Ageing with HIV

Moderator: Georg Behrens, Germany

Silvia Nozza, Italy
Adrian Curran, Spain
Italian Data from ISS

- In 2015 in Italy 650 new HIV infections occurred in people more than 50 years old
- Most of them are heterosexual
Prevalence of different non-AIDS related co-morbidities at different age strata in naive patients.
Pt G-C

- Male, born in 1949
- IVDU
- 1989: diagnosis of HIV infection
- 1999: neurotoxoplasomis, neurological sequelae (right emiparesis)
1999: First ART AZT+3TC+SQV/RTV
Drop out (poor adherence and prison) until 2008
Different ART combinations PI/based
Genotypes performed during STI (wild type virus)
• 2008: TDF+FTC+DRV/r 800/100 mg
GEPPPO Italian cohort

Geriatric Patients living with HIV/AIDS

Guaraldi G et al. P158; HIV Drug Therapy 2016
Nozza S et al. P163 HIV Drug Therapy 2016
Aim of the Cohort

• To describe
  – Multimorbidity (MM)
  – Polypharmacy (PP)
  – Antiretrovirals’use (ARV)

in elderly patients living with HIV
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 outpatient 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)

Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>HIV+ (n=1323)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)[n]</td>
</tr>
<tr>
<td>F</td>
<td>16.86% [223]</td>
</tr>
<tr>
<td>M</td>
<td>83.14% [1100]</td>
</tr>
<tr>
<td>Age median (ds)</td>
<td>71.3 (4.98) [1323]</td>
</tr>
<tr>
<td>[65,69)</td>
<td>45.41% [599]</td>
</tr>
<tr>
<td>[70,74)</td>
<td>30.4% [401]</td>
</tr>
<tr>
<td>[75,Inf]</td>
<td>24.18% [319]</td>
</tr>
<tr>
<td>Current smoker</td>
<td>25.05% [276]</td>
</tr>
<tr>
<td>BMI</td>
<td>25.86 (9.29) [973]</td>
</tr>
<tr>
<td>HIV duration (years)</td>
<td>16.55 (7.5) [1302]</td>
</tr>
<tr>
<td>&lt;10 years</td>
<td>424 (33.11%)</td>
</tr>
<tr>
<td>10-20 years</td>
<td>596 (46.5%)</td>
</tr>
<tr>
<td>&gt;20 years</td>
<td>261 (20%)</td>
</tr>
<tr>
<td>CD4 Nadir</td>
<td>218.84 (175.77) [1231]</td>
</tr>
<tr>
<td>Current CD4</td>
<td>641.31 (287.62) [1294]</td>
</tr>
<tr>
<td>CD4 / CD8 median e SD</td>
<td>0.97 (1.42) [1077]</td>
</tr>
<tr>
<td>Viral Load ≤ 40</td>
<td>94.07% [1078]</td>
</tr>
<tr>
<td>Viral Load Undetectable</td>
<td>86.37% [963]</td>
</tr>
<tr>
<td>HBV co-infection</td>
<td>9.6% [105]</td>
</tr>
<tr>
<td>HCV co-infection</td>
<td>12.61% [147]</td>
</tr>
</tbody>
</table>

24 Non-Caucasian HIV infected patients were excluded.
Pt G-C comorbidities

- 2009: osteoporosis
- 2009: hypetrigliceridemia
- 2009: hypercholesteroleemia
- 2010: diabetes
Co-morbidity and Multy-Morbidity prevalence by duration of HIV infection
Poly-Pharmacy by duration of HIV infection

Nozza S et al. P163 HIV Drug Therapy 2016
Antiretroviral regimens and relationship with MM and PP

**ARV strategy**

- **MONO**: 6.06% (78)
- **DUAL**: 25.09% (338)
- **TRIPLE**: 66.3% (850)
- **MEGA**: 1.64% (21)

**3rd Drug**

- **2NRTI+INSTI**: 15.53% (132)
- **2NRTI+NNRTI**: 45.70% (380)
- **2NRTI+Pur**: 28.36% (241)
- **3NRTI**: 1.41% (12)
- **OTHER TRIPLE**: 8.94% (78)

*Guaraldi G et al. P158; HIV Drug Therapy 2016*
*Nozza S et al. P163 HIV Drug Therapy 2016*
G.C. ART

- eGFR=69 mL/min/1.73 m²
- Framingham score 25, ACC/AHA score 29
- To avoid TDF
- To avoid ABC

3TC+DRV/r
ARV strategy

Guaraldi G et al. P158; HIV Drug Therapy 2016
Nozza S et al. P163 HIV Drug Therapy 2016
Antiretroviral therapy

Guaraldi G et al. P158; HIV Drug Therapy 2016
Nozza S et al. P163 HIV Drug Therapy 2016
Conclusions

• In this cohort both multi-morbidity and polypharmacy are function of HIV duration rather than age

• Elderly people living with HIV have higher burden of comorbidities than the general population

• A significant proportion of these patients are treated with non-conventional ARV regimens: the selection of ARVs seems to be driven by several factors including MM and PP
G.C.

- Metformina 1000 mg: 1 tb TID
- Fenofibrate 200 mg: 1 tb QD
- Rosuvastatine 20 mg: 1 tb QD
- Cardioaspirina 100 mg: 1 tb QD
Ageing with HIV: a multidisciplinary review

A. Calcagno\textsuperscript{1} · S. Nozza\textsuperscript{2} · C. Muss\textsuperscript{3} · B. M. Celesia\textsuperscript{4} · F. Carli\textsuperscript{5} · S. Picoli\textsuperscript{6} · G. V. De Socio\textsuperscript{7} · A. M. Cattelan\textsuperscript{8} · G. Orofino\textsuperscript{9} · D. Ripamonti\textsuperscript{10} · A. Riva\textsuperscript{11} · G. Di Perri\textsuperscript{1}

Fig. 1 Schematic representation of pharmacokinetic modifications in elderly patients and the potential associated consequences. Rounds and arrows represent ideal average and range concentrations: in elderly patients a higher variability increases the chance of suprapharmacological or sub-therapeutic exposures.
And now

- Left carotid stenosis (85%) and right carotid stenosis destra (70%)
- Surgical intervention
- CD4=301/mmc (21%)
- HIVRNA < 1 cp/mL
ART

- To continue dual therapy with 3TC+DRV/r
- To change PI: 3TC+ATV/r
- Triple therapy: TAF/FTC/EVG/c
- Dual therapy: 3TC+DTG
Clinical case. HIV journey

- Medical history: male, 67 year-old, osteoporosis, dyslipidemia, diabetes, carotid stenosis
- HIV history: CD4 301 (21%), RNA-VIH <1 c/mL
- ART with XXX…
- Concomitant Rx: Metformina 1000 mg/8 h, Fenofibrate 200 mg/24 h, Rosuvastatine 20 mg/24 h, AAS 100 mg/24 h

Now what???????
Clinical case. HIV journey

• **Now what??????**

  a. Follow him as any other HIV patient

  b. Follow him as any other HIV patient, asking the GP/other specialists to look after all co-morbidities & prevention

  c. Follow him for HIV **AND** all co-morbidities & prevention
Pros & Cons of centralizing care in HIV Units

**Advantages**
- Less visits for the patient (1 physician)
- No loss of information between physicians
- Lower risk of DDI
- Better control??

**Limitations**
- Need for actualization in non-HIV fields
- Hospital care more expensive?
- More tests performed?
- Globally, more time per visit/more visits?
  - In an increasing HIV-population
  - In an older HIV-population
In an ideal world (no limitation of time or expenses), in the “older” HIV patients we should…

• Screen for & treat co-morbidities (pro-actively)
• Polypharmacy
• Specific vaccinations
• Evaluate non-medical aspects
  – Nutrition
  – Social
  – Functional
  – Frailty???
  – Others
The Can Ruti’s “Over-60 Cohort” Example

Métodos

In 15-20 minutes per patient???
i Use the Framingham equation or whatever system local National Guidance recommends; a risk equation developed from HIV populations is available: see http://www.chip.dk/Tools. This assessment and the associated considerations outlined in this figure should be repeated annually in all persons under care, see pages 5-6, to ensure that the various interventions are initiated in a timely way.
Screen for co-morbidities. CV Risk

- HIV considered as high CV risk subjects
- More aggressive treatment??

**Table 32  Recommendations for lipid-lowering drugs in HIV patients**

**Recommendations for treatment goals for low-density lipoprotein-cholesterol**

- In patients at VERY HIGH CV risk, an LDL-C goal of <1.8 mmol/L (70 mg/dL), or a reduction of at least 50% if the baseline LDL-C is between 1.8 and 3.5 mmol/L (70 and 135 mg/dL) is recommended.

- In patients at HIGH CV risk, an LDL-C goal of <2.6 mmol/L (100 mg/dL), or a reduction of at least 50% if the baseline LDL-C is between 2.6 and 5.2 mmol/L (100 and 200 mg/dL) is recommended.

The importance of smoking cessation

Mortality attributable to smoking among HIV-1-infected individuals

SCREEN FOR CO-MORBIDITIES. KIDNEY
Screen for co-morbidities. Kidney

- **CKD-epi**
  - Cobi and cobi-like effect (DTG, RPV, RTV…)

### Kidney Disease: Definition, Diagnosis and Management

#### Diagnosis of kidney disease

<table>
<thead>
<tr>
<th>eGFR&lt;sup&gt;(1)&lt;/sup&gt;</th>
<th>≥ 60 mL/min</th>
<th>30-59 mL/min</th>
<th>&lt; 30 mL/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP/C&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>Regular follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UP/C&lt;sup&gt;(2)&lt;/sup&gt; &lt; 50</td>
<td>• Check risk factors for CKD&lt;sup&gt;(3)&lt;/sup&gt; and nephrotoxic medicines including ART&lt;sup&gt;(4)&lt;/sup&gt;&lt;sup&gt;, (5)&lt;/sup&gt;</td>
<td></td>
<td>• Check risk factors for CKD and nephrotoxic medicines including ART&lt;sup&gt;(4)&lt;/sup&gt;&lt;sup&gt;, (5)&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>UP/C&lt;sup&gt;(2)&lt;/sup&gt; 50-100</strong></td>
<td>• Discontinue or adjust drug dosages where appropriate&lt;sup&gt;(6)&lt;/sup&gt;</td>
<td>• Discontinue or adjust drug dosages where appropriate&lt;sup&gt;(6)&lt;/sup&gt;</td>
<td>• Discontinue or adjust drug dosages where appropriate&lt;sup&gt;(6)&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Proteinuria&lt;sup&gt;(7)&lt;/sup&gt;</strong></td>
<td>• Perform renal ultrasound</td>
<td>• Perform renal ultrasound</td>
<td>• Perform renal ultrasound</td>
</tr>
<tr>
<td><strong>UP/C&lt;sup&gt;(2)&lt;/sup&gt; &gt; 100</strong></td>
<td>• If haematuria present with any level of proteinuria refer to nephrologist</td>
<td>• Refer to nephrologist if new CKD or progressive decline in eGFR</td>
<td>• Urgent referral to nephrologist</td>
</tr>
</tbody>
</table>

---

- **UP/C**
  - Role in the TAF vs ABC vs non-nuke regimen era?
- **UP/C + UA/C**
  - Role of HBP and DM in proteinuria, mainly microalbuminuria

---

<sup>1</sup> For eGFR: Use CKD-EPI formula based on serum creatinine, gender, age and ethnicity because eGFR quantification is validated > 60 ml / l

<sup>2</sup> Urinalysis: use urine dipstick to screen for haematuria. To screen for proteinuria, use urine dipstick and if ≥ 1+ check urine protein/creatinine (UP/C) or screen with UP/C. Proteinuria defined as persistent if non.

---

EACS Guidelines v 8.1. October 2016
SCREEN FOR CO-MORBIDITIES. BONE
Consider HIV as an individual risk factor?

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Diagnostic tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider classic risk factors</td>
<td>DXA scan</td>
</tr>
<tr>
<td>Consider DXA in any person with ≥ 1 risk of:</td>
<td>Rule out causes of secondary osteoporosis if BMD low</td>
</tr>
<tr>
<td>1. Postmenopausal women</td>
<td></td>
</tr>
<tr>
<td>2. Men ≥ 50 years</td>
<td></td>
</tr>
<tr>
<td>3. History of low impact fracture</td>
<td></td>
</tr>
<tr>
<td>4. High risk for falls</td>
<td></td>
</tr>
<tr>
<td>5. Clinical hypogonadism (symptomatic, see Sexual Dysfunction)</td>
<td></td>
</tr>
<tr>
<td>6. Oral glucocorticoid use (minimum 5 mg/qd prednisone equivalent for &gt; 3 months)</td>
<td>Lateral spine X-rays (lumbar and thoracic) if low spine BMD, osteoporosis on DXA, or significant height loss or kyphosis develops. (DXA-based vertebral fracture assessment can be used as an alternative to lateral spine X-ray).</td>
</tr>
<tr>
<td>Preferably perform DXA in these</td>
<td></td>
</tr>
</tbody>
</table>

DXA results in the FRAX® score (http://www.shef.ac.uk/FRAX)
- Only use if > 40 years
- May underestimate risk in HIV-positive persons
- Consider using HIV as a cause of secondary osteoporosis
SCREEN FOR CO-MORBIDITIES. CNS
HIV-Associated Neurocognitive Disorders (HAND): Frascati criteria

Onset delayed and HAD reduced

People aging with HIV have Non-HIV Dementias

Relative contribution to cognitive impairment

- Due to active HIV replication (CSF HIV RNA)
- On-going neuroinflammation (CSF biomarkers)
- Damage prior to cART initiation (nadir CD4)
- CVD (Framingham score)
- Non-HIV neurodegenerative diseases
- Drug and alcohol abuse (history)

Time

- 1980s
- 1990s
- 2000s
- 2010s
- 2020s

ART

Ageing cohort

Screen for cognitive impairment?

- Probably only if symptomatic
- If we do, simple test for multiple cognitive domains
  - 3 questions:
    - ‘Do you experience frequent memory loss?’
    - ‘Do you feel that you are slower when reasoning, planning activities, or solving problems?’
    - ‘Do you have difficulties paying attention?’
  - International HIV Dementia Scale (IHDS)
    - Motor speed, psychomotor speed, memory-recall
  - Mini-cog
    - Remember 3 nouns
    - Draw a clock
  - MoCA (Montreal Cognitive Assessment)
    - Picks up MCI
  - Others: MEC-35, SPMSQ Pfeiffer, Bloch...
  - Probably MMSE not useful
- Important to rule out Depression as cause of CI!!!
- CSF viral escape rare!!!

SCREEN FOR CO-MORBIDITIES. CANCER
### Lung Cancer??

- **Screening recommendations derived from the general population.**

  These screenings should preferably be done as part of national general population-screening programmes. Although non-Hodgkin's lymphoma has a higher incidence in HIV-positive persons than in the general population, it is currently unknown whether it can be screened. Careful examination of skin should be performed regularly to detect cancers such as Kaposi's sarcoma, basal cell carcinoma and malignant melanoma.

- **Persons of Asian and Black ethnicity, family history of HCC, liver cirrhosis, NAFLD or replicating HBV infection**

---

<table>
<thead>
<tr>
<th>Problem</th>
<th>Persons</th>
<th>Procedure</th>
<th>Evidence of benefit</th>
<th>Screening interval</th>
<th>Additional comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anal cancer</td>
<td>MSM</td>
<td>Digital rectal exam ± anal cytology</td>
<td>Unknown; advocated by some experts</td>
<td>1-3 years</td>
<td>If anal cytology abnormal, anoscopy</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>Women 50-70 years</td>
<td>Mammography</td>
<td>↓ Breast cancer mortality</td>
<td>1-3 years</td>
<td></td>
</tr>
<tr>
<td>Cervical cancer</td>
<td>Sexually active women</td>
<td>Liquid based cervical cytology test</td>
<td>↓ Cervical cancer mortality</td>
<td>1-3 years</td>
<td>Target age group should include the 25 to 64 years at least. HPV testing may aid screening</td>
</tr>
<tr>
<td>Colorectal cancer</td>
<td>Persons 50-75 years</td>
<td>Faecal occult blood test</td>
<td>↓ Colorectal cancer mortality</td>
<td>1-3 years</td>
<td>Flexible sigmoidoscopy at 55-years is an alternative</td>
</tr>
<tr>
<td>Hepatocellular carcinoma</td>
<td>Persons with cirrhosis &amp; persons with HBV co-infection at high risk of HCC(^a)</td>
<td>Ultrasound and alphafetoprotein</td>
<td>Earlier diagnosis allowing for improved ability for surgical eradication</td>
<td>Every 6 months</td>
<td>See pages 52 and 69</td>
</tr>
<tr>
<td>Prostate cancer</td>
<td>Men &gt; 50 years</td>
<td>Digital rectal exam ± PSA</td>
<td>Use of PSA is controversial</td>
<td>1-3 years</td>
<td>Pros: ↑ early diagnosis. Cons: overtreatment; ambiguity about size of ↓ cancer-related mortality</td>
</tr>
</tbody>
</table>
VACCINATION
<table>
<thead>
<tr>
<th>Infection</th>
<th>Vaccination rationale in HIV-positive persons</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza Virus</td>
<td>Higher rate of pneumonia. Explicitly recommended in all HIV-positive persons</td>
<td>Yearly</td>
</tr>
<tr>
<td>Human Papilloma Virus (HPV)</td>
<td>Shared risk with HIV of contracting infection. Higher rate of cervical and anal cancer</td>
<td>If HPV infection is established, efficacy of vaccine is questionable</td>
</tr>
<tr>
<td>Hepatitis B Virus (HBV)</td>
<td>Shared risk with HIV of contracting infection. HIV accelerates liver disease progression</td>
<td>Vaccinate if seronegative. Consider double dose (40 µg) in non-responders, in particular with low CD4 count and high HIV-VL. Repeat doses until HBs antibodies ≥ 10 IU/L / ≥ 100 IU/L according to national guidelines. See page 69</td>
</tr>
<tr>
<td>Hepatitis A Virus (HAV)</td>
<td>According to risk profile (travel, MSM, IVDU, active hepatitis B or C infection)</td>
<td>Vaccinate if seronegative. Check antibody titres in individuals with risk profile See page 69</td>
</tr>
<tr>
<td>Neisseria meningitidis</td>
<td>As general population</td>
<td>Use conjugated(10) vaccine (2 doses 1-2 months apart) if available. Booster every five years if exposure continues. Polysaccharide vaccine not recommended anymore</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em></td>
<td>Higher rate and severity of invasive disease. Vaccine explicitly recommended for all HIV-positive persons</td>
<td>Use conjugated(10) 13-valent vaccine instead of PPV-23 polysaccharide vaccine if available. No recommendations yet about the need for a booster dose</td>
</tr>
<tr>
<td>Varicella Zoster Virus (VZV)</td>
<td>Higher rate and severity of both chickenpox and zoster</td>
<td>Perform serology if exposure history negative. Vaccinate if seronegative. For contra-indications, see*</td>
</tr>
<tr>
<td>Yellow Fever Virus</td>
<td>Mandatory for travel to selected countries (provide exemption letter if no true risk of exposure)</td>
<td>Contra-indicated if past or current haematological neoplasia or thymus affection (thymoma, resection/radiation) For other contra-indications, see*</td>
</tr>
</tbody>
</table>

**Vaccination**

- Vaccinate according to national guidelines for healthy population, preferably after having achieved suppressed viremia and immune reconstitution (CD4 count > 200 cells/µL)
- Consider repeating vaccinations performed at CD4 count < 200 cells/µL (< 14%) following adequate immune reconstitution (HIV-VL undetectable and CD4 count > 200 cells/µL)
- As vaccine responses may be significantly lower in HIV-positive persons, consider antibody titers to assess their effectiveness
- Avoid polysaccharide vaccination
- For additional details, see [http://www.bhiva.org/vaccination-guidelines.aspx](http://www.bhiva.org/vaccination-guidelines.aspx)
- For attenuated live vaccines(10)
  - in addition to restrictions for general population:
  - *Varicella, measles, mumps, rubella, yellow fever*
    - Contra-indicated if CD4 count < 200 cells/µL (14%) and/or AIDS
    - Oral live typhoid
      - Contra-indicated if CD4 count < 200 cells/µL (14%): give inactivated parenteral polysaccharide vaccine. Preferred if CD4 count > 200 cells/µL (> 14%).
“NON-MEDICAL” ASPECTS
“Non-medical” aspects

- Lifestyle interventions
  - Dietary, Exercise, Toxics
- Sexual (dys)function
  - Causes: psychological, co-morbidities, drugs, hypogonadism
  - Treatment: DDI!
  - STDs!
- Functional/autonomy/dependency
  - Basic activities (ambulation, bathing, eating, dressing, grooming, toilet,...): Barthel, Katz
  - Instrumental activities (finances, cooking, shopping, housekeeping, telephone, transportation, taking meds): Lawton&Brody
  - Advanced activities (lifestyle, social relationships)
- Pain/range of motion/gait (risk of falls & fractures)
- Social
- Frailty??
- Advanced-care planning??

Frailty phenotype

- **Shrinking** (unintentional weight loss 4.5+ kg in prior year)
- **Weakness** (grip strength lowest 20%)
- **Poor endurance/exhaustion** (self report)
- **Slowness** (4 m walk 6-7 sec)
- **Low activity** (subject report)

- ≥3 criteria: frail
- 1-2 criteria: prefrail or intermediate

Some simpler Frailty Screens

“FRAIL” Questionnaire
3 or greater = frailty; 1 or 2 prefrail

- Fatigue: are you fatigued?
- Resistance: Cannot walk up 1 flight of stairs?
- Aerobic: Cannot walk 1 block?
- Illnesses: Do you have more than 5 illnesses?
- Loss of weight: Have you lost more than 5% of your weight in the past 6 months?

“FRAIL” Questionnaire
3 or greater = frailty; 1 or 2 prefrail


Gérontopôle Frailty Screening Tool
(yes to at least 1, + gestalt)

- Patient living alone?
- Involuntary weight loss in the past 3 months?
- Fatiguability from the past 3 months?
- Mobility difficulties for the past 3 months?
- Memory complaints?
- Slow gait speed (>4 s for 4 m)

Subra et al. J Nutr Health Aging 2012

Timed up and Go
Get up of the chair, walk 3 m, turn around, walk 3 m, sit on the chair

Normal <10”
Frail 10-20”
Risk of falls 20-30”
High risk of falls >30”
VACS Calculator: Assess prognosis/disease progression

Highly predictive of
- All cause and cause-specific mortality
- Hospitalization, ICU admission
- Fragility fractures

Associated with
- Markers of chronic inflammation
- Cognitive performance
- Functional performance

https://vacs.med.yale.edu/calculator/
Impact of Frailty
Geriatric (ageing-related) syndromes

- Immobility
- Falls
- Incontinence
- Confusional syndrome/delirium, dementia
- Infections
- Malnutrition
- Sight/hearing impairment (doctor-patient communication!)
- Constipation
- Depression, insomnia
- Iatrogenic (polypharmacy!)
- Sexual dysfunction
- ...

These syndromes may have a greater impact than co-morbidities in our aging HIV patients!
Achtung!!

HIV Continuum of Care for People \(\geq 50\) and older in the U.S.


Disclaimer: The original version of this bar graph was taken from the CDC website and modified to display data for the 45 years and older population only.
Evaluation of the “older” HIV patient
More than managing CD4/VL and comorbidities...

In 15-20 minutes per patient???
Older HIV evaluation
Older HIV patients care in the future…

Open question

- How should we organize the medical care to our geriatric patients???
  - Within the HIV Units, on our own (after all we are Internists...)
  - Within the HIV Units, incorporating adequate professionals (geriatrician, nutritionist, physiotherapist, social worker, psychologist...)
  - Incorporating HIV physicians (part-time) to the existing Geriatric Units
  - Visiting patients both at the HIV Clinic and the Geriatric Unit
Conclusions

• Patients will die WITH HIV, NOT FROM HIV, and many of them will achieve old ages

• It is not only about HIV or comorbidities, there is also functional, cognitive, social and many more issues to evaluate! Not only extend survival but maintain quality of life!!

• Comprehensive geriatric assessment cannot be completed in an hour (or 20 min!), but you can start

• We will have to start thinking on how to organize the holistic care of our HIV aging population
THANK YOU