

HIV NURSING 2019



21-22 September 2019 • Rome, Italy

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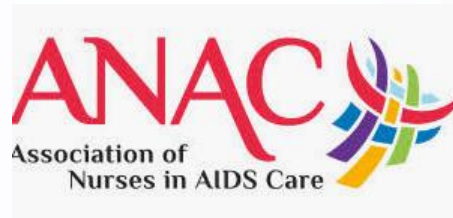
HIV & Aging: healthcare complexities and challenges

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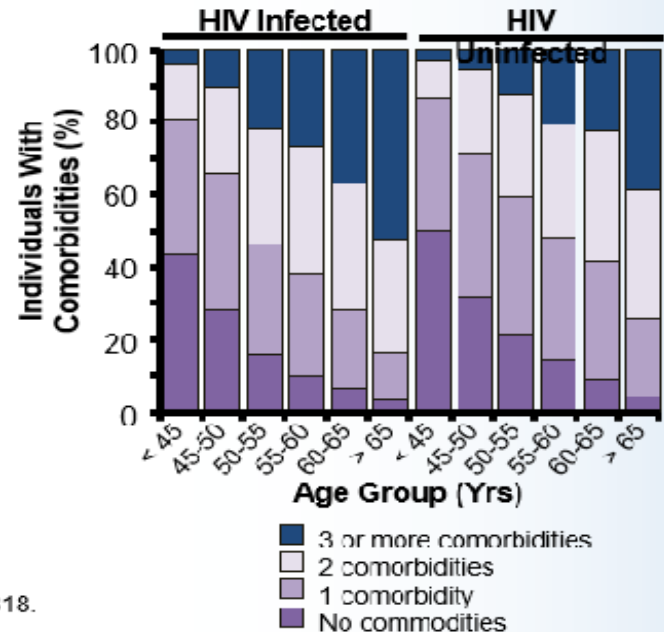


ATHENA: Comorbidities Increase With Age and With HIV Infection

By 2030

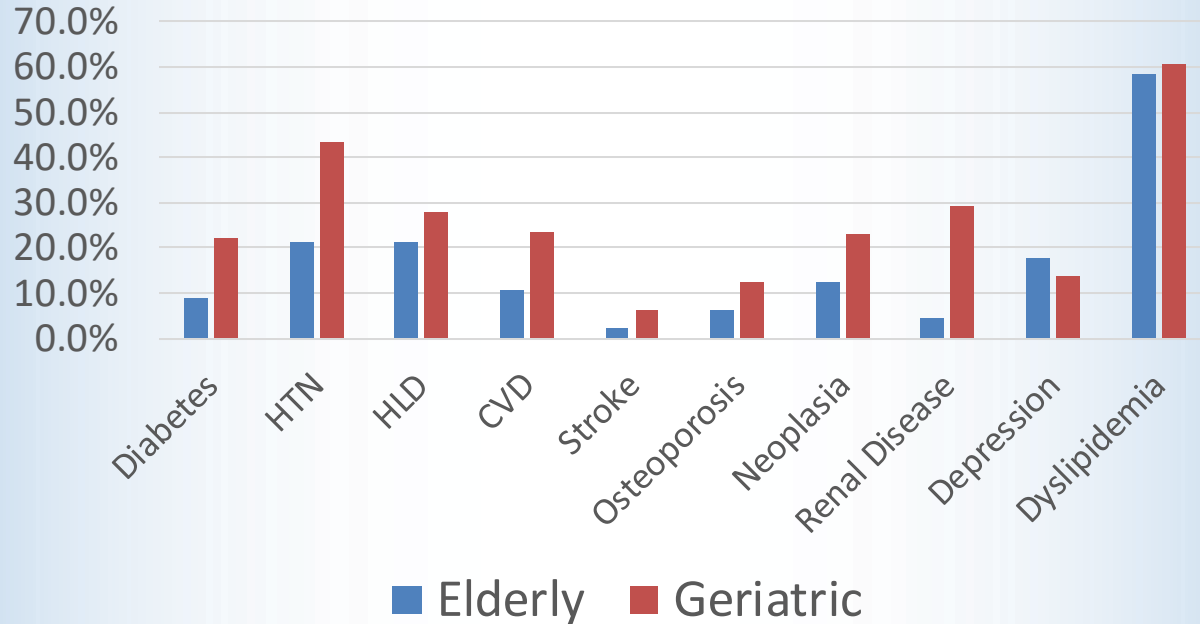
- 81% of HIV+ pts will have ≥ 1 comorbidity
- 28% of HIV+ pts will have ≥ 3 NCDs
- 54% of HIV+ pts will be prescribed meds other than ART
 - Increased from 13% in 2010
- 20% will take ≥ 3 meds besides ART
 - Mostly driven by increase in CVD

Smit M, et al. Lancet Infect Dis. 2015;15:810-818.



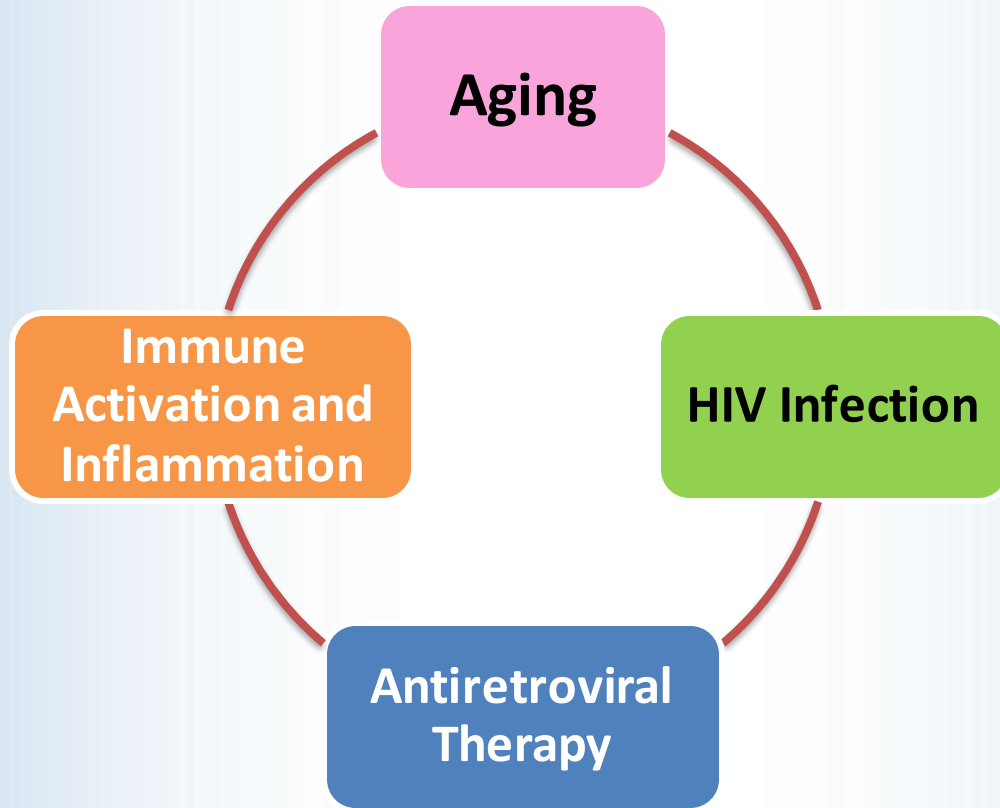
Co-Morbidities:

Elderly vs Geriatric (n=16,436; n=572)



Allavena, et al. 2018, PLoS



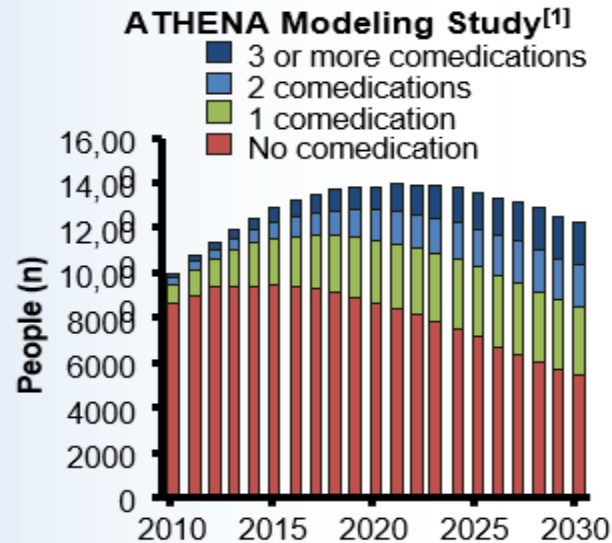


“Just one pill a day....”

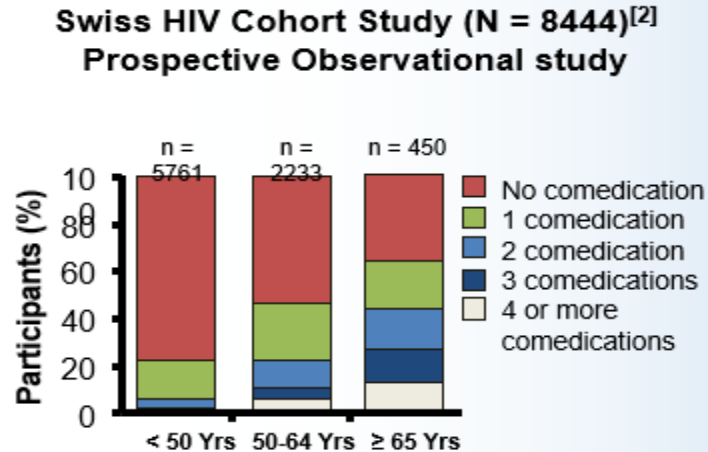


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ATHENA and Swiss HIV Cohort Studies: Polypharmacy Among HIV+ Pts on ART



- Predicts that 20% of pts will be taking ≥ 3 meds other than ART in 2030

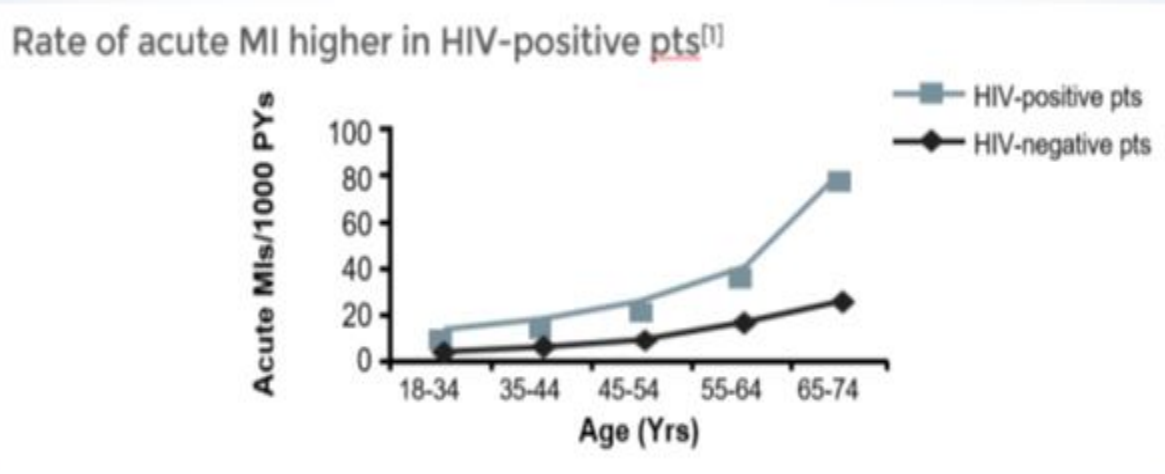


- 115 (5.2%) of 2233 participants 50-64 yrs of age and 64 (14.2%) of 450 participants ≥ 65 yrs of age received ≥ 4 meds other than ART

1. Smit M, et al. Lancet Infect Dis. 2015;15:810-818. 2. Hasse B, et al. Clin Inf Dis. 2011;1130-1139.



The Link Between HIV and Cardiovascular Disease and Age



HIV infection is a risk factor for ischemic stroke^[2]

HIV-infected men have a greater prevalence of coronary artery plaques^[1,3]

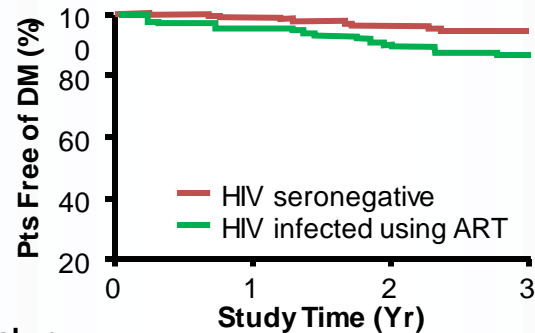
1. Triant VA, et al. *J Clin Endocrinol Metab.* 2007;92:2506-2512. 2. Chow FC, et al. *J Acquir Immune Defic Syndr.* 2012;60:351-358. 3. Post WS, et al. *Ann Intern Med.* 2014;160:458-467.



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MACS: Rates of DM Increased in HIV-Positive Pts on ART

- Rate of incident **DM** was **4.7 cases/100 PYs** in HIV-positive men vs **1.4 cases/100 PYs** in seronegative men

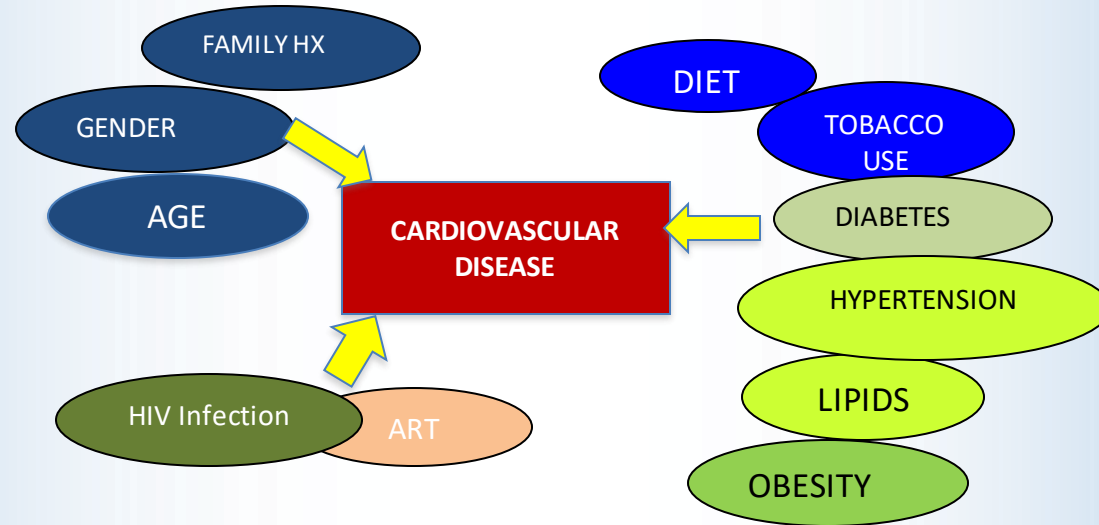


	Pts at Risk, n			
	0	1	2	3
HIV seronegative	361	265	177	89
HIV infected using ART	229	204	145	62

Brown TT, et al. Arch Intern Med. 2005;165:1179-1184.

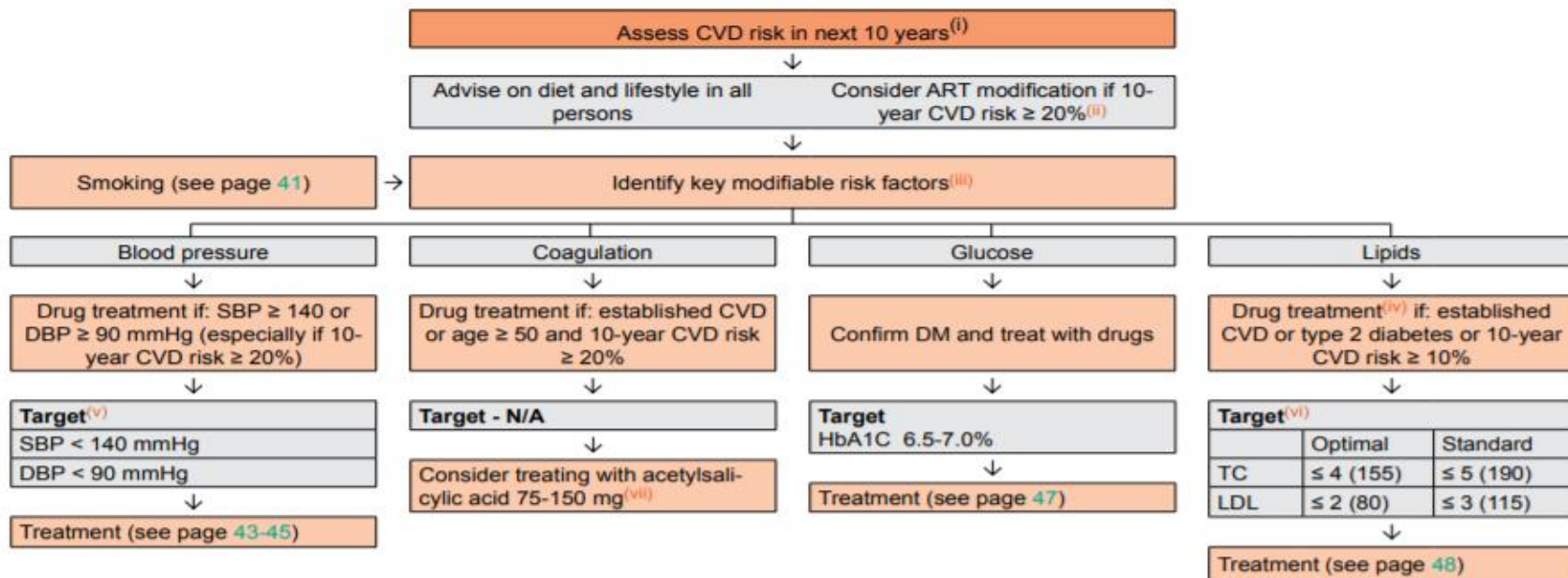


Traditional Factors Are the Biggest Contributor to CVD in HIV Population



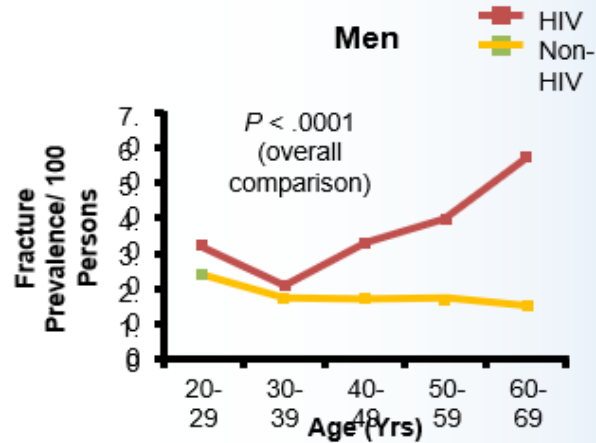
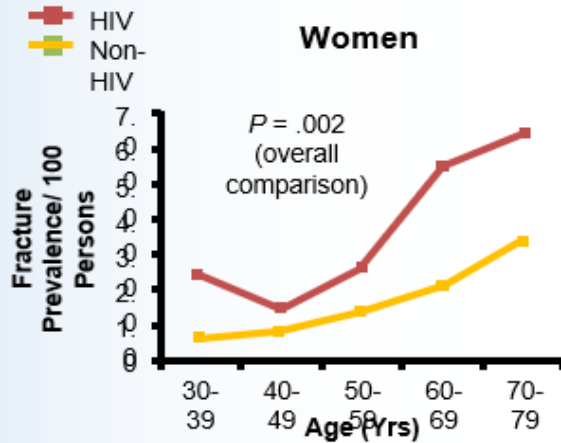
Prevention of CVD

Principles: The intensity of efforts to prevent CVD depends on the underlying risk of CVD, which can be estimated⁽ⁱ⁾. The preventive efforts are diverse in nature and require involvement of a relevant specialist, in particular if the risk of CVD is high and always in persons with a history of CVD.



Fracture Prevalence Is Increased in Older HIV-Positive Pts

- 8525 HIV-infected pts compared with 2,208,792 uninfected pts in Partners HealthCare System



Triant V, et al. *J Clin Endocrinol Metab*. 2008;93:3499-3504.





Calculation Tool

Please answer the questions below to calculate the ten year probability of fracture with BMD.

Country: **Italy** Name/ID:

[About the risk factors](#)

Questionnaire:

1. Age (between 40 and 90 years) or Date of Birth
 Age: Date of Birth: Y: M: D:

2. Sex Male Female

3. Weight (kg)

4. Height (cm)

5. Previous Fracture No Yes

6. Parent Fractured Hip No Yes

10. Secondary osteoporosis No Yes

11. Alcohol 3 or more units/day No Yes

12. Femoral neck BMD (g/cm²)
 Select BMD:



Weight Conversion

Pounds kg

Height Conversion

Inches cm



Strategies to reduce or prevent bone loss with ART initiation

- Avoid Tenofovir Disoproxil Fumarate (TDF)
- Avoid Protease Inhibitors
- Calcium and Vitamin D
- Biphosphonate Therapy
- Resistance training



Cancer

- Cancer risk elevated in older persons living with HIV vs non-HIV-infected.
- Lung, prostate, colorectal, breast cancer most common.
- Tobacco cessation and early detection are critical.

Yanik et al. 2016. AIDS, 30(10).



Cancer: Screening Methods⁽¹⁾

Problem	Persons	Procedure	Evidence of benefit	Screening interval	Additional comments
Anal cancer	MSM and persons with HPV-associated dysplasia ⁽¹⁾	Digital rectal exam ± anal cytology	Unknown; advocated by some experts	1-3 years	If anal cytology abnormal, anoscopy
Breast cancer	Women 50-70 years	Mammography	↓ Breast cancer mortality	1-3 years	
Cervical cancer	HIV-positive women > 21 years or within 1 year after sexual debut	Liquid based cervical cytology test	↓ Cervical cancer mortality	1-3 years	HPV testing may aid screening
Colorectal cancer	Persons 50-80 years with a life expectancy > 10 years	Faecal occult blood test annually or sigmoidoscopy every 5 years or colonoscopy every 10 years	↓ Colorectal cancer mortality	1-3 years	
HepatoCellular Carcinoma (HCC)	Persons with cirrhosis, persons with HBV co-infection at high risk of HCC or those who ever had chronic hepatitis ⁽¹⁾	Ultrasound (and alpha foetoprotein)	Earlier diagnosis allowing for improved ability for surgical eradication	Every 6 months	See pages 58 and 81
Prostate cancer	Men > 50 years with a life expectancy >10 years	PSA ⁽²⁾	Use of PSA is controversial	2-4 years	Pros: ↑ early diagnosis and modest ↓ prostate cancer specific mortality. Cons: overtreatment, adverse effects of treatment on quality of life

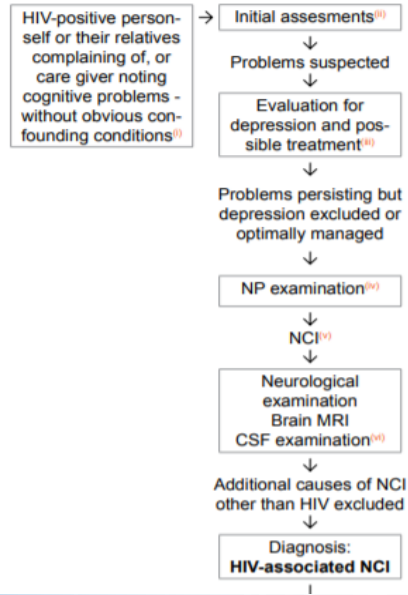
Source: EACS, 2018



Algorithm for Diagnosis and Management of HIV-Associated Neurocognitive Impairment (NCI) in Persons without Obvious Confounding Conditions

Abbreviations

CSF	cerebrospinal fluid
GDR	genotypic drug resistance test
HAD	HIV-associated dementia
MND	mild neurocognitive disorder
MRI	brain magnetic resonance imaging
NP	neuropsychological
OIs	opportunistic infections



i Obvious confounding conditions:

1. Severe psychiatric conditions
2. Abuse of psychotropic drugs
3. Alcohol abuse
4. Sequelae from previous CNS-OIs or other neurological diseases
5. Current CNS-OIs or other neurological diseases

ii The following questions may be used to guide doctor assessment

1. Do you experience frequent memory loss (e.g. do you forget the occurrence of special events even the more recent ones, appointments, etc.)?
2. Do you feel that you are slower when reasoning, planning activities, or solving problems?
3. Do you have difficulties paying attention (e.g. to a conversation, book or movie)?

Answering "yes" to one or more of these questions may suggest the presence of cognitive disorders, although not necessarily linked to HIV.

iii See [Depression: Screening and Diagnosis](#)

iv **NP examination** will have to include tests exploring the following cognitive domains: fluency, executive functions, speed of information processing, attention/working memory, verbal and visual learning, verbal and visual memory, motor skills plus assessment of daily functioning.

v **NCI** is defined by impairment in cognitive function on the above neuropsychological test where performance is compared to age- and education-matched appropriate controls and is considered clinically significant.

vi **Neurological examination, brain MRI and CSF examination** are required to exclude other pathologies and to further characterise HIV-associated NCI by including assessment of CSF HIV-VL level and, where appropriate, evidence for genotypic drug resistance (GDR) in a paired CSF and plasma sample.

vii **CSF escape definition:**

either CSF HIV-VL detectable and plasma HIV-VL undetectable; or both CSF HIV-VL and plasma HIV-VL detectable, with CSF HIV-VL higher than plasma HIV-VL.

viii **Including all situations that do not fulfill the CSF escape definition**

ix **Triple ART regimen**

x **ART drugs with potential beneficial or detrimental effects on the CNS**

Definition of potentially CNS-active drug

ARV drugs with either:

1. demonstrated clear CSF penetration when studied in healthy



Depression & Isolation



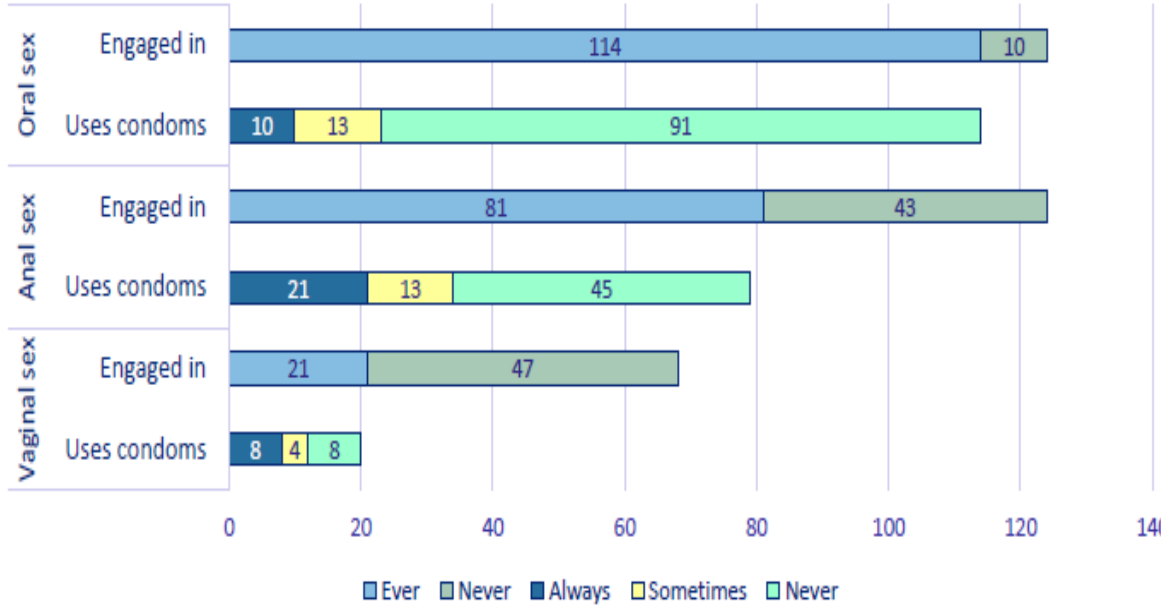
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Sex and Condom Use Among ROAH SF 2.0 Participants Reporting Past-Year Sex



Among our Participants:

65% Had Sex in the Past Year

32% Had Sex in the Past Month

Acria, 2018



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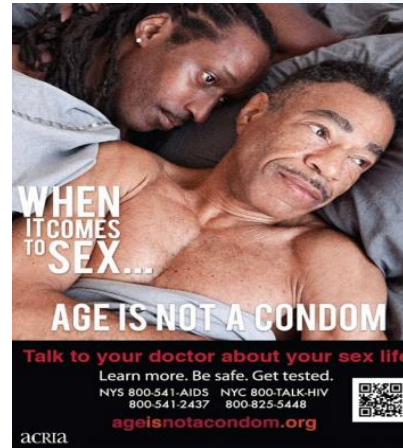


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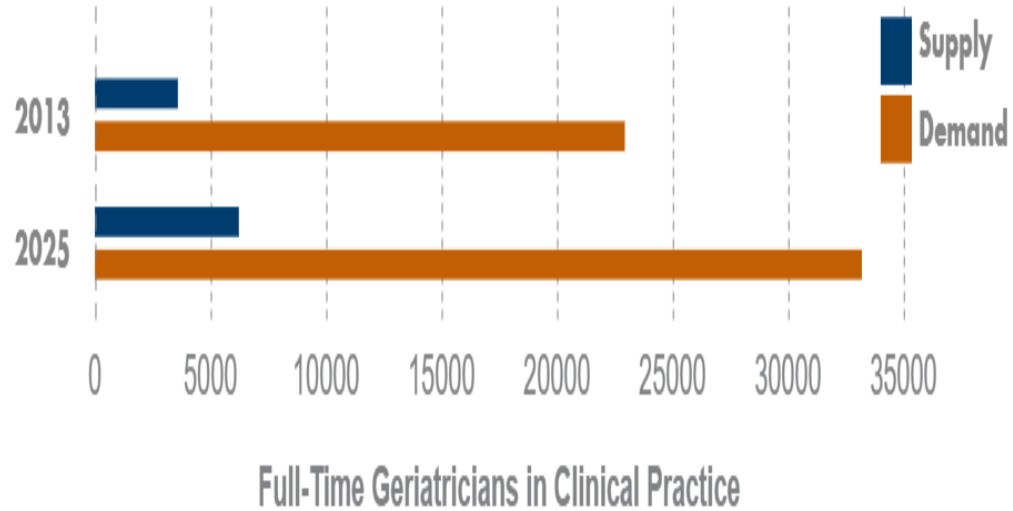
Prevention

- 38% of men and 22% of women discussed sex with their provider



45%
INCREASE
in demand for
geriatricians,
2013-2025★

Geriatrics Workforce Supply & Demand★



Source: American Geriatrics Society



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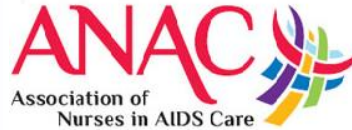




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Exploring the opportunities and challenges of an aging population



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Take Home Points

- **Co-morbid chronic disease** plays a role in patients with long-standing disease and those who are aging.
- **Modification of risk factors** (smoking cessation, exercise, lipid management) may improve or reduce risk of CVD, CKD, osteopenia.
- **Early diagnosis and treatment** can improve outcomes in this population.
- Clinicians, policy makers, and educational institutions need to work collaborative to address **healthcare workforce issues**.



References & Resources

- HIV-Age.org

www.hiv-age.org

- Adults 50 and Over

<http://www.cdc.gov/hiv/group/age/olderamericans/index.html>

