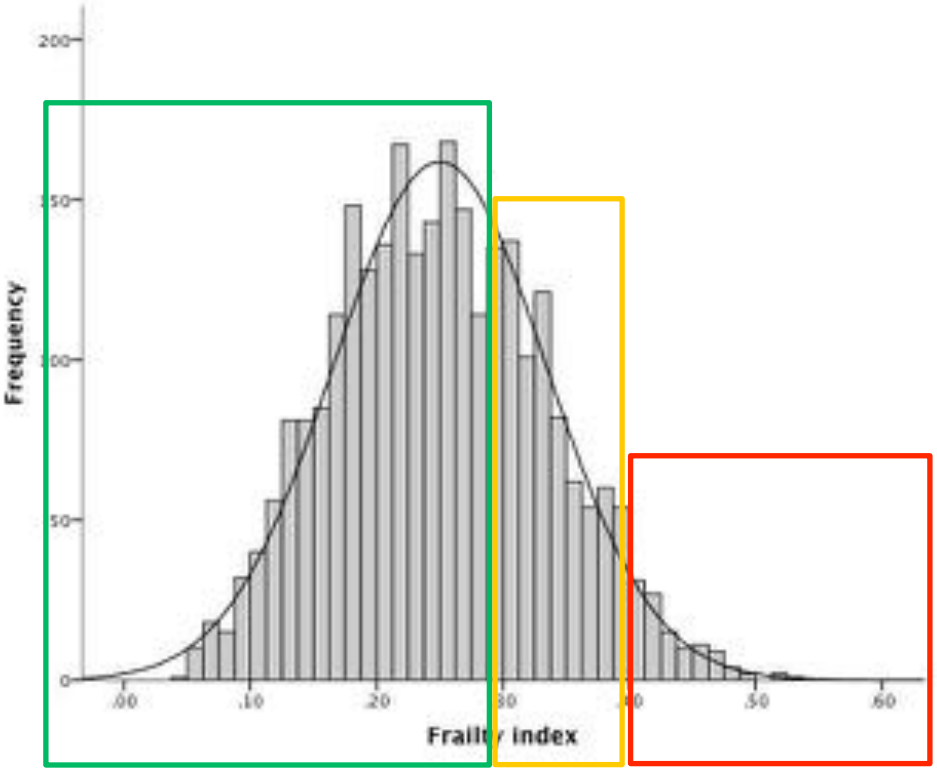
What you see, is what you get

Frailty as a deficit accumulation

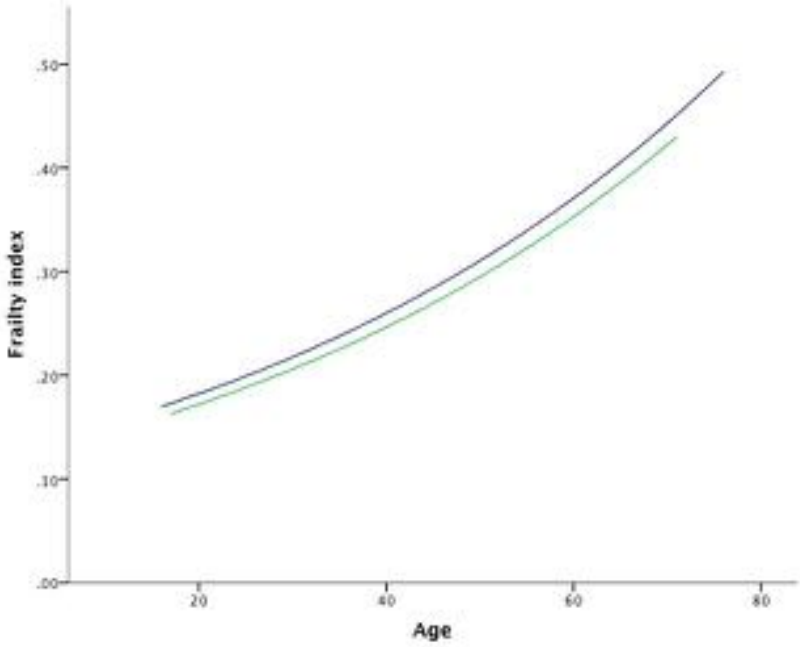
- Frailty can be operationalized as deficit accumulation and can be expressed in a frailty index
- Can be summarised as a scale from Robust to Terminally Ill
- A frailty index derived from routinely collected clinical data can offer insights into the biology of aging using mathematics of complex systems

Rockwood et al. Lancet 1999;353:205-6

FI distribution at MHMC



Distribution of frailty index scores at first visit. Bars represent 0.01 frailty index score groupings. Solid line indicates normal distribution.



Average frailty index score at each age. Lines represent exponential best fit. Solid line is men, dashed line is women.

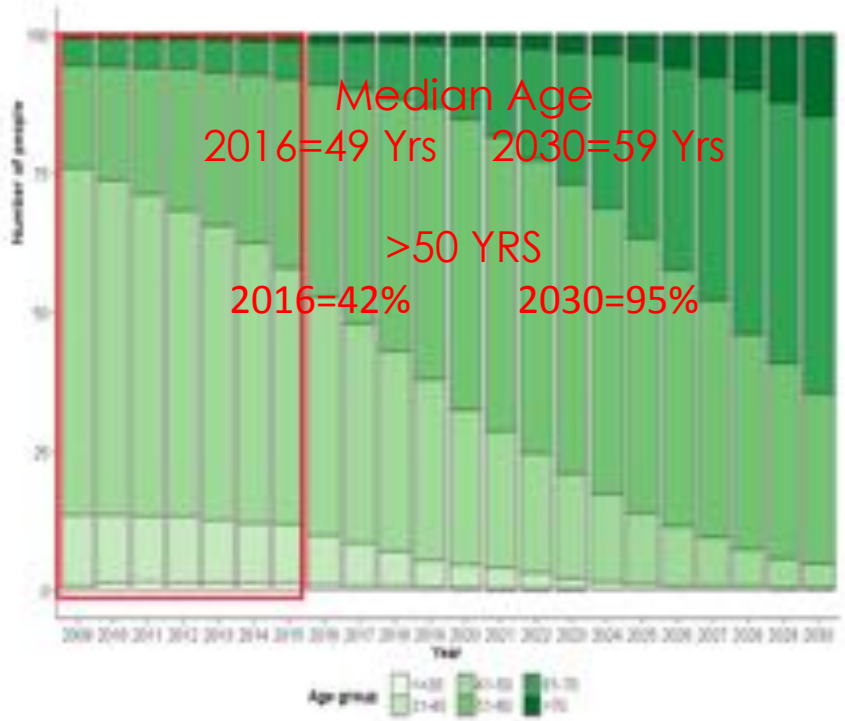
Guaraldi G. AIDS. 2015 Aug 24;29(13):1633–41.

Future challenges for clinical care of an ageing population infected with HIV: a "geriatric -HIV" modelling study

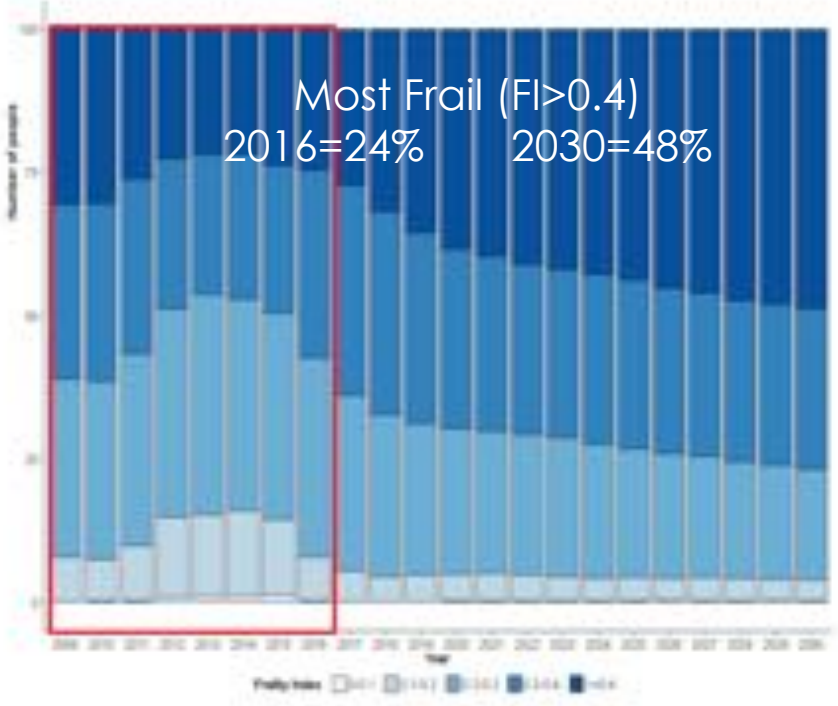
OBJ: We aimed to quantify the scale of the change in Frailty and its implications for HIV care in the Italy in the year 2030.

Methods: An individual-based model of the ageing population of the Modena HIV Metabolic Clinic (MHMC) was constructed using data collected between 2009 and 2015 from 3086 patients. The model follows patients enrolled to the clinic up to 2015 and generates new entries on a yearly basis up to 2030.

Observed (red area) and projected **age** distribution of HIV-infected patients



Observed (red area) and predicted burden of Frailty in HIV-infected patients between 2009 and 2030 as simulated by the model



Redefining measurement of Health in HIV

Drug Toxicities → Co-morbidities → Multi-morbidities → Frailty → Disability

Impairment *(body function)*:
Osteoarthritis

Limitations *(activity)*:
Show chair rise time, slow gait

Frailty *(vulnerability)*:
Slow walking speed, low activity, fatigue

Disabilities *(participation)*:
Requires cane, but ramp into home and no stairs in home

Impairment:
History, exam, X-ray

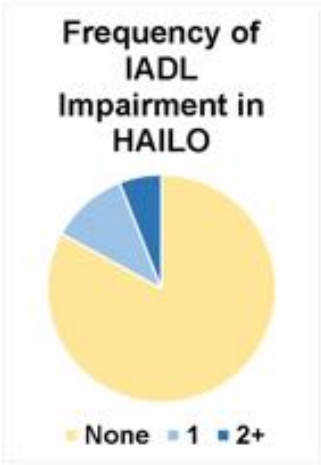
Limitations:
Short Physical Performance Battery Timed walk

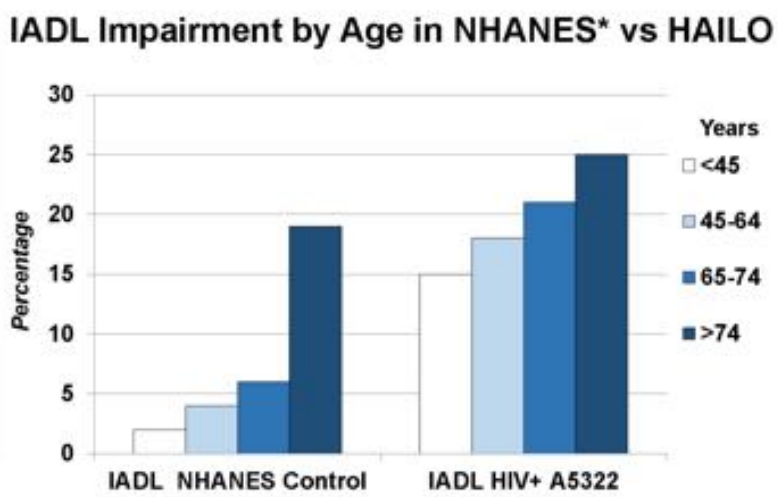
Frailty:
Frailty phenotype, Frailty index

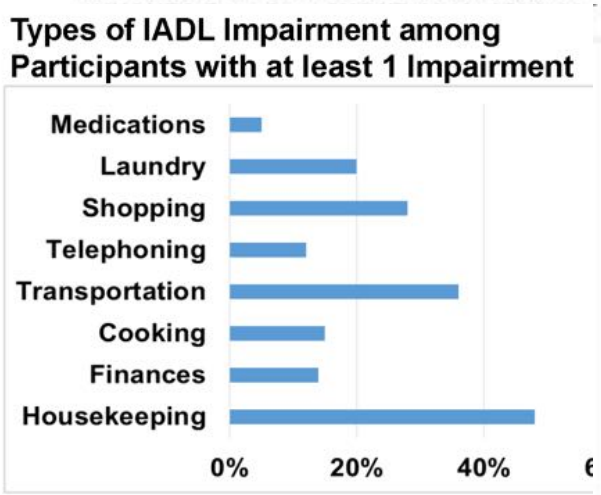
Disability:
Activities of daily living
Independent activities of daily living

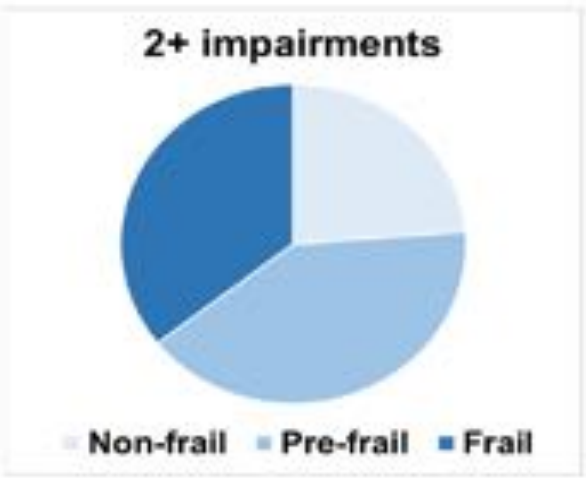
Erlandson, K. M.,et al. Current HIV/AIDS Reports, 11(3), 279–290.

Factors Associated With Limitations in Daily Activity Among Older HIV+ Adults









- ✓ In HIV+ older adults, IADL impairment occurs more frequently among those with neuroimpairment or frailty.
- ✓ Modifiable risk factors (smoking, low physical activity) provide targets for interventions to help maintain independent living

Erlandosn K, P-721 CROI 2016

Geriatric Syndromes in Older HIV-Infected Adults

Meredith Greene, MD,† Kenneth E. Covinsky, MD, MPH,*† Victor Valcour, MD, PhD,*‡ Yinghui Miao, MD, MPH,*† Joy Madamba, BS,§ Harry Lampiris, MD,#‖ Irena Stijacic Cenzer, MA,*† Jeffrey Martin, MD, MPH,¶ and Steven G. Deeks, MD§*

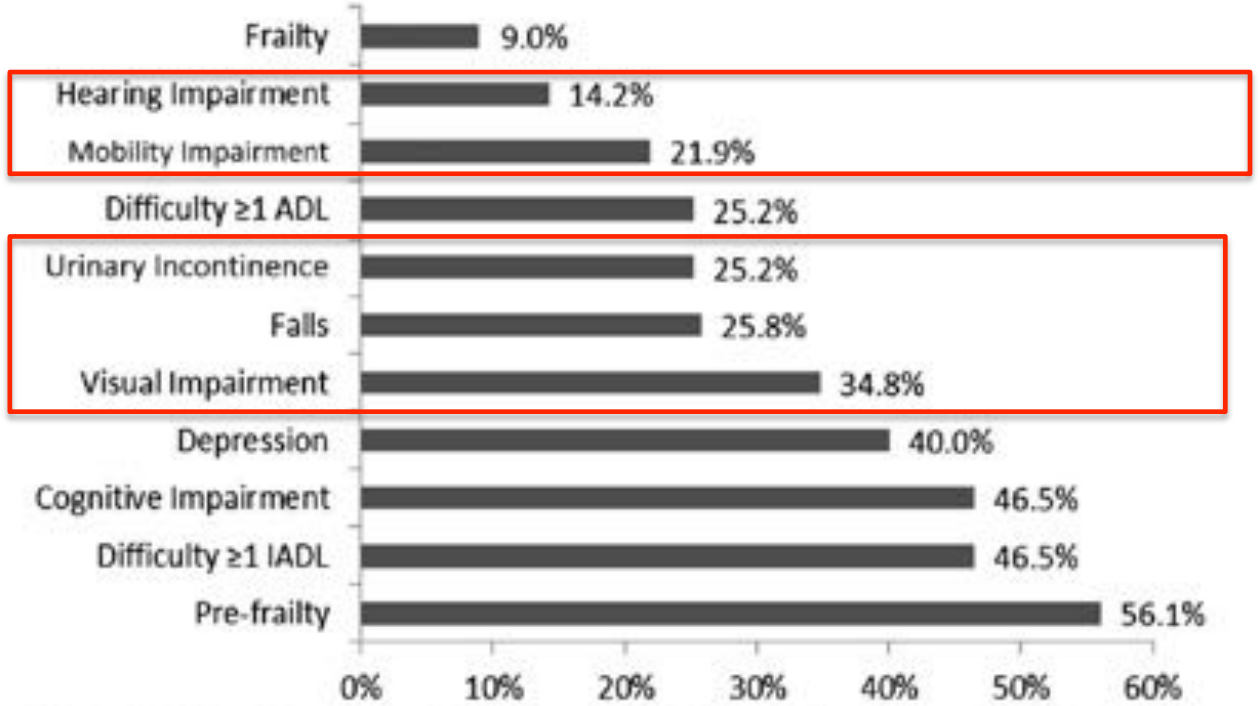


FIGURE 1. Frequencies of geriatric syndromes. Each bar reflects the percentage of participants with each geriatric syndrome. Actual percentages are shown at the end of each bar. Horizontal axis only shown to 60%.

JAIDS 2015

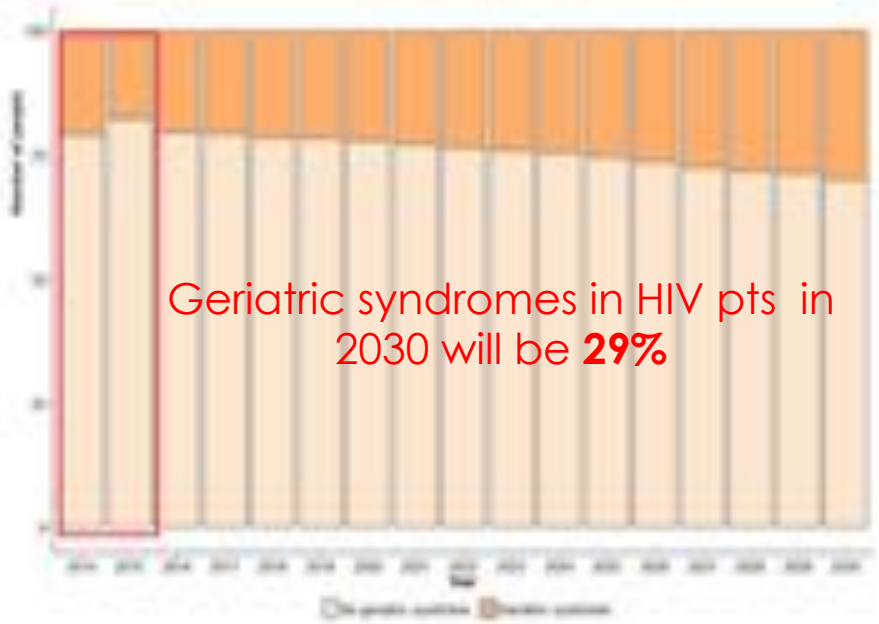
Future challenges for clinical care of an ageing population infected with HIV: a "geriatric -HIV" modelling study

Methods:

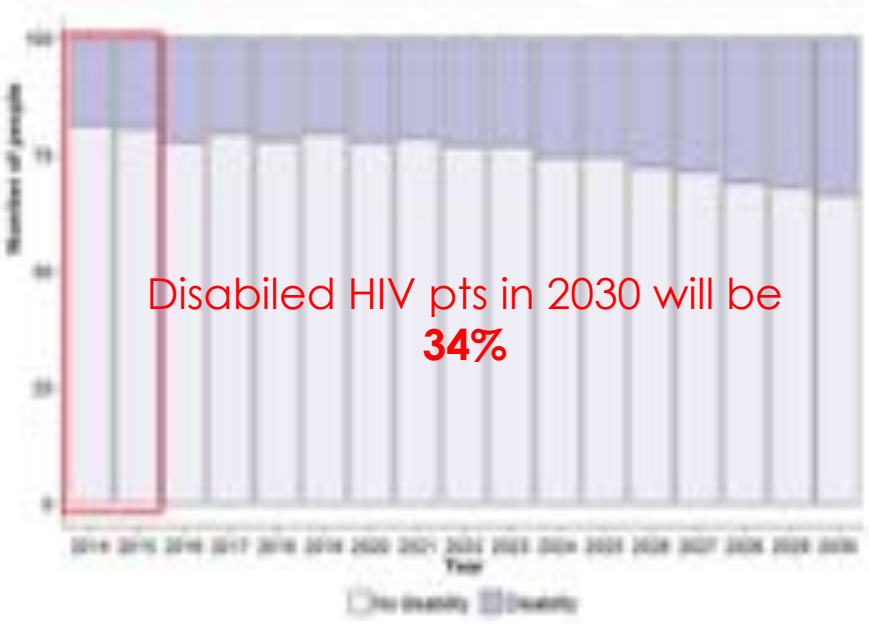
Geriatric syndromes were evaluated by means of a self-reported fall frequency in the past 12 months and defined as one or more falls (i.e. unexpectedly dropping to the floor or ground from a standing, walking, or bending position).

Disability was assessed with 8 categories of activities of daily function (housekeeping, money management, cooking, transportation, telephone use, shopping, laundry, medication management) and defined as impairment in ≥1 categories.

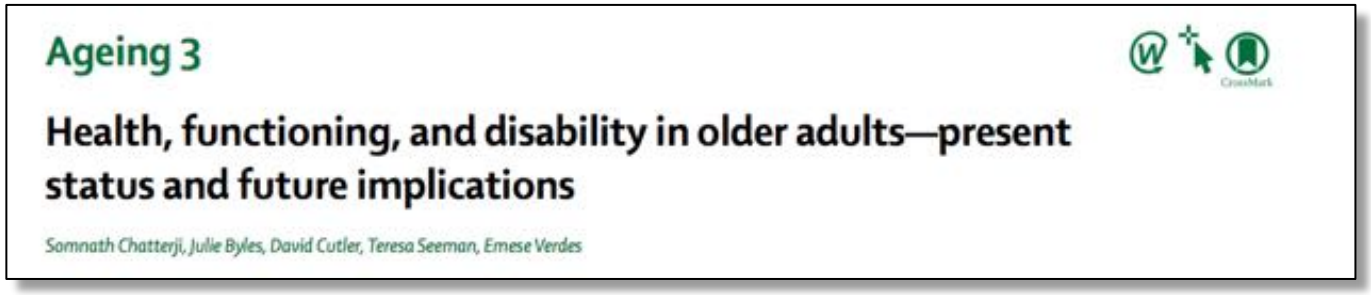
Distribution of **geriatric syndromes** by frailty group for HIV-infected patients in 2030.



Distribution of **disability** by frailty group for HIV-infected patients in 2030.



Life expectancy **vs** healthy life expectancy


Ageing 3

Health, functioning, and disability in older adults—present status and future implications

Somnath Chatterji, Julie Byles, David Cutler, Teresa Seeman, Emese Verdes

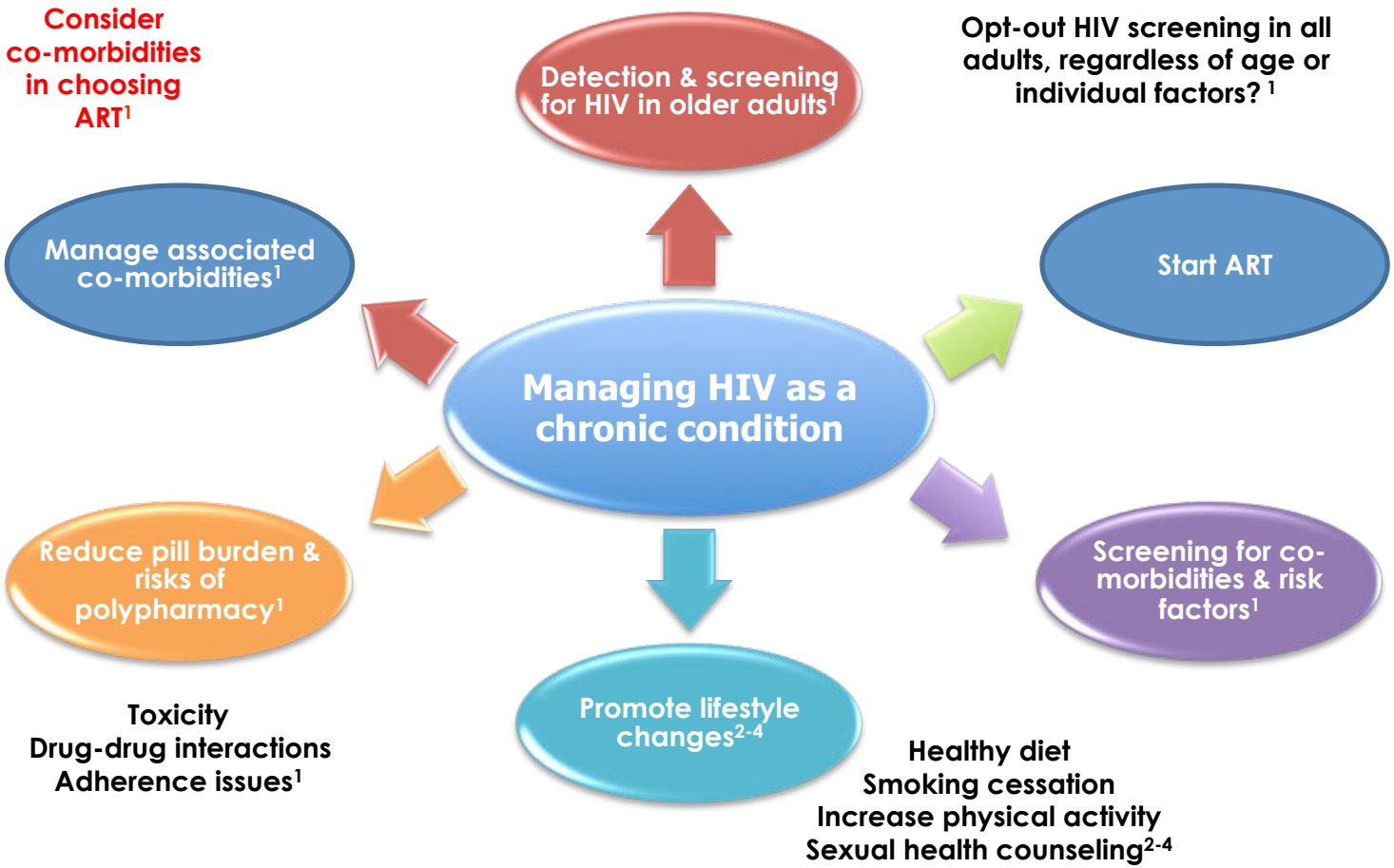
Healthy life expectancy is a measure that combines mortality and morbidity information in one index, expressing the number of healthy years of life lost because of poor health, and incorporating a range of severities to quantify poor health

- ✓ Chronic diseases
- ✓ Special population
- ✓ Multymorbidity
- ✓ Complex cases
- ✓ Ageing

Data from the Global Burden of Disease 2010 show that from 1990 to 2010, as life expectancy rose 20 years healthy life expectancy increased more slowly (0·75 years for each year of increase in life expectancy).

www.thelancet.com **Vol385 February7,2015 563**

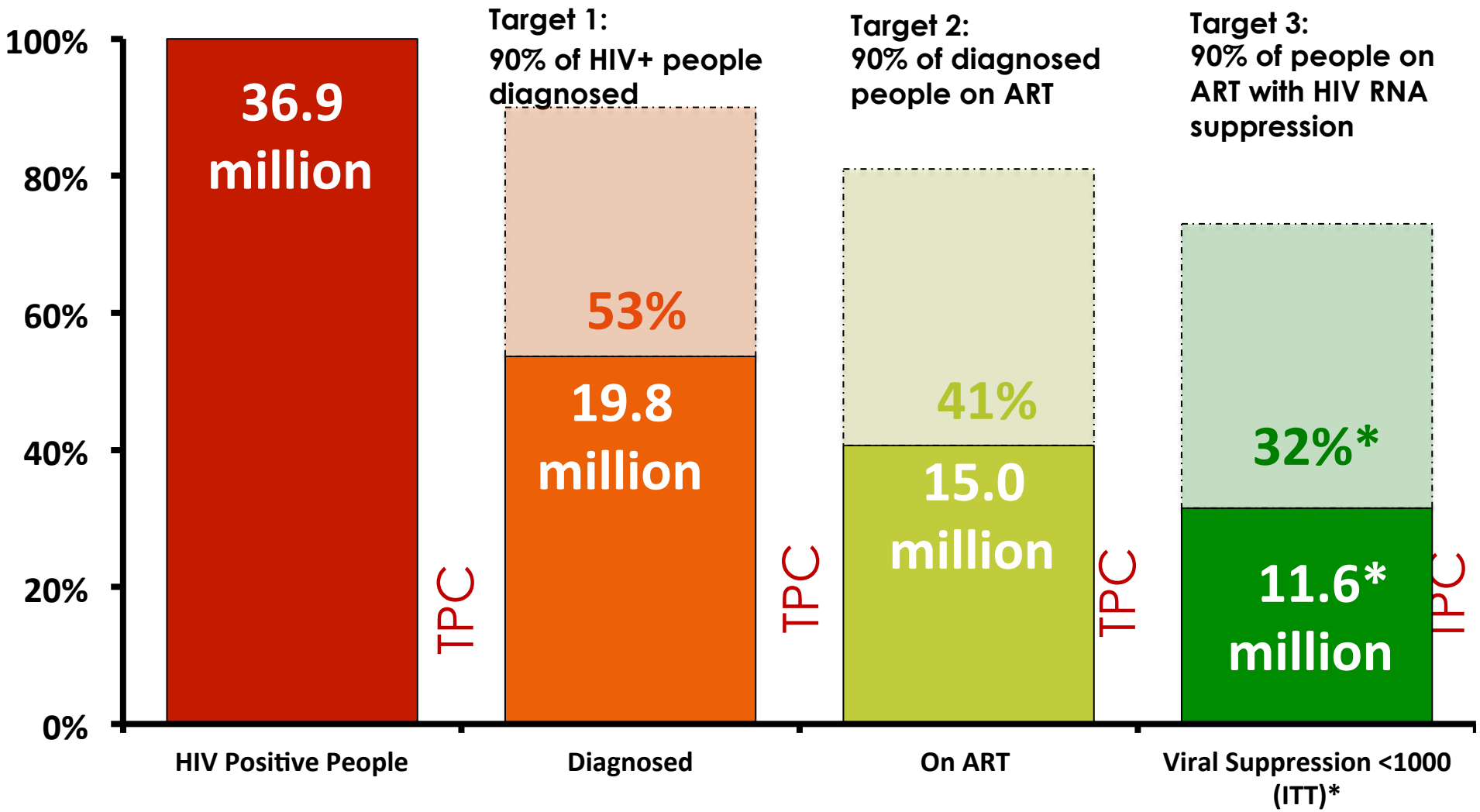
How to manage HIV as a chronic condition



*if plasma HIV RNA levels > 50,000 copies/ml, greater than 100-point decline in CD4 count in prior 12 months, or risk factors for CVD.

1. The HIV and Aging Consensus Project: Recommended Treatment Strategies for Clinicians Managing Older Patients with HIV 2011. Available at http://www.aahivm.org/hivandagingforum Accessed April 2012; 2. Fitch K,et al. AIDS. 2006;20:1843-1850; 3. Petoumenos K, et al. HIV Med 2011; 12:412-421; 4. Lindau ST, et al. NEJM. 2007;357:762-774.

TOTAL PATIENT CARE VS BEYOND UNDETECTABILITY

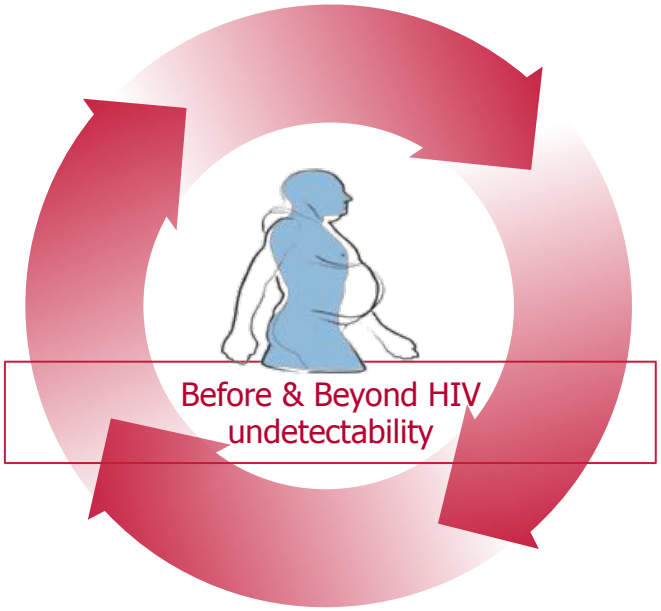


Ref: The Joint United Nations Programme on HIV/AIDS. 90-90-90 An ambitious treatment target to help end the AIDS epidemic. 2014; JC2684 (Numbers as of March 2015) How Aids Changed Everything. Fact Sheet. UNAIDS 2015. MDG 6: 15 YEARS, 15 LESSONS OF HOPE FROM THE AIDS RESPONSE July 2015.

TOTAL PATIENT CARE: a patient cantered multidimensional assessment of HEALTH

How to **screen** for comorbidities:

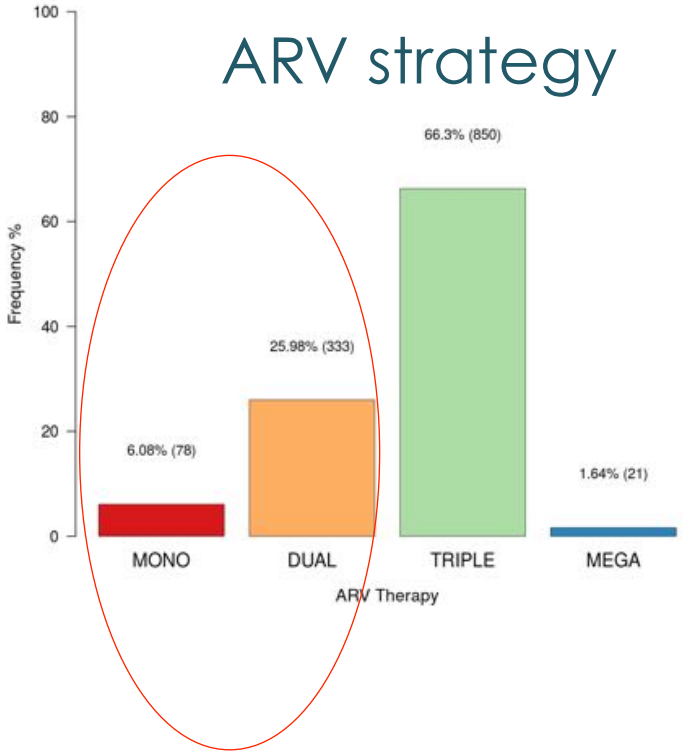
1. Collect Modifiable and not modifiable risk factors
2. Estimate risk probability with algorithms
3. Evaluate

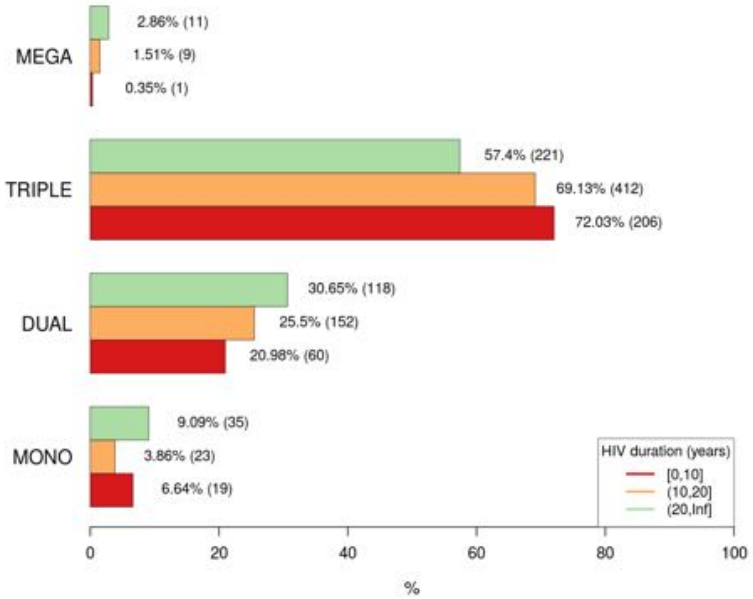


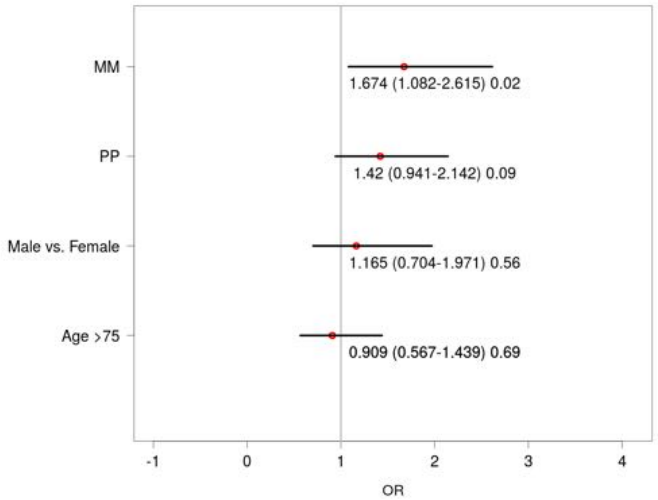
How to **treat** comorbidities:

1. Get HIV un-detectability
2. Reactive or pre-emptive ARV switch
3. Treat risk factors or existing comorbiditie s
4. Empower

Antiretroviral regimens and relationship with MM and PP

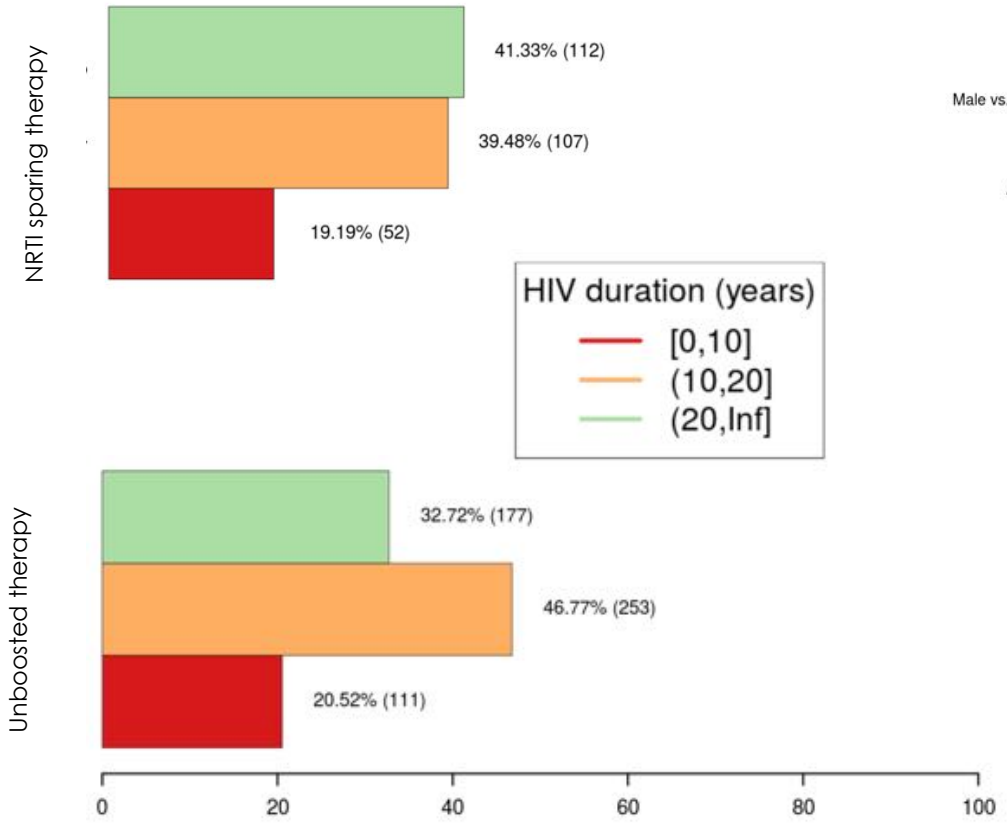




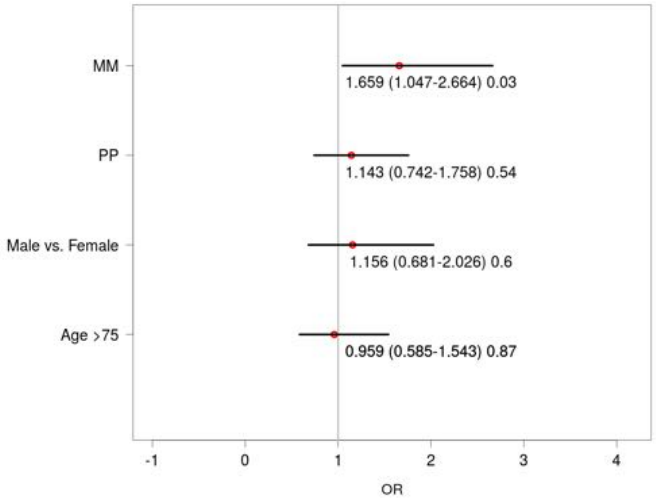


Guaraldi G, et al. OC85 8th ICAR – 6-8 June 2016 - Milano

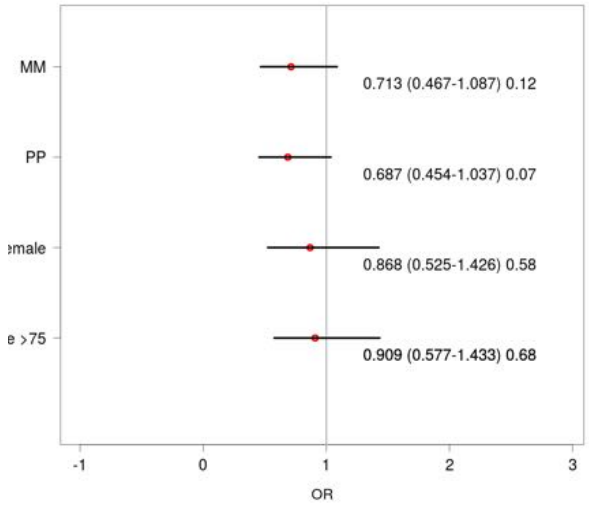
Antiretroviral Strategies and relationship with MM and PP



Multivariable logistic regression for NRTI sparing therapy



Multivariable logistic regression for unboosted therapy



Considerations in Management of ART in the Older HIV Patient

It is time to move into a proactive approach in ARV management in older HIV patients

		NRTI	NNRTI	PI/r	PI	INSTI
Multimorbidity	✓ eg., cardiovascular, hepatic, metabolic ✓ may be exacerbated by effects of HIV or its treatment	✗	✓>✗	✗>✓	✓	✓
Polifarmacy	– overlapping side effects or potential interactions with ARVs and concomitant medications	✓>✗	✗	✗	✓	✓

Guaraldi G., Medskape 2016

Polypharmacy (PP) in the HIV infected older adult population

Def: 1. the use of 5 or more medications
2. the use of a potentially inappropriate drug

NEGATIVE CONSEQUENCES OF PP

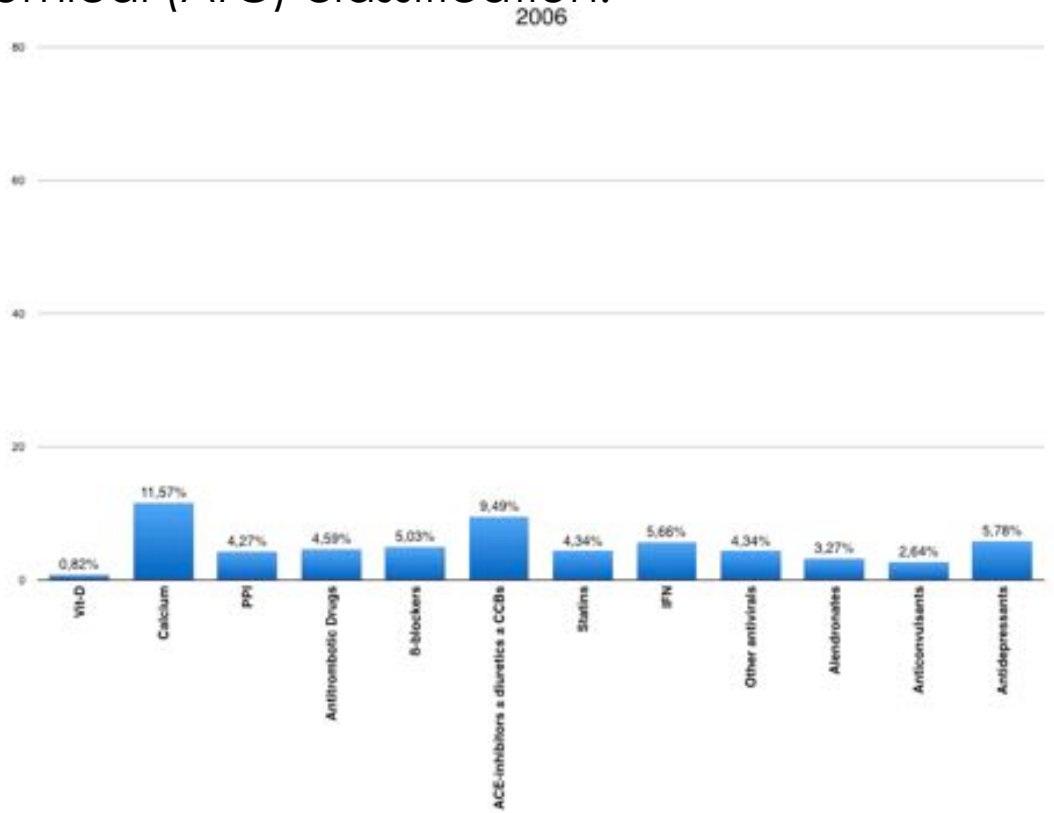
1. ADE
2. DDIs
3. INCREASED COSTS
4. PILL BURDEN
5. AHDERENCE
6. FALLS
7. MORTALITY

Gleason LG, Clin Interv Aging. Dove Press; 2013;8:749–63.

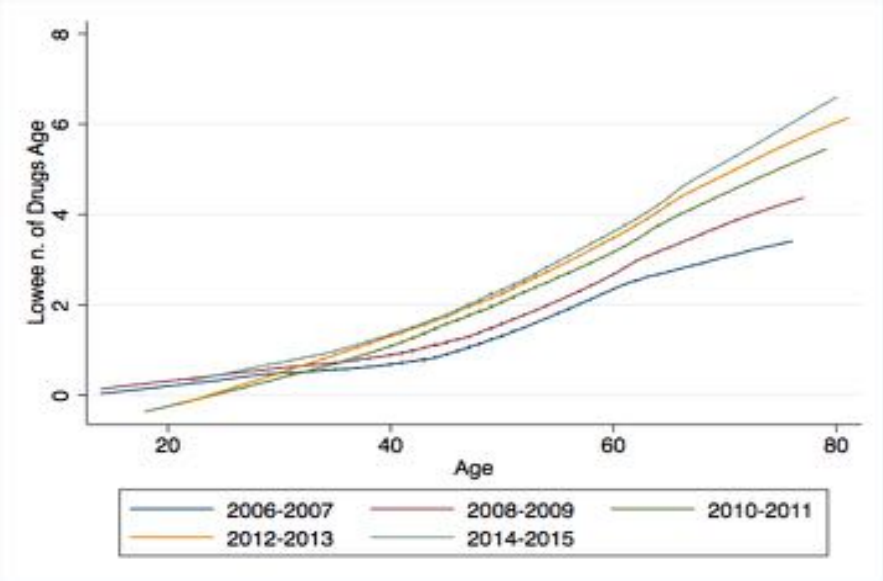
Prevalence of use of the 12 most prescribed categories of drugs by calendar year

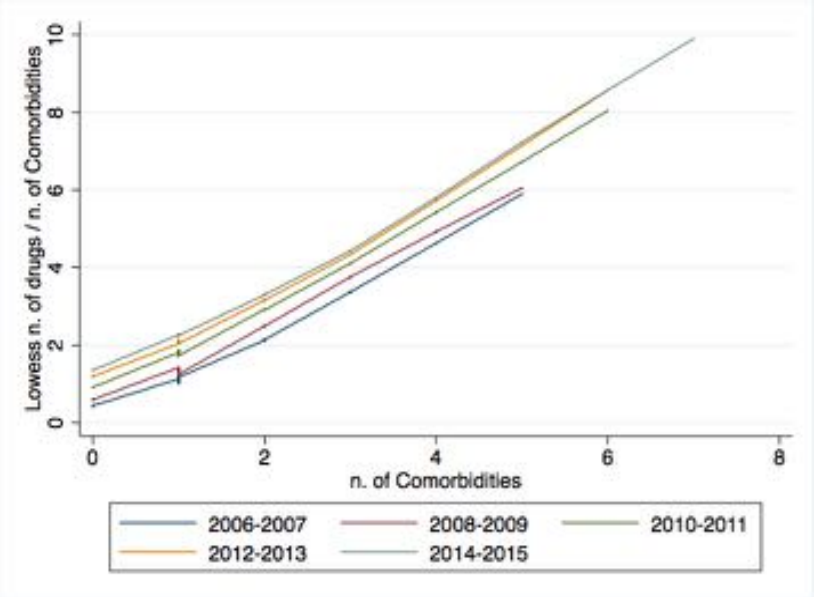
Retrospective observational study including all HIV patients who were evaluated at Modena HIV Metabolic Clinic (MHMC) from 1st Jan 2006 to 31st Dec 2015)

Polypharmacy (PP) was defined as the chronic use of 5 or more medications (excluding antiretroviral drugs) according to the Anatomical Therapeutic Chemical (ATC) classification.



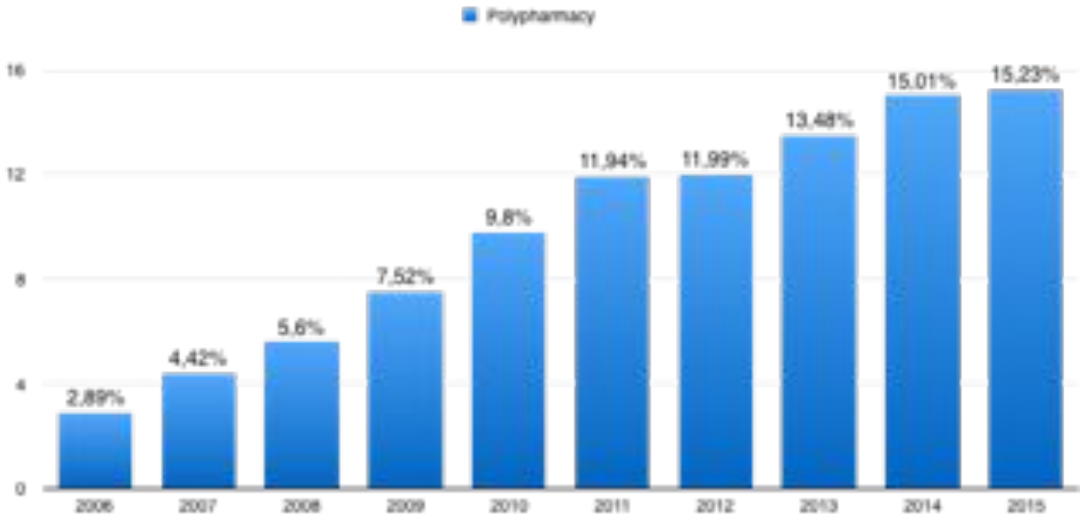
Association between Polypharmacy (PP) and Comorbidity, Age and Frailty by calendar year

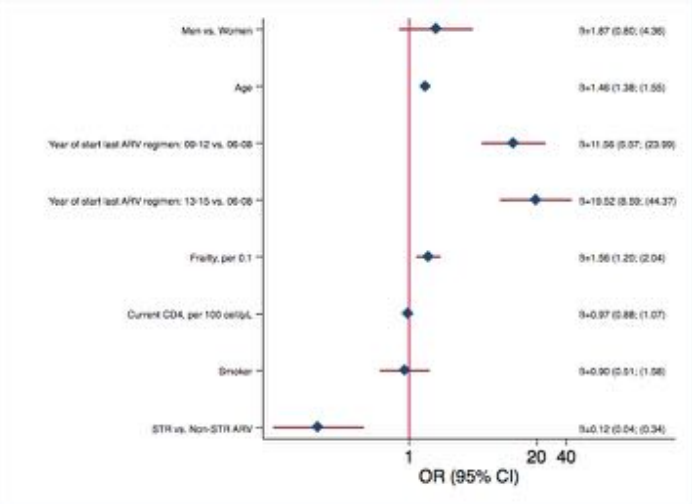




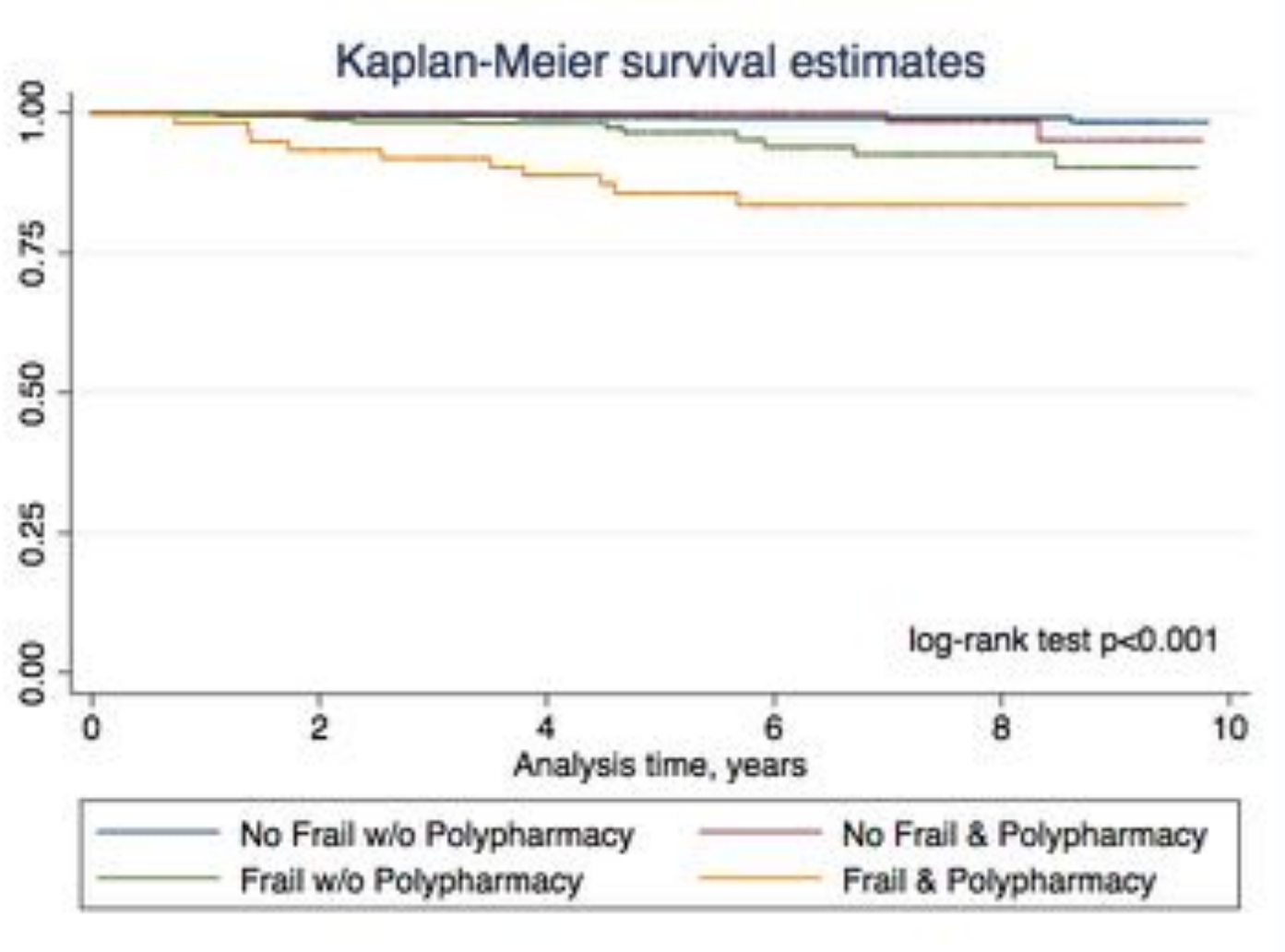
Prevalence of Polypharmacy at MHMC by calendar year

Predictors of PP at multivariable logistic regression

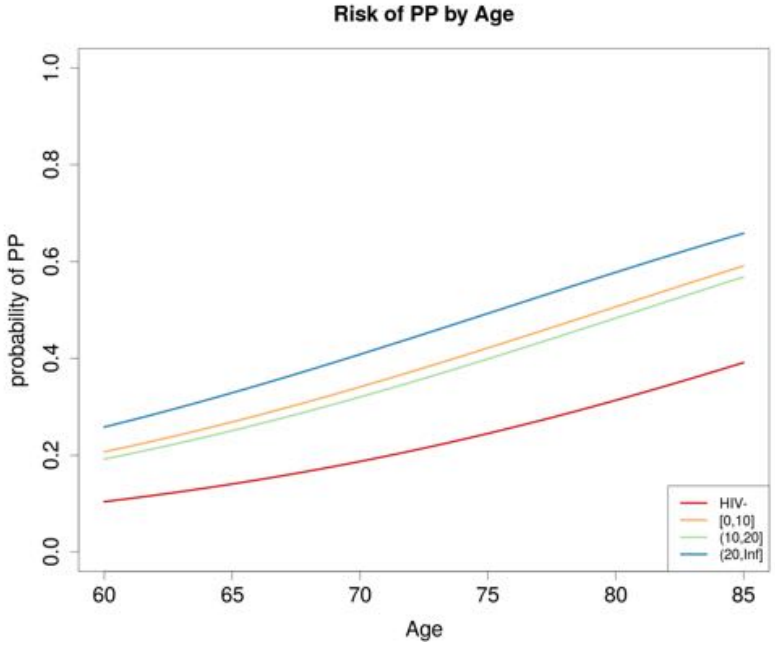


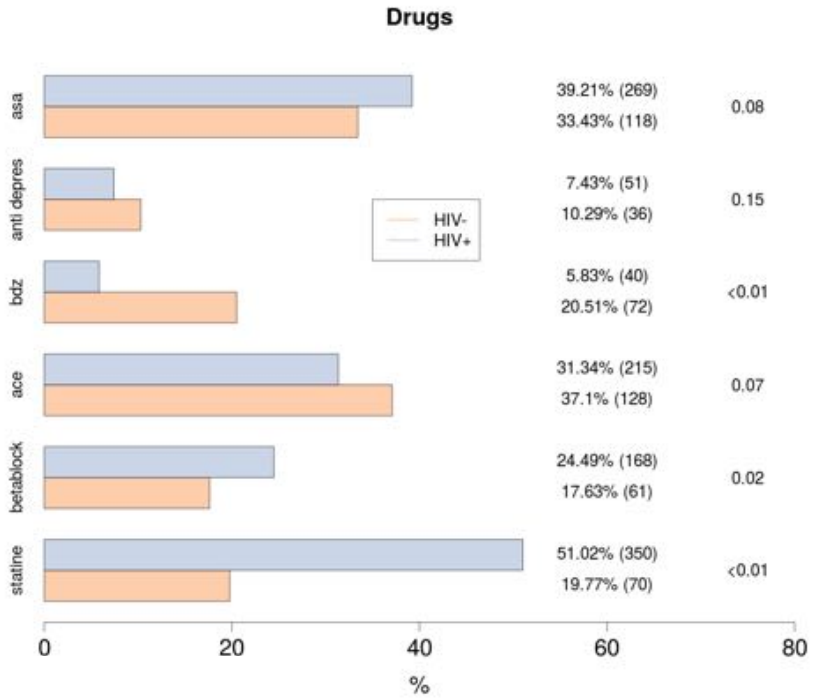


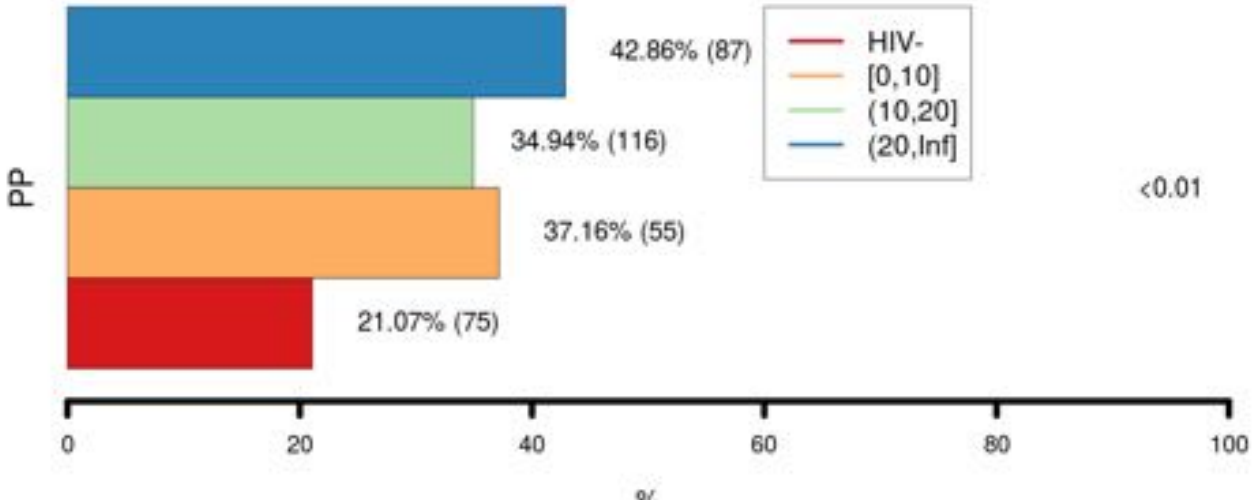
Polipharmacy in frail patients is a predictor of overall mortality



Poly-Pharmacy
by duration of HIV infection







Special Communication | LESS IS MORE

Reducing Inappropriate Polypharmacy
The Process of Deprescribing

Algorithm for Deciding Order and Mode in Which Drug Use Could Be Discontinued

JAMA Internal Medicine May 2015 Volume 175, Number 5

JAMA®
The Journal of the American Medical Association

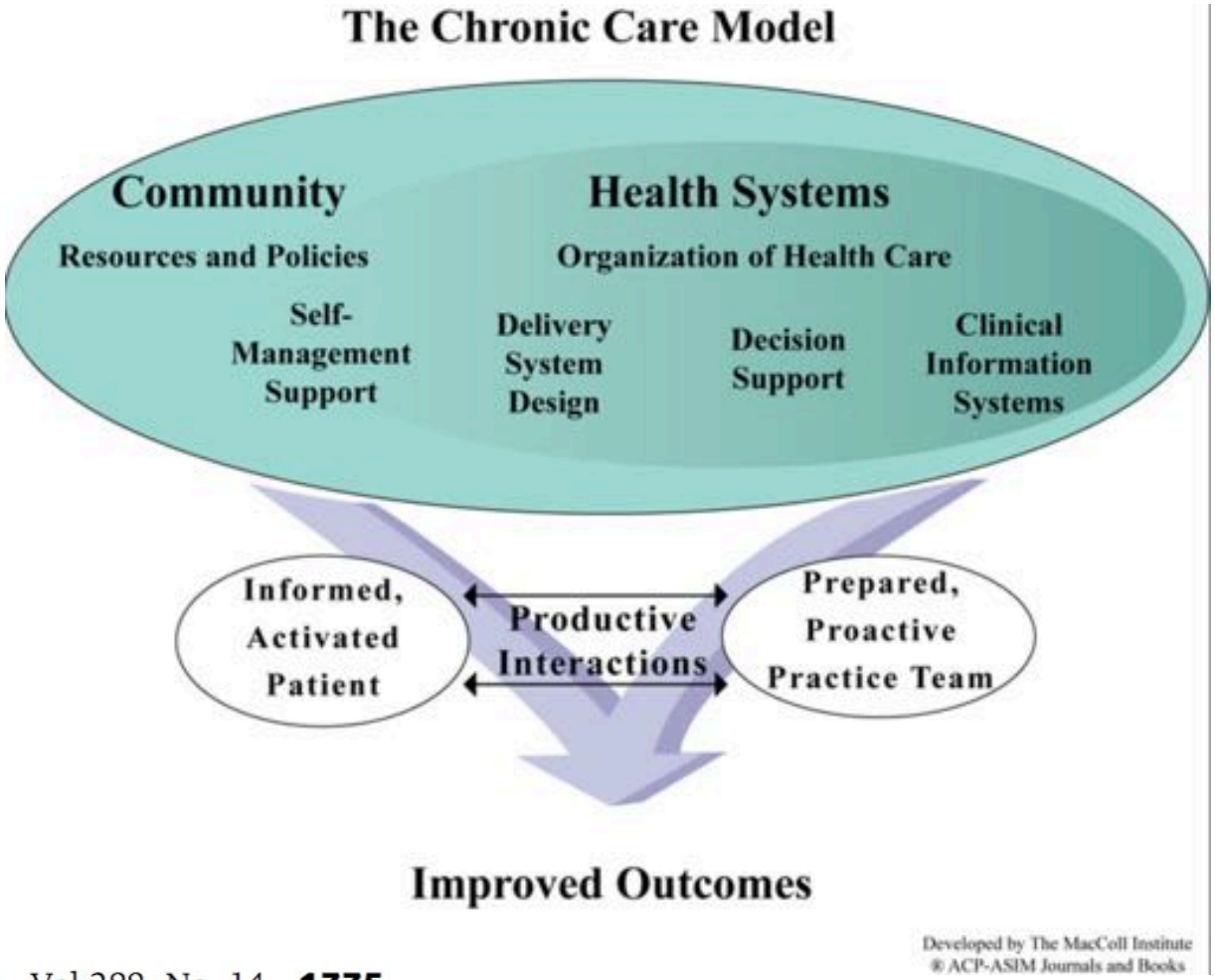
Improving Primary Care for Patients With Chronic Illness

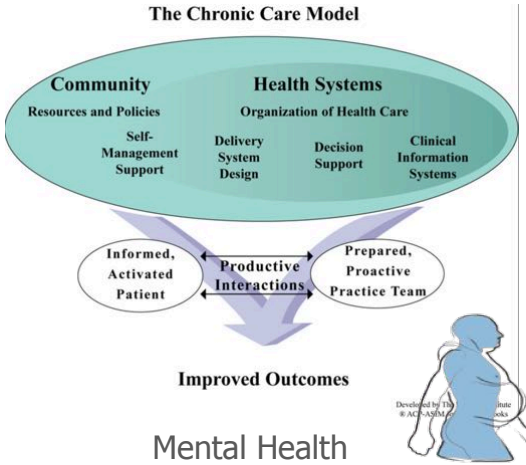
The chronic care model is a guide to higher-quality chronic illness management within primary care. The model predicts that improvement in its 6 interrelated components—self-management support, clinical information systems, delivery system redesign, decision support, health care organization, and community resources—can produce system reform in which informed, activated patients interact with prepared, proactive practice teams. Case studies are provided describing how components of the chronic care model have been implemented in the primary care practices of 4 health care organizations.

JAMA. 2002;288:1775-1779 www.jama.com

JAMA®
The Journal of the American Medical Association

Improving Primary Care for Patients With Chronic Illness





Delivery System Design: Assure the delivery of effective, efficient clinical care and self-management support

Mental Health

HIV physicians

QoL

Psychologist

Nurse

Physical function

Beyond HIV undetectability

Frailty

Occupational therapist

Multidimensional assessment of HEALTH

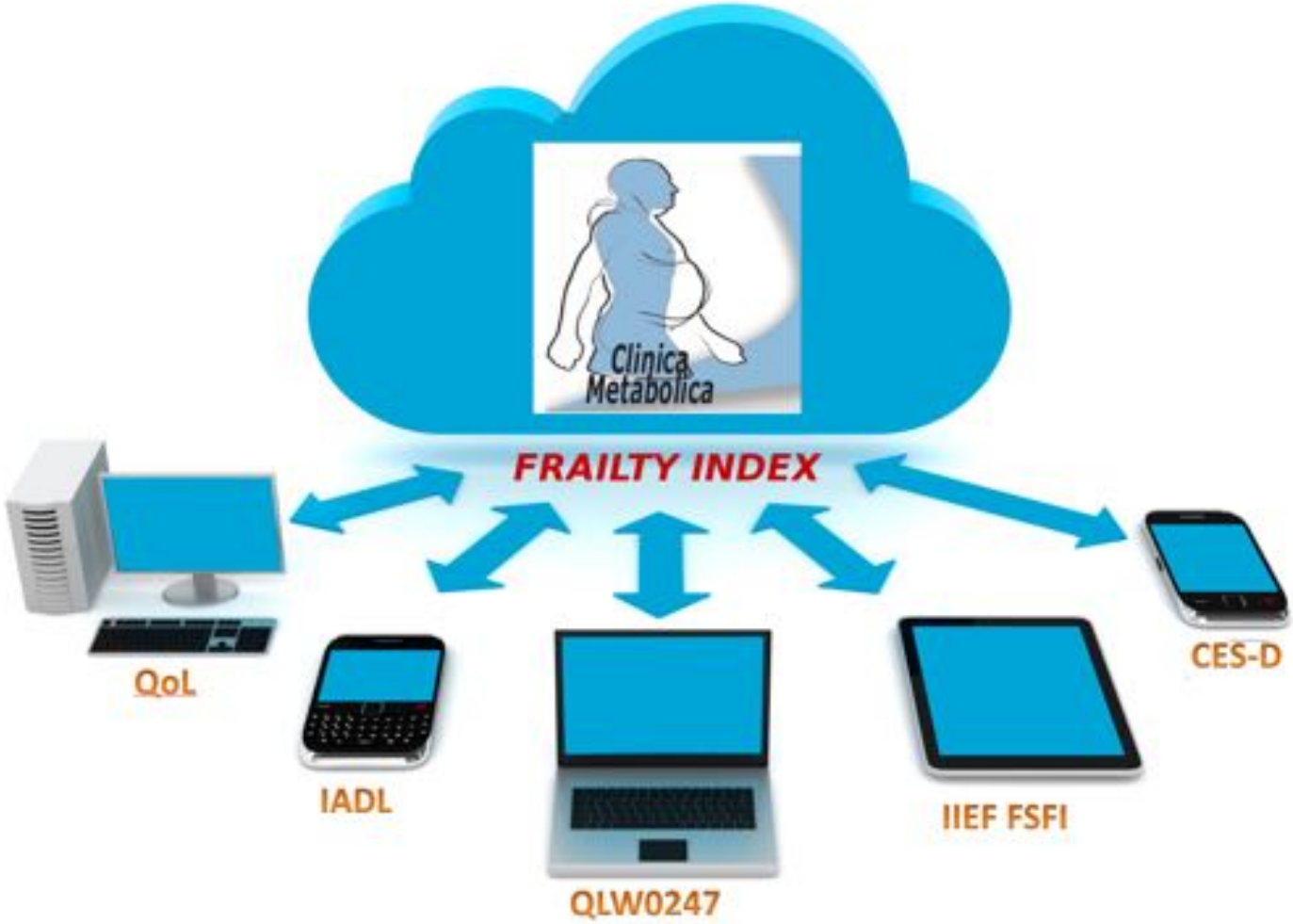
Pharmacist

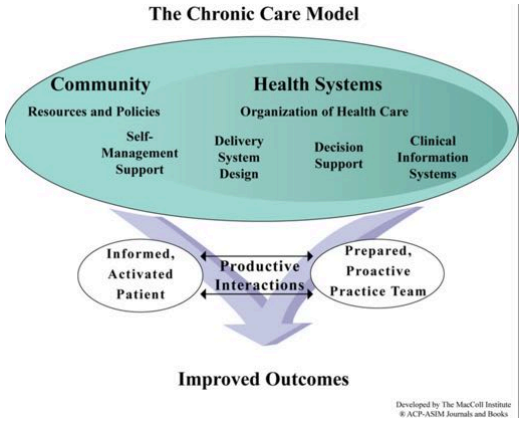
Non HIV specialists

Geriatric syndromes

Disability

CLINICAL MANAGEMENT:
Health care organization & Delivery system design

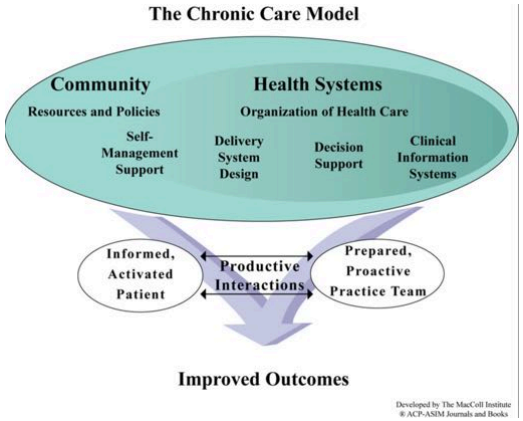




Decision Support: Promote clinical care that is consistent with scientific evidence and patient preferences

HIV & hepatitis drug interactions

- http://www.hiv-druginteractions.org
- http://www.hep-druginteractions.org



Clinical Information Systems:

Organize patient and population data to facilitate efficient and effective care

My Smart Age with HIV: Smartphone self-assessment of frailty and information - communication technology (ICT) to promote healthy ageing in HIV.

mysawh

GARMIN

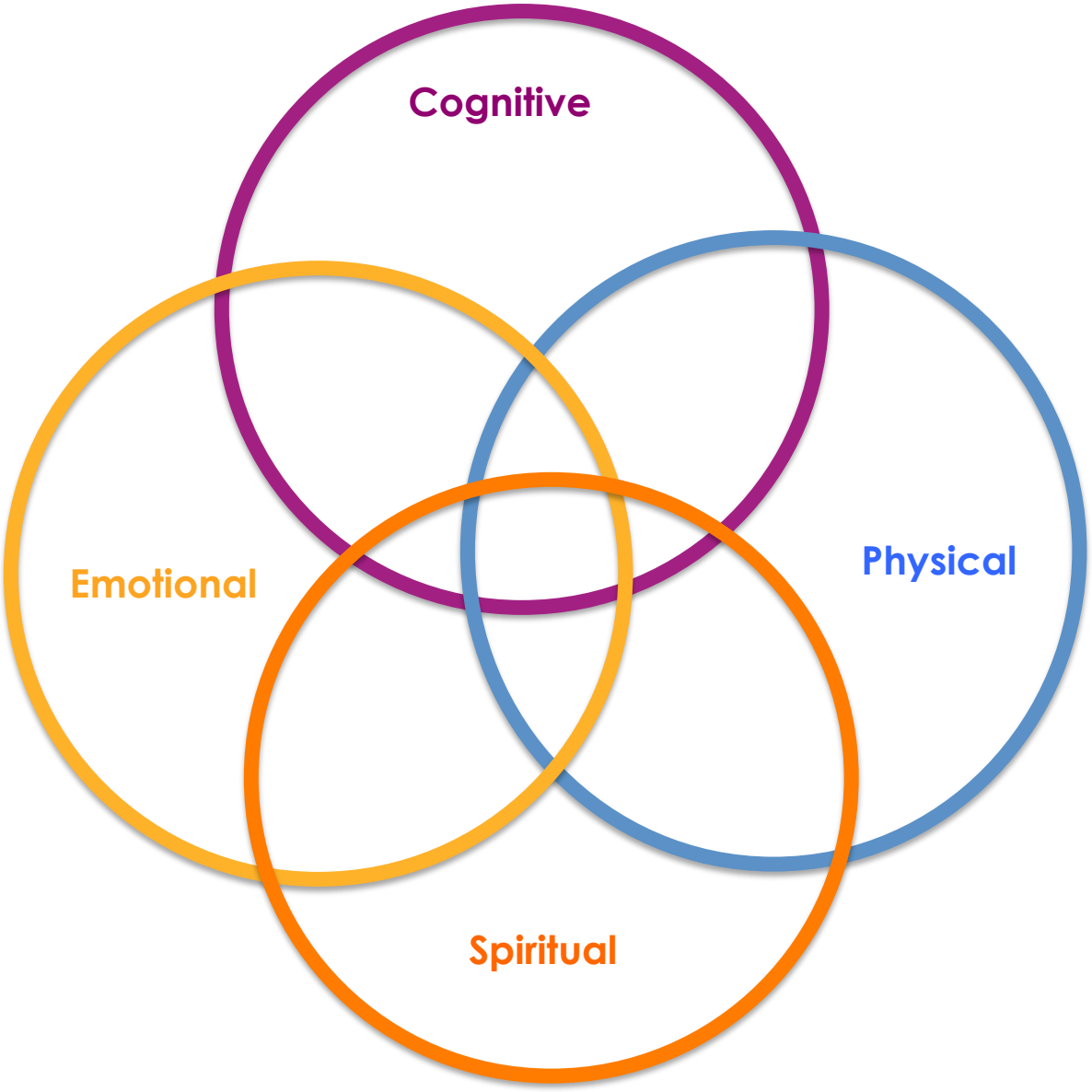
TECHNOGYM
The Wellness Company™

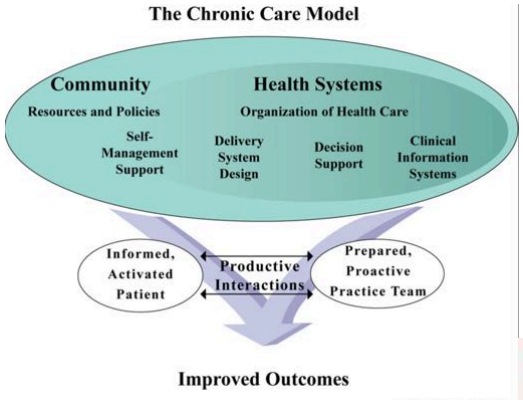
PURPOSE AND OBJECTIVES OF THE STUDY

In this study we plan to empower elderly HIV patients via health promotion, assessing reduction in health deficit and improvement in quality of life using My Smart Age – application.

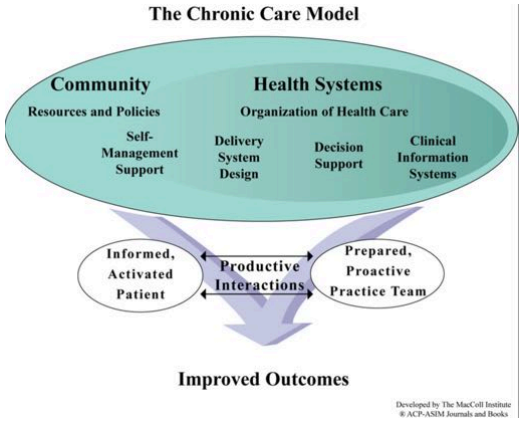
A frailty Index will be generated from **physiological data** collected by a wellness tract device and PRO obtained by **ecological momentary assessmen**t data generated by MYSAWH app

Successful Aging
… beyond absence of co-morbidities





The comunity: Mobilize community resources to meet needs of patients



Self-Management Support:

Empower and prepare patients to manage their health and health care

Self managment: Wellness checklist

Daily

1. Could I exercize more today?
2. Have I bought the right food?
3. Should I drink less alcohol today?
4. Am I doing the right thing to help me sleep properly?
5. Am I doing something new today?
6. Am I keeping my brain active?

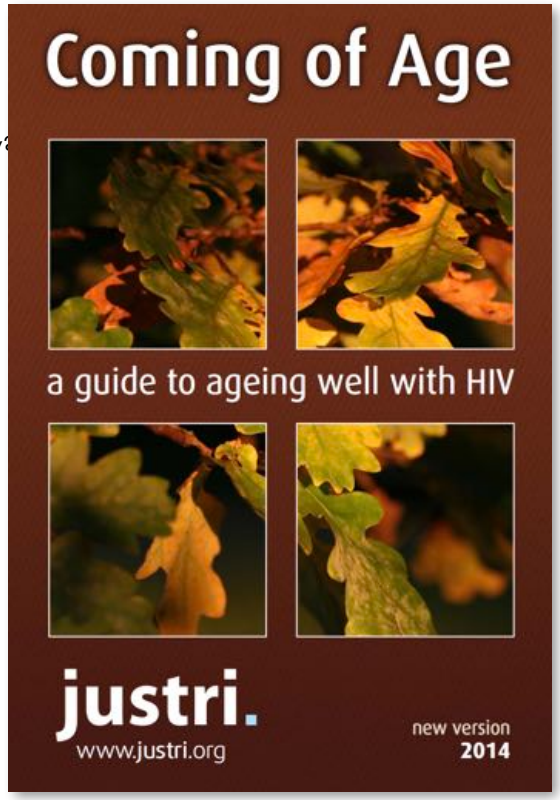
Weekly

1. Am I doing something nice with a friend this week?
2. What is my weight and is it changing?
3. Have I planned an active weekend?
4. Am I eating healthy?

Every three to four months

1. Do I feel well or unwell?
2. Have I had my checkup at the clinic?
3. What are my blood results?
4. Have I stopped smoking?
5. Are my finances in order?
6. How has my mood been recently?
7. What are my plans for the next few months?

Coming of age. www.justry.org



The Multiple Stigma Experience and Quality of Life in Older Gay Men With HIV

Slater LZ et al JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE, Vol. 26, No. 1, January/February 2015, 24-35

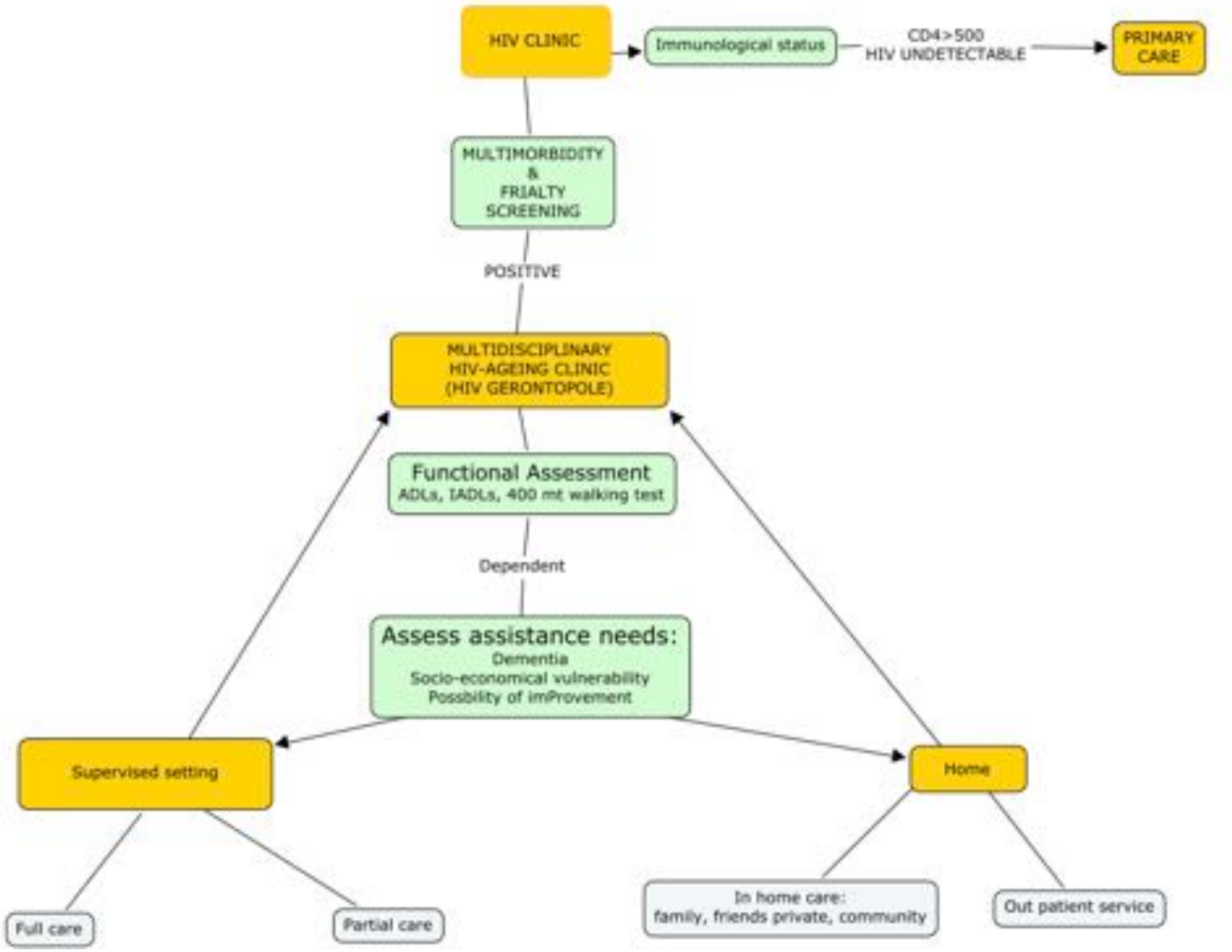
Novel concept in handling of HIV+ persons on stable ART at HIV clinics

- Comprehensive care of HIV+ persons involves:
  - Handling HIV-specific issues
  - General medicine – due to age related co-morbidities
  - Multidisciplinary approach
- Diversification of type of visits
  - Traditional f2f visit with responsible physician
  - Triage with experienced nurse
  - Community clinic
  - Telemedicine (for most stable patients)
- Enhancing self management
- Focus areas
  - Ensure retainment in care
  - Shared access to electronic systems (lab, medicine) to allow for proactive alert and prompts

HIV specialist physicians have to continue to lead the way to ensure optimization of quality of care for HIV+ persons

Lundgren J. Glasgow

Suggested health care provision algorithm for PLWH>50 years



Guaraldi G, personal comunication

1

- From Co-morbidities to Geriatric Syndromes

From Co-morbidities to Geriatric Syndromes

80 yrs
Accompanied by his neview
Wife with recent diagnosis of Anzheimer disease

HIV diagnosis: 2005
CDC group A
CD4 nadir 241/microL
TDF/FTC+RAL (2nd regimen)
CD4=1043/microL HIV VL<40 c/mL (ND)

Antropometry

BMI=26.3
Waist=102 cm
Leg fat%=27%
VAT=366 cc

Life style

Sedentary
Non smoker
(pack year=36!)

Co-morbidities

1988 Non Hodgkin linfoma
1990 Chronic HBV
2000 IMA
2003 HTN
T2DM
Dislipidemia
Erectile disfunction
Benign prostatic hyperplasia (BPH)
Osteoporosis (?)
Stroke (2014)
Dementia (?)

Polifarmacy

1. ASA 100
2. Dipyridamole
3. Pravastatin
4. Carvedilol
5. Metformin
6. Venlafaxina
7. Tamsulosina
8. Lansoprazolo
9. Vit D

Q1: Should I treat osteoporosis?

Data	Lumbar BMD	V_LBMD	Lumbar T	Lumbar Z	Femoral BMD	V_FBMD	Femoral T
18/06/2014	0,816	-0,73%	-2,5	-1,4	0,682	-4,08%	-1,8
20/05/2013	0,822	1,36%	-2,4	-1,3	0,711	-10,45%	-1,6
09/09/2008	0,811	-1,58%	-2,5	-1,6	0,794	10,74%	-1,6
14/11/2007	0,824	-13,08%	-2,4	-1,5	0,717	-22,40%	-1,6
14/02/2007	0,948		-2,3	-1,9	0,924		-1,1

Geriatrician assessment:

QLW0247(A5322)/01-31-14

ACTG A5322 FALL HISTORY QUESTIONNAIRE

NIAID AIDS CLINICAL TRIALS GROUP

Page 1 of 2

Patient Number ☐☐☐ ☐☐☐☐☐ ☐ Date of Patient Visit/Contact ☐☐☐ mmm ☐☐ dd ☐☐☐☐ yyyy

Protocol Number ☐☐☐☐☐☐ Institution Code ☐☐☐☐☐

Form Week ☐☐☐☐ *Seq No. ☐☐ **Step No. ☐☐ Key Operator Code ☐☐☐

* Enter a '1' if this is the first of this form for this date. Designate subsequent forms on the same date with a 2, 3, etc.
** Enter the subject's current study step number. Enter '1' if the study does not have multiple steps.

FOR OFFICE USE ONLY - TEAR OFF SHEET

SITE PERSONNEL INSTRUCTIONS:

The following interview asks the participant about falls that he/she may have experienced during his/her usual daily activities. **The interview should be conducted prior to the clinical exam and preferably in a quiet secluded area (e.g., exam room or other office). This form must be interviewer-administered.**

It is important to be familiar with the content and format of the interview before administering it to the study participants. At the visit, please begin by telling the participant:

"We are now going to ask you some questions about falls that may have happened during your usual daily activities. For the following questions, by "a fall" or "falling", we mean an unexpected event, including a slip or trip, in which you lost your balance and landed on the floor, ground or lower level, or hit an object like a table or chair. Falls that result from a major medical event (for example, a stroke, or seizure) or an overwhelming external hazard (for example, hit by a truck or pushed) should not be included."

The interview is very brief and should take no more than 10 minutes to complete. Complete the header prior to interviewing the participant.

INSTRUCTIONS TO THE INTERVIEWER:

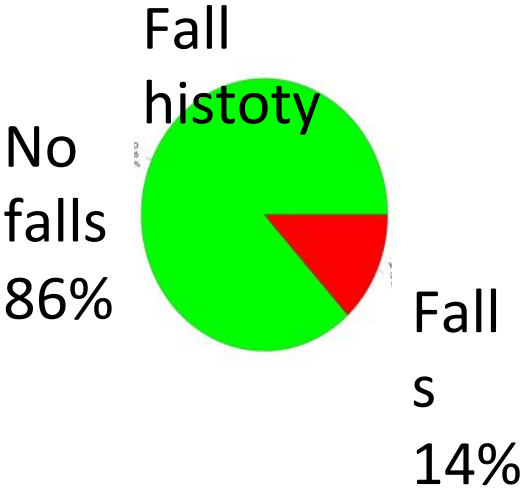
PLEASE COMPLETE THE FOLLOWING ITEMS AFTER THE PARTICIPANT COMPLETES THE QUESTIONNAIRE OR AFTER YOU ASCERTAIN THAT THIS IS NOT POSSIBLE.

1. Was the interview completed? .. . .. (1-Yes, 2-No) ☐
   If Yes, go to question 2.
   If No, complete 'a' and **STOP.**
   a. Indicate reason . 1-Participant declined ☐
   2-Not enough time to complete form in clinic
   9-Other, specify
   Specify [70]: _____
2. Enter the language used to complete the form. Refer to Appendix 80 for Language Codes.
   Language: ☐☐

01-31-14

30854

- ✓ Fall history
- ✓ Risk factors for falls



Geriatrician evaluation:

Clinistatic BP=140/80 mmHg

Orthostatic BP=105/75 mmHg

BMJ

BMJ 2013;347:f6320 doi: 10.1136/bmj.f6320 (Published 5 November 2013)

RESEARCH

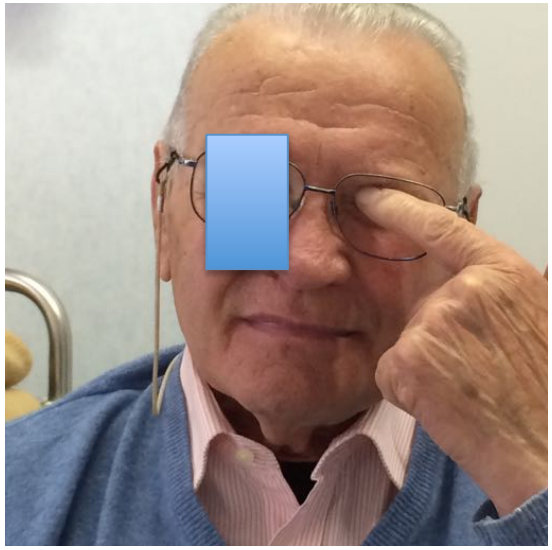
Tamsulosin treatment for benign prostatic hyperplasia and risk of severe hypotension in men aged 40-85 years in the United States: risk window analyses using between and within patient methodology

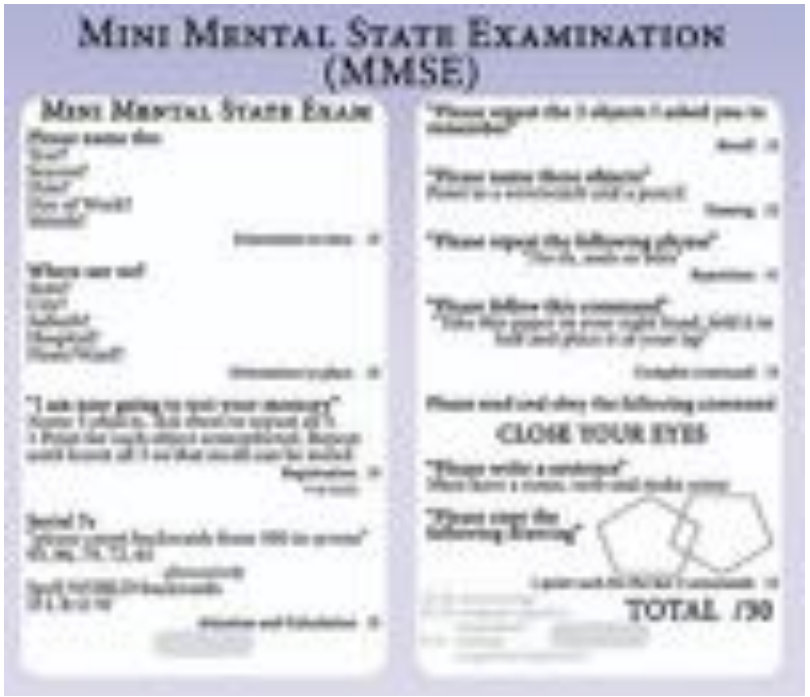
Geriatrician prescription:

- ✓ switch tamsulosin with finasteride
- ✓ occupational terapist evaluation at home

Extrinsic risk factors
• Obstacles • Inadequate ambient lighting • Inadequate footwear and clothing • Uneven or slippery floors • Presence of steps • Lack of handrails • Inadequate height of beds • Inadequate chairs • Inadequate bathroom • Unfamiliar environment

The Multidimensional Geriatric Assessment





- ✓ Fall history
- ✓ Urinary incontinence
- ✓ Hearing loss
- ✓ Visual impairment
- ✓ Altered equilibrium
- ✓ Delirium

Q1: If MMSE is negative, should I ask for neurocognitive full battery assessment?

Q2: Should RMN, Brain PER and Lumbar puncture be performed to exclude dementia?

Geriatrician prescription: change the glasses, consultation of an occupational

2

- Ageing Well with HIV

Ageing Well with HIV

82 yrs Marco & Mirella 77yrs
2004: HIV diagnosis: 2004
PHI
A CDC group A
340/microL CD4 nadir 241/microL
ABC/3TC+DTG Rx NEV+RAL
620/microL CD4 502/microL
<40c/mL HIV VL <40 c/mL (ND)

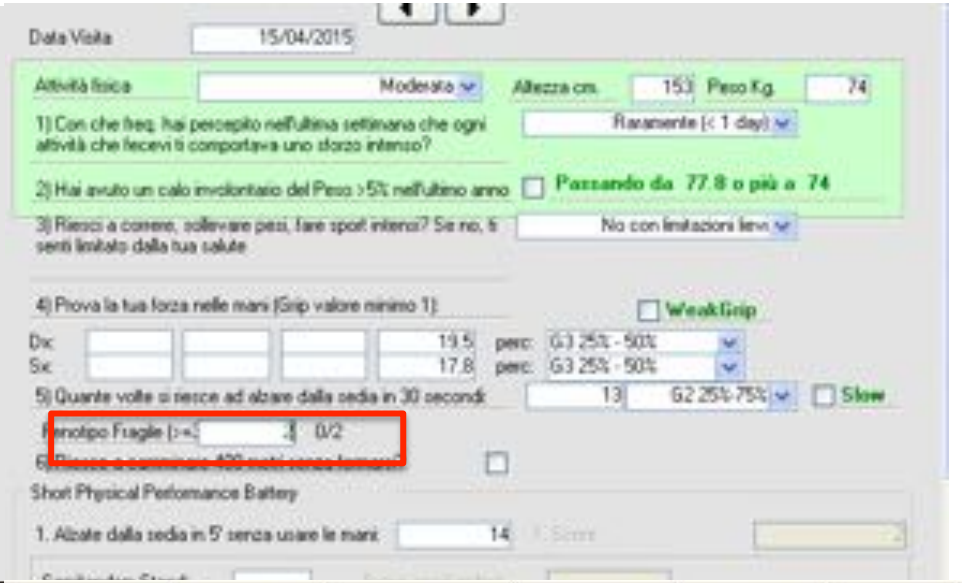
Co-morbidities
✓ Osteoporosis ✓
✓ Vit D deficiency ✓
HTN ✓
Dilipidemia ✓
✓ Mitral insuficiency
✓ BPH

Very much socially engaged
(go to pay visits to friends "who are old")
Very much in love!

Does fraity assessment helps in clinical practice?

Data Es:	HIVFI (>.4):	HIVMMFI (>.4)	FI (>.39):	MMFI (>.37)	Deficit:
11/11/2013	0,2708333	0,2380952	0,3023256	0,2702703	13
24/09/2012	0,2857143	0,255814	0,3333333	0,3055556	14
20/09/2011	0,22	0,1818182	0,255814	0,2162162	11
07/09/2010	0,24	0,2045455	0,2790698	0,2432432	12

Dataesame:	VACS	VACSCat
24/09/2012	43	
07/09/2010	43	
24/06/2010	43	2 Lieve
04/06/2010	43	2 Lieve
09/09/2009	43	



Data Es:	HIVFI (>.4):	HIVMMFI (>.4)	FI (>.39):	MMFI (>.37)	Deficit:
11/11/2013	0,32	0,2666667	0,3809524	0,3243243	16
24/09/2012	0,28	0,2222222	0,3333333	0,2702703	14
20/09/2011	0,3	0,2444444	0,3571429	0,2972973	15
07/09/2010	0,34	0,2888889	0,3809524	0,3243243	17
04/06/2010	0,3333333		0,275		15

24/09/2012	49	
20/09/2011	39	
24/06/2011	39	2 Lieve
07/09/2010	33	
04/06/2010	33	1 Assente
09/09/2009	33	

✓ Pre-Frail ✓

0.20 Frailty Index

Take home message (1/2)

- Comorbidities are the prevalent clinical picture of contemporary HIV disease
- The association of comorbidities into complex multy-morbidity pictures describe patient complexity
- When Multi-morbidity is the norm, frailty and disability turn to be relevant clinical outcomes and allows patient risk stratification beyond the CD4 and HIV VL assessment
- Total patient care allows to integrate the need for reaching un-detectability with the need to take care of comorbidities.

Take home message (2/2)

- HIV Care implies a switch from a Inter-disciplinary approach into a Multi-dimensional comprehensive assessment
- Patient visit diversification must be built in an individualised management plan focused on quality of life and prevention of disability
- The increasing numbers of older patients with frailty, geriatric syndromes and disability depict an “geriatric -HIV” scenario. This model suggests evidence-based screening and monitoring protocols to ensure high-quality care.

Preserve the health capital!

1. **Successful ageing** is a feasible objective of HIV care, through:
   - Patient engagement
   - Medical interventions
2. **Preserving organ functional reserve** save deficit accumulation, frailty, multi-morbidity and disability, through:
   - Test and treat approach
   - Metabolic friendly ARV drugs
   - Reduction of inflammaging
3. **Comprehensive care** of HIV+ persons involves:
   - Multidimensional geriatric approach
   - Diversification of type of visits
   - Enhancing self management

The new target

90-90-90-90-90

90% diagnosed
90% on treatment
90% virally suppressed

90% fit at 90 years

Thank you….
…and stay fit!