



### HIV and Women's Health: Where Are We Now? Dr Shema Tariq, Principal Clinical Research Fellow, UCL Institute for Global Health Honorary Consultant HIV and Sexual Health Physician, Mortimer Market Centre, London

126

# Disclosures

I have received speaker honoraria and consultancy fees from Janssen, Gilead

Sciences and ViiV Healthcare.



#### Overview

#### Menopause

#### Cardiometabolic health

Future

Support

## HIV and women

52% of the global population of people living with HIV are women

**Overview** 

Menopause

Cardiometabolic health

Support

Future

# 30371

Women in HIV care in England

61%

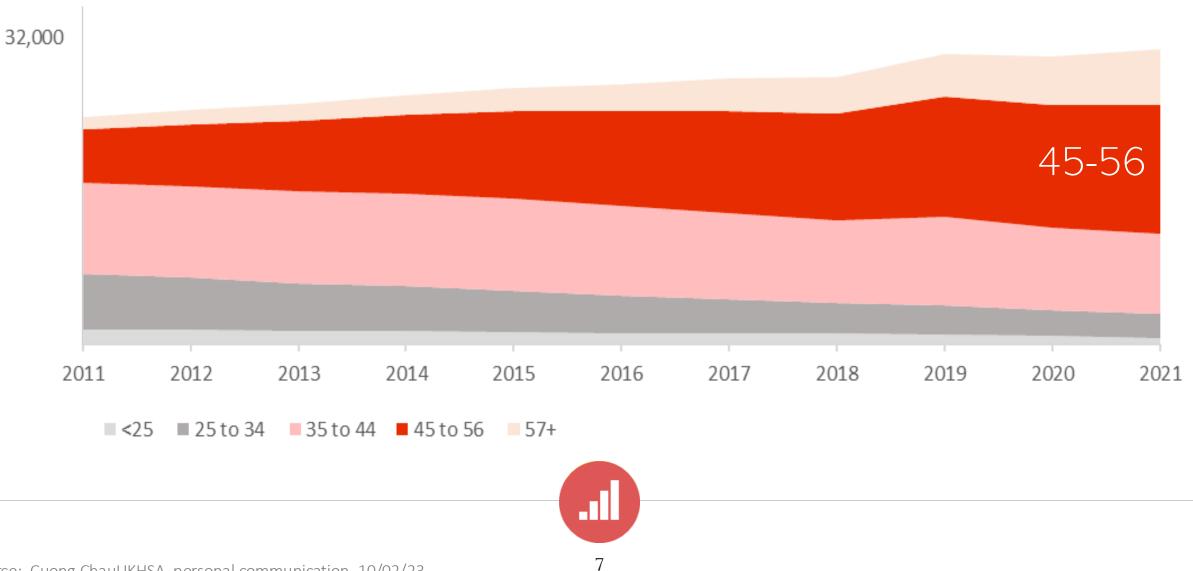
Black African ethnicity

99%

On ART



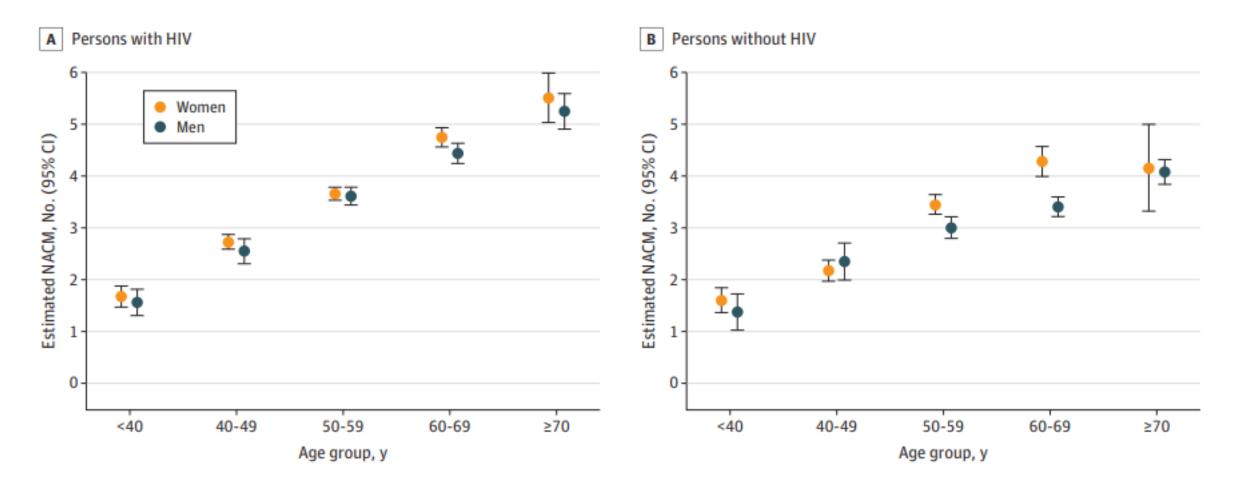
#### Number of women accessing HIV care by age group, 2011-2021



Source: Cuong ChauUKHSA, personal communication, 10/02/23



## Mean number of Non-AIDS comorbidities



Source: Collins LF et al. Jama Open Network (2023).

#### **Structural** Laws (e.g. age and sex discrimination), poverty, policy, gender norms

#### **Community** Norms, stigma, social capital, local environment

Interpersonal Relationship quality, violence, support, caregiving

#### Individual Biology, knowledge, attitudes, skills, selfefficacy, self-stigma, mental health

# Sex and gender shape ageing at multiple levels



		•		· · · · · · · · · · · · · · · · · · ·
Overview	Menopause	Cardiometabolic health	Support	Future



#### WHAT IS THE

# **MENOPAUSE?**

verview Menopause Cardiometabolic health Support Future

The time when periods stop and people can no longer get pregnant

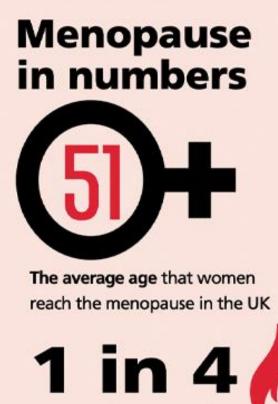
Overview



Cardiometabolic health

Support

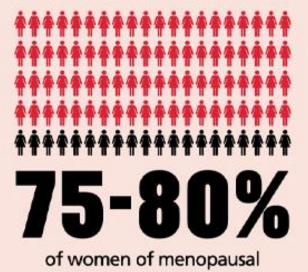
Future



women will experience hot flushes during the menopause that adversely affect their work

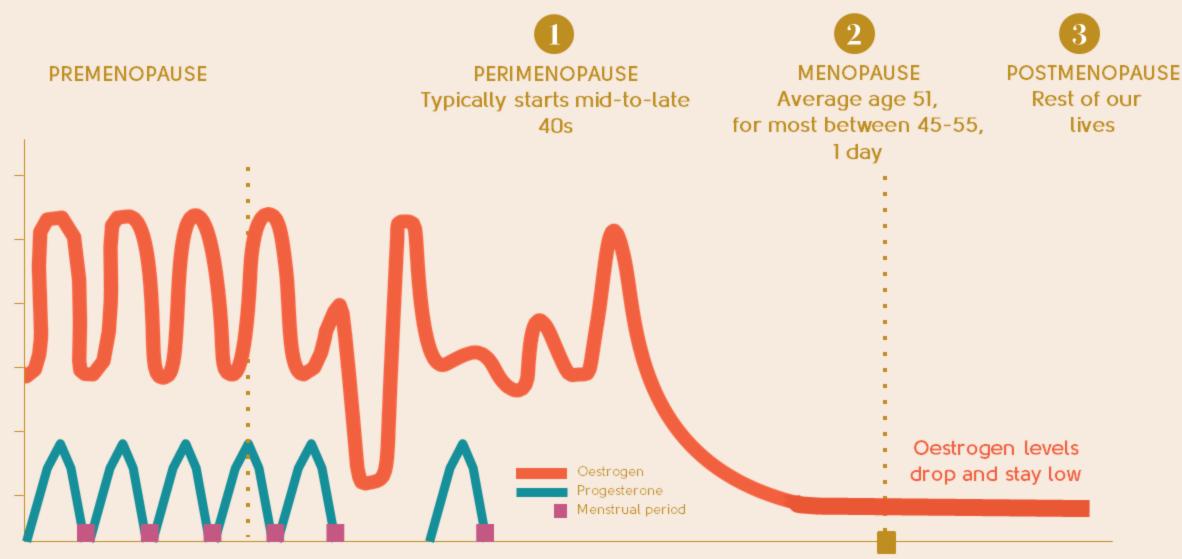


The typical length of time that menopause symptoms last



age are in work

# **Menopause transition**



Source: www.mymenopausecentre.com

12 months since last period



Oestrogen is more than a reproductive hormone

#### Future Menopause Cardiometabolic health Support Overview **Estrogen effects** Modulates immune system Anti-inflammatory ٠ Inhibits bone resorption by $\checkmark$ osteoclast activity OH Estrogen [Estradiol]

H

Ĥ

Ĥ

HO

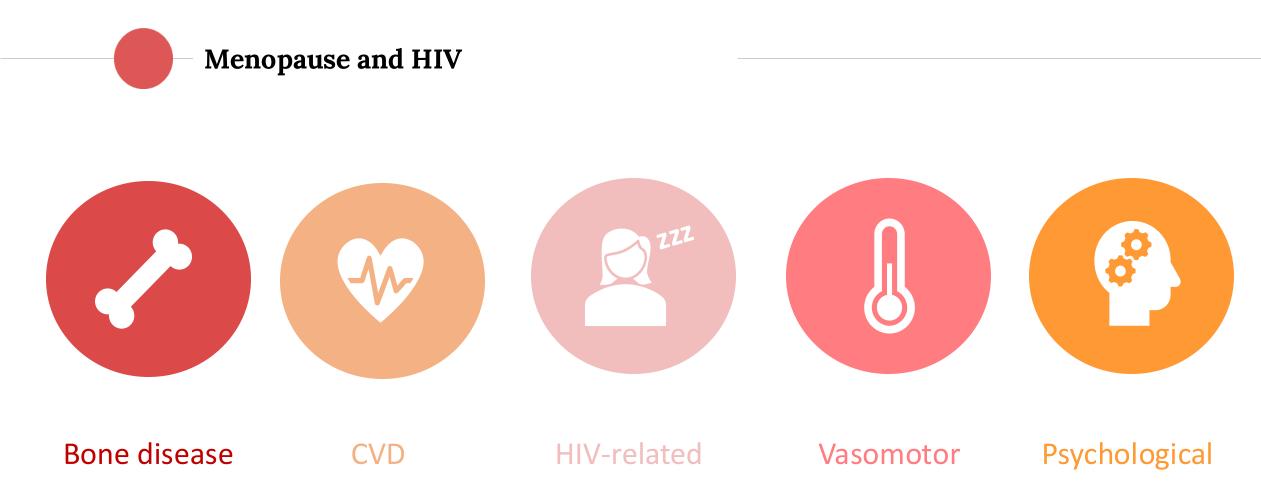
- Improves vascular tone and elasticity by ↑ nitric oxide production
- Regulates sleep and body temperature
- Affects fat distribution
- Increases insulin sensitivity
- Increases metabolism of triglycerides and lipids





## Publications on "HIV" and "Menopause", 2004-2024





Source: 1. Cortes Y et al. (2015); 2. Sharma A et al. (2015); Looby SE *et al.* (2014); 3. Solomon D. *et al.* (2018); 4. Ferreira CE *at al.* (2007); 5. Miller SA *et al.* (2005); 6. Clark RA *et al.* (2000); 7. Looby SE *et al.* (2018); 8. Rubin LH *et al.* (2014); 8. Lui-Filho JF *et al.* (2014); 9. Haag K *et al.* (2022); 10. Schnall R *et al.* (2018);



#### Prevalence of menopausal symptoms



Somatic

hot flushes, palpitations, joint and muscle discomfort, sleep disturbance





Urogenital

vaginal dryness, urinary tract symptoms, sexual problems





Psychological

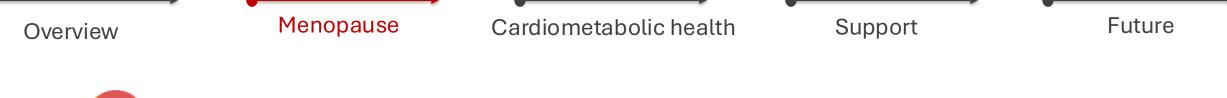
depression, anxiety, irritability, exhaustion



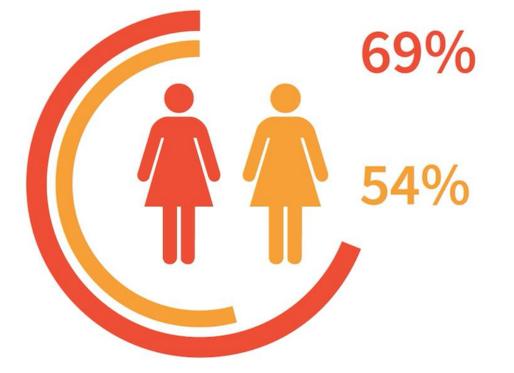
It leaves you feeling 'what is going on here'? Is it HIV? Is it the menopause?



Source: Tariq S et al.. Poster WEBEP0564. IAS; Paris 2017; Okhai H et al. (2021)





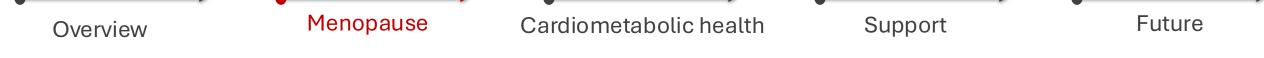


# Women with HIV reporting ≥1 sexual problem in past 1 year

Women without HIV reporting ≥1 sexual problem in past 1 year



Source: Toorabally N et al. (2019)



## Impact of menopausal symptoms

- Reduced adherence to ART (AOR 2.22; 95% CI 1.13, 4.35)<sup>1</sup>
- Reduced clinic attendance (AOR 1.52; 95% CI 1.01, 2.29)<sup>1</sup>
- Increased psychological distress<sup>2</sup>
- Reduced quality of life (also associated with perimenopausal status)<sup>3</sup>



Cardiometabolic health

Support /

uture

# Cardiometabolic health

Menopause

Common but preventable conditions including heart attack, stroke, diabetes, insulin resistance and non-alcoholic fatty liver disease.

Overview	Menopause	Cardiometabolic health	Support	Future
	HIV		Menopause	
	Heart diseas		Heart disease	
	Dyslipidaem	ia <b>HIV and</b>	Dyslipidaemia	
	Fatty liver	Menopause:	Fatty liver	
	Insulin resistar	nce effect	Insulin resistance	
	Mood disord		Mood disorder	
	Cognitive decl	ine	Cognitive decline	
		ART		:

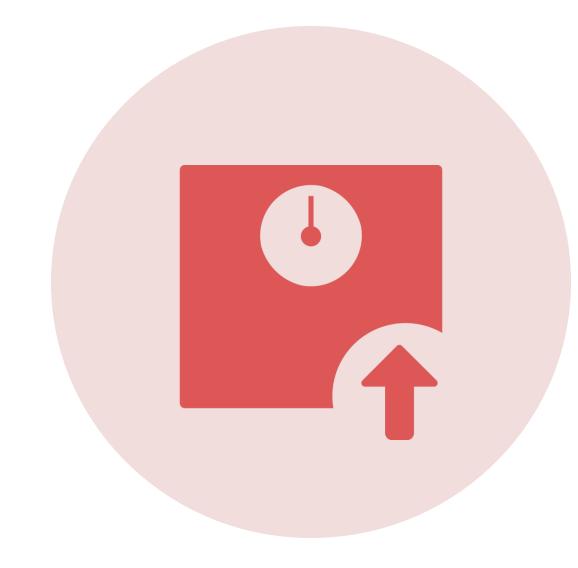




Cardiometabolic health

Support

Future



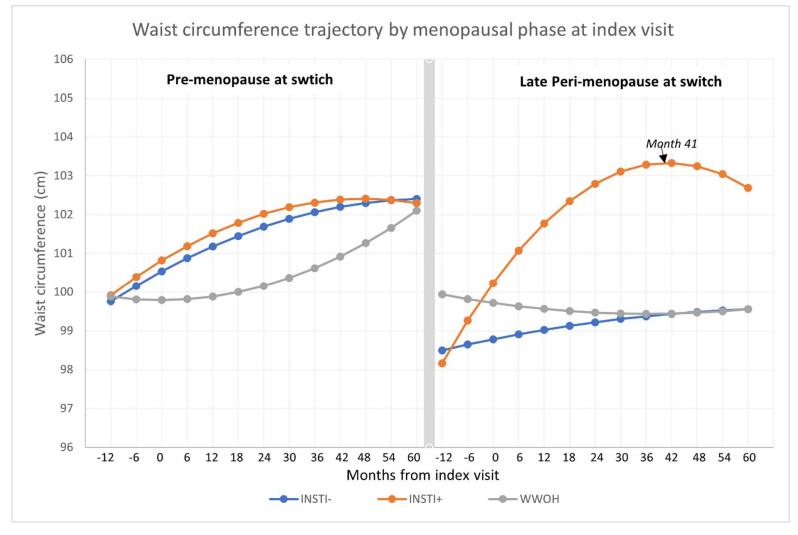
### Weight gain

Increasingly important 40.1% obesity prevalence 32.1% overweight prevalence Associated with Black African and other Black ethnicities



Source: Ashraf A et al. (2022)

# Accelerated changes in waist and BMI when switching to INSTI during peri- or postmenopause



\* Based on linear mixed effect model adjusted for baseline WC, age, race, site, smoking, drinking, menopausal phase, Center for Epidemiologic Studies Depression Scale, chronic kidney disease, and hypertension.

Why do women with HIV gain weight?

- Multifactorial
- Medication
- Obesogenic environment
- Limited physical activity (comorbidities, symptoms, poor mental health)
- Hormonal environment





- Relative increased androgens favours central fat accumulation
- Sarcopenia leads to reduced energy expenditure
- Estrogen depletion has wide ranging impact on metabolism
- Leptin (produced by fat tissue) inhibits appetite
- Estrogen potentiates leptin by increasing expression and sensitivity of leptin receptors in hypothalamus
- Estrogen depletion reduces leptin effects and appetite inhibition

Overview

Menopause

Cardiometabolic health

women

Support

Future

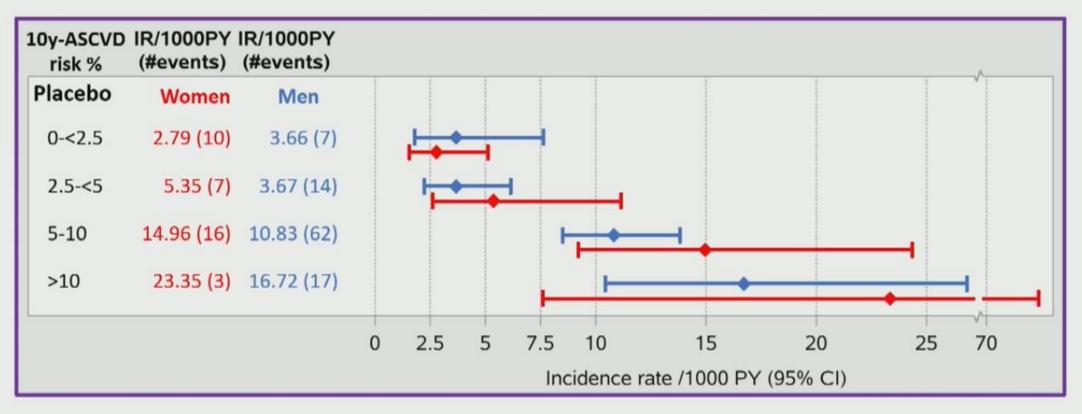


### Major adverse cardiac events

Increased risk of MI in HIV REPRIEVE n=7769 (women=2419) CVD risk score lower in women at baseline CVD risk score reduces risk and doesn't take into account menopause Despite lower score, incident MACE similar CVD risk scores underestimate risk for

REPRIEVE

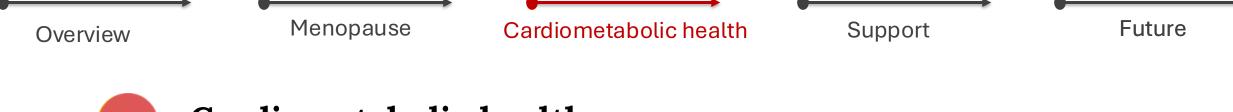
## MACE Rates in PCE 10-year ASCVD Risk Subgroups by Sex in REPRIEVE





Grinspoon NEJM 2023

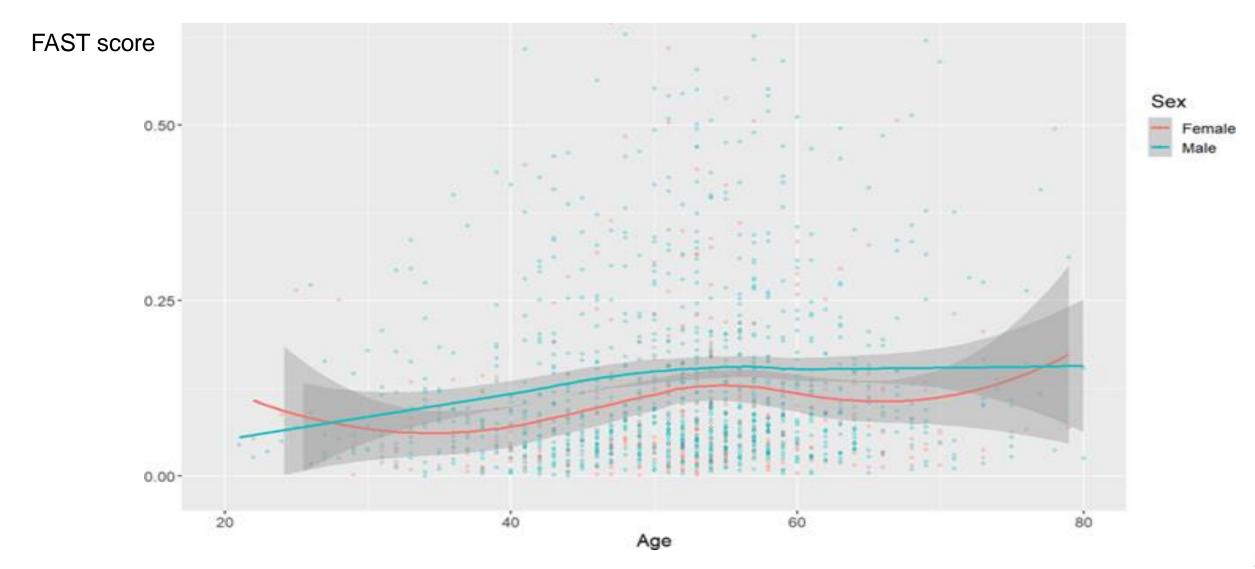
31



- Cardiometabolic health

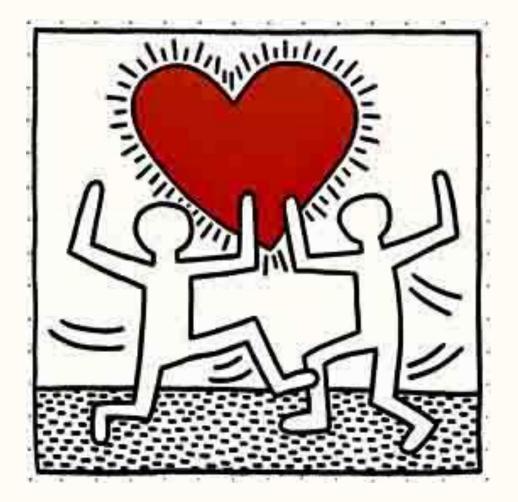
- Changes in gut microbiome which predispose to cardiometabolic disease<sup>1</sup>
- Increases in carotid intima-media thickness perimenopausally<sup>2</sup>
- Increased FibroScan-AST (FAST) score during perimenopausal age<sup>3</sup>

### Metabolic dysfunction-associated steatohepatitis exhibits sex differences in people with HIV

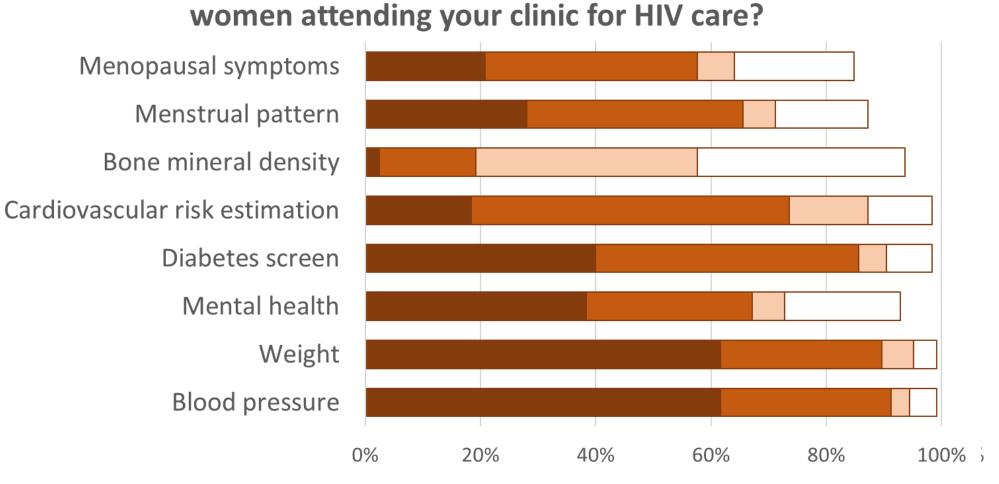


### HIV in the UK Menopause HIV & menopause Support Future

# Support and management







How often do you check/ask about the following in

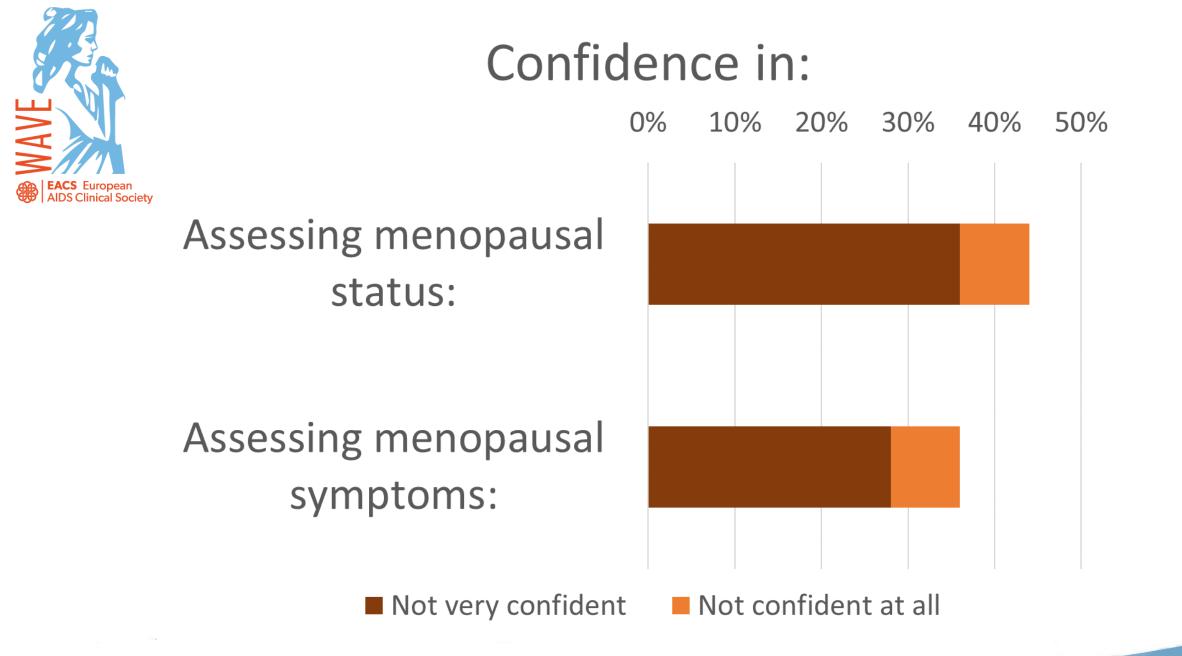
At every visit

At least once a year

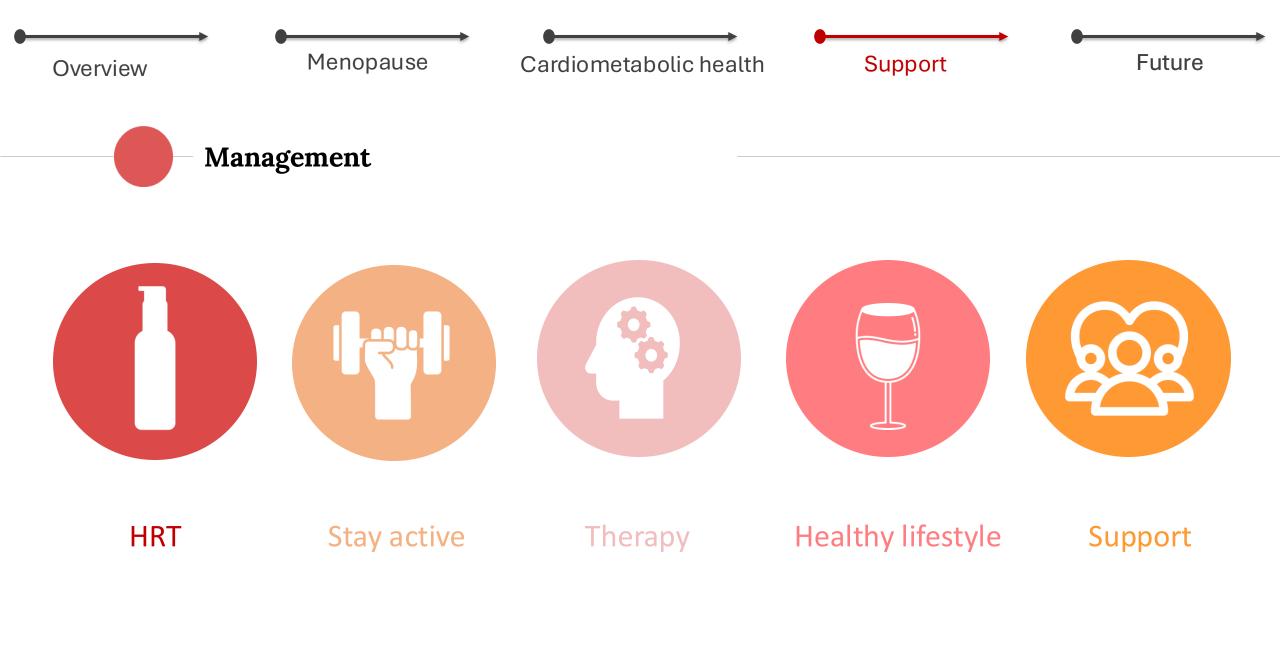
Regularly, but less often than once a year
Only if there are reasons for concern

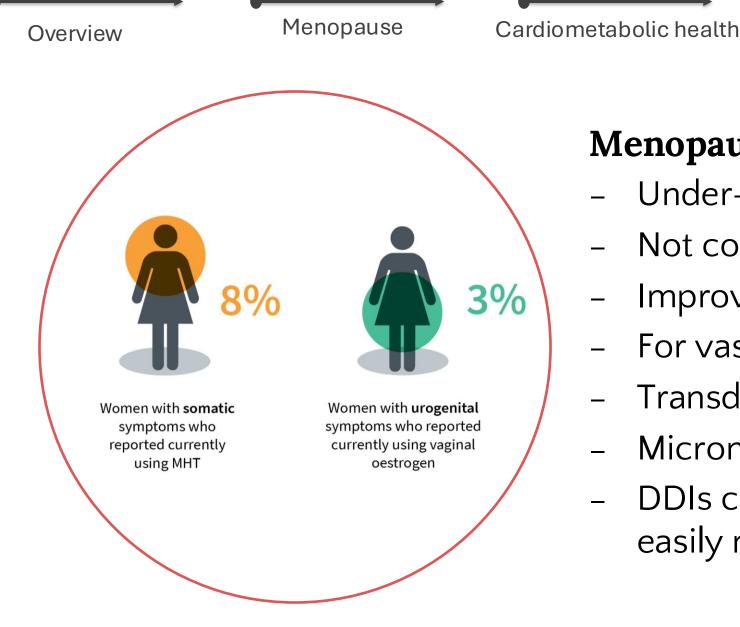
For menopausal symptoms and menstrual pattern, at age 45-54

For other items, at age checked most frequently



Source: Caixas U et al. (2024)





## Menopausal hormone therapy

- Under-used in general and in HIV

Support

- Not contraindicated in HIV
- Improves QoL/CVD/bone health
- For vasomotor/mood symptoms
- Transdermal oestrogen
- Micronised progestogen
- DDIs can impact hormone levels but easily managed



Future



Menopause

Cardiometabolic health

Support

Future



### Whole patient care

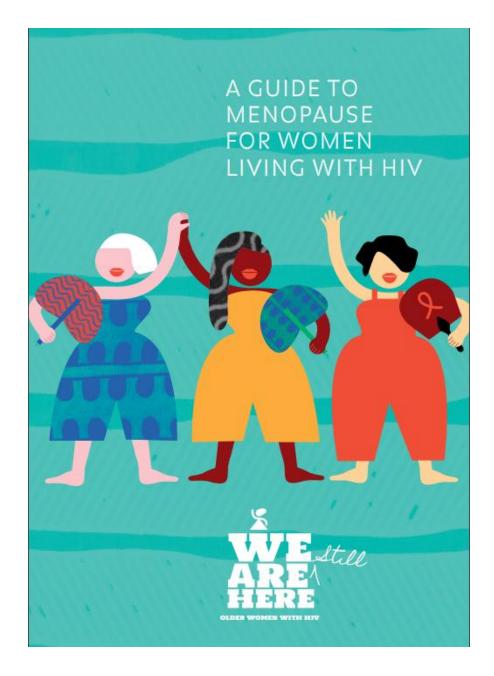
- Dedicated HIV and menopause clinic
- MDT with psychology input
- Menopausal status and symptoms
- Comorbidity and cancer screening
- Contraception and sexual wellbeing
- Optimise antiretroviral therapy
- Lifestyle modification
- Listen, inform, direct to support
- Liaise with GP



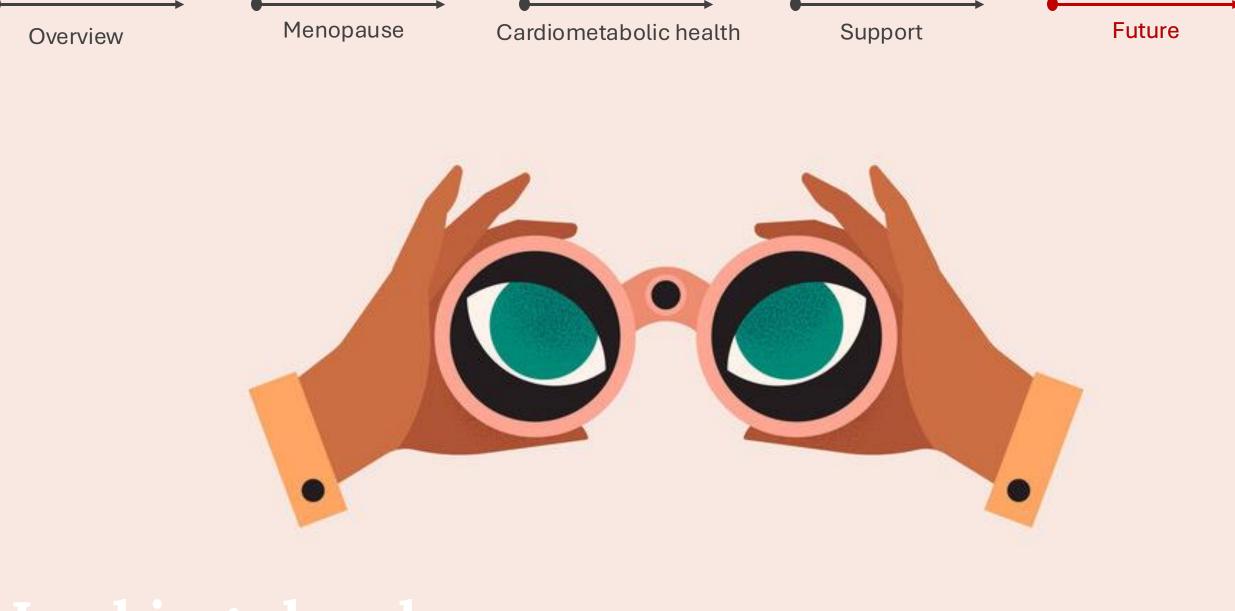
# I just feel alive again. I feel like me.



Maria, 3 months after commencing HRT







# Looking ahead

Longitudinal pathogenesis studies Primary prophylaxis with MHT Long term safety of MHT Use of novel agents i.e. fezolinetant Validated tool for symptoms Menopause and sleep Evaluating peer support for menopause Data from high prevalence settings Best models of care



- Cisgender women age differently to cisgender men
- Menopause is an important biological transition
- Potential impacts on symptoms and cardiometabolic health
- Women with HIV may face additional challenges
- Role of dedicated HIV and menopause services
- Importance of person-centred care

## Let's reframe HIV care for women ageing with HIV

Acknowledgements: PRIME Study Team, GROWS Study Team, WAVE, clinical colleagues, funders (NIHR, BHIVA, ViiV, Wellcome, UCL, Fast Track Cities), patients and participants