INDIANA UNIVERSITY
SCHOOL OF MEDICINE

Primary Care Guidelines for the Management of Persons Living With HIV

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Disclosures

- None

Outline

1. Discuss the current vaccination recommendations for PLWH
2. Discuss the current screening guidelines for PLWH
3. Screening and special considerations in management of metabolic disorders in PLWH
4. HIV disease related testing

Section 1:

Vaccine Recommendations

Vaccines (1)

VACCINE	WHO	FREQUENCY	COMMENTS
Flu vaccine	All PLWH.	Annually	Use high-dose inactivated vaccine for age: 65+ years.
Hepatitis A	MSM, PWID, Persons with liver disease (including HBV and HCV).	2 doses: 0 & 6 months	Consider vaccination for all PLWH.
Hepatitis B	Non-immune patients (1).	3 doses: 0, 1 & 6 months	Recheck serology at least 4 weeks after last dose. If surface AB levels are not protective: repeat vaccine series; consider double dose.

(1) Hepatitis B non-immune patients include: *HBsAg/Ab(-) HBcAB(-) & HBsAg/Ab(-) HBcAB(+)HBVPCR(-)*

Vaccines (2)

VACCINE	WHO	FREQUENCY	COMMENTS
Human Papilloma Virus	PLWH, both genders, age: 13 – 26 years.	3 doses: 0, 1 & 6 months	
Meningococcus	All PLWH	2 doses: Menveo or Menactra at least 8 – 12 weeks apart, booster in 5 years.	Does not cover meningococcus serotype B (outbreaks, asplenics)
Diphtheria & Tetanus (Td)	All PLWH	1 dose every 10 years	One-time substitution of Td with TdaP (acellular pertussis).
Pneumococcus	All PLWH	2 doses: PCV13 followed by PPSV23 at least 8 weeks apart. PPSV23 boosters in in 5 years & at age 65 years.	Consider deferring PPSV23 until CD4 > 200 cells/ mm3. If PPSV23 given first, give PCV13 after 12 months.

Zoster Vaccine

Vaccine Types	Live attenuated zoster vaccine (ZVL, Zostavax)	Recombinant zoster vaccine (RZV, Shingrix)
Characteristics	Single dose Live vaccine Waning immunity with time Risk for vaccine associated Zoster	Two doses Non-live vaccine Provide greater protection Mild to moderate side effects (myalgia, headaches, fever …)
Age Recommendations in general populations	Age ≥ 60	Age ≥ 50
Recommendations in PLWH	Evidence is limited. Contraindicated if CD4 < 200 cells/ mm^3 Can consider if CD4 > 200 cells/mm^3 and age ≥ 60	AICP recommendations for use of RZV in PLWH (and other immunocompromising diseases) are pending

Section 2:

Screening Recommendations

Hepatitis C Screening

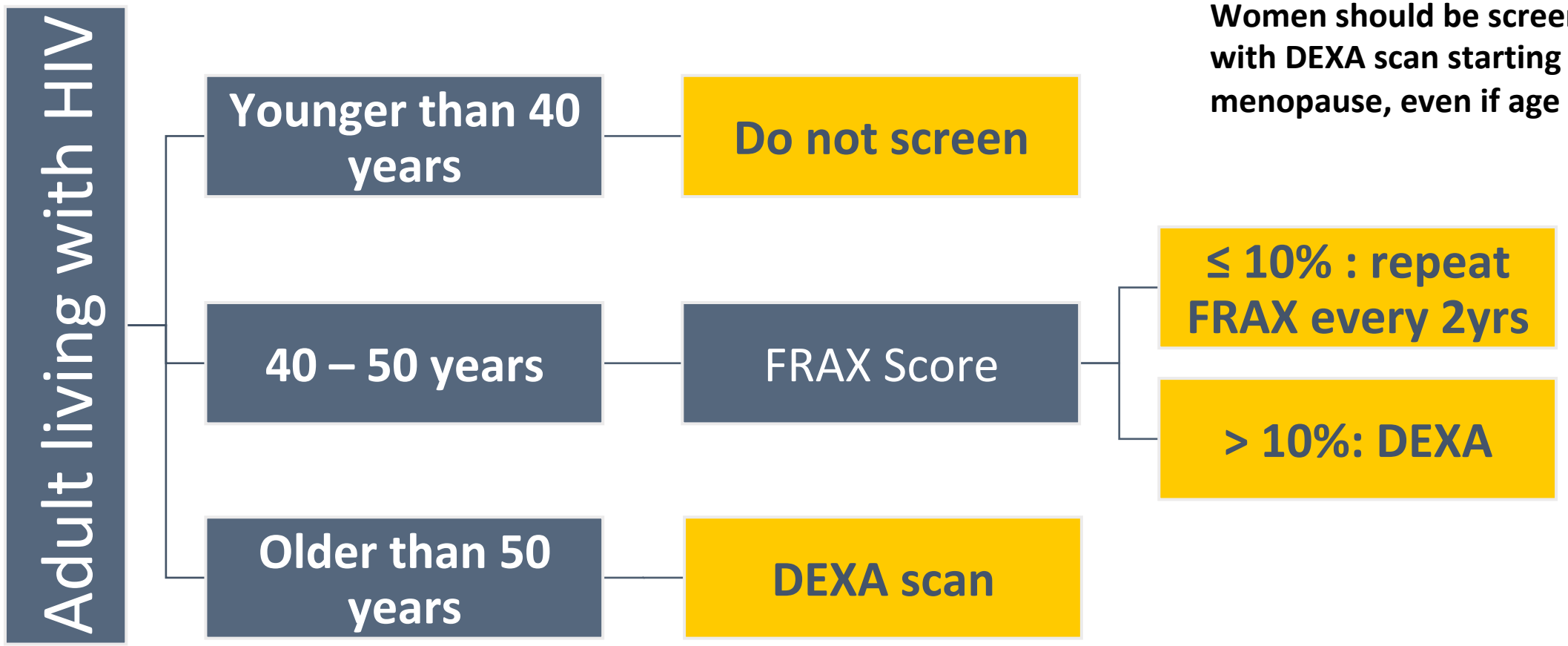
PLWH should be screened for HCV infection upon initiation of care by a test for HCV antibody and annually thereafter for high risk patients.

HCV RNA should be checked for all those with a positive HCV antibody test to assess for active HCV disease.

HCV RNA should also be measured in HCV-seronegative patients with a history of injection drug use or with unexplained increased serum transaminases

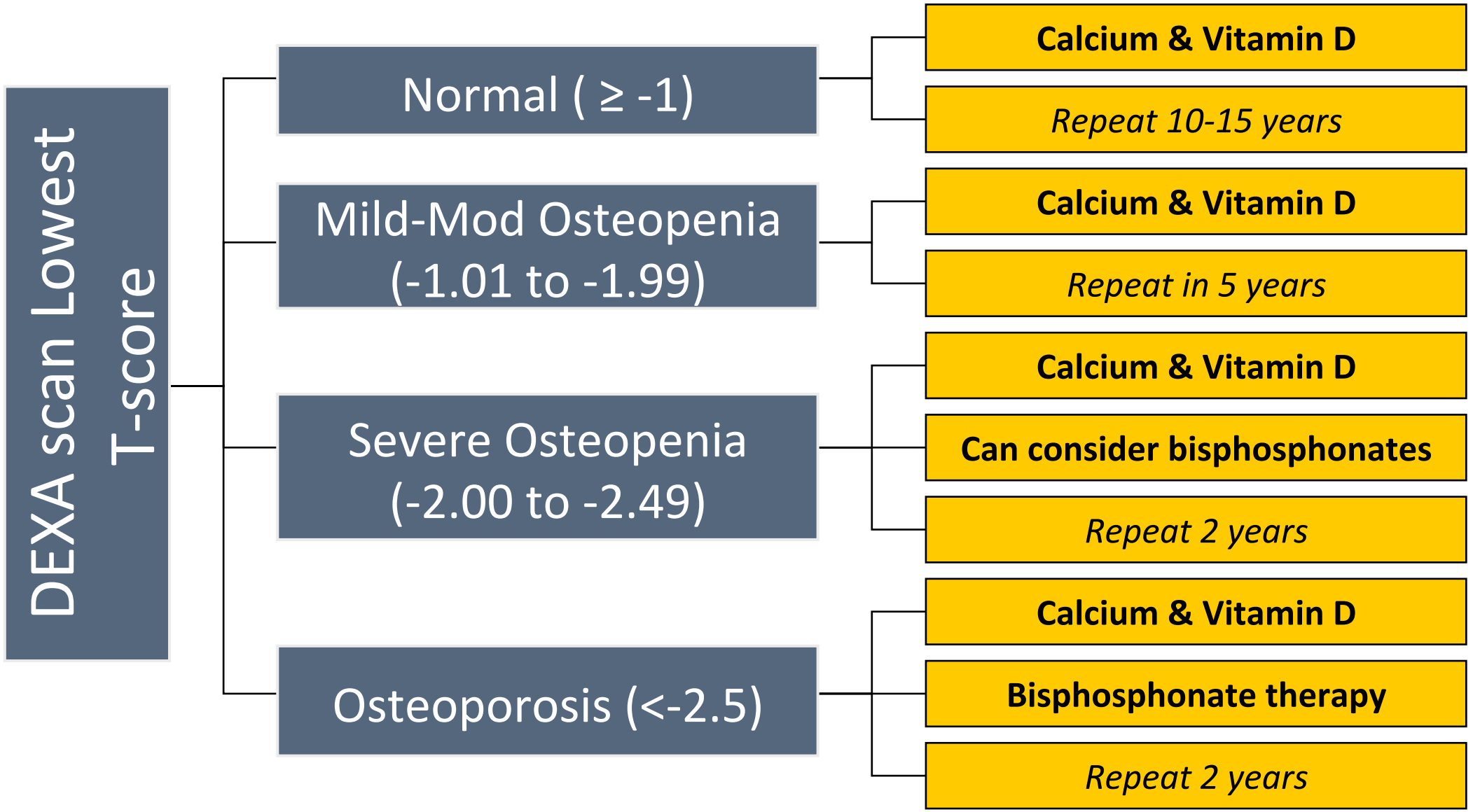
- Approximately 6% of HIV/HCV-coinfected persons do not develop HCV antibodies

Screening for Osteoporosis



Women should be screened with DEXA scan starting at menopause, even if age < 40.

Screening for Osteoporosis (2)



Cervical Cancer Screening

Timing and frequency

- Upon initiation of care, and repeated at 6 months then annually thereafter.

More frequent screening

- History of cervical dysplasia or abnormal pap
- HPV infections at other sites

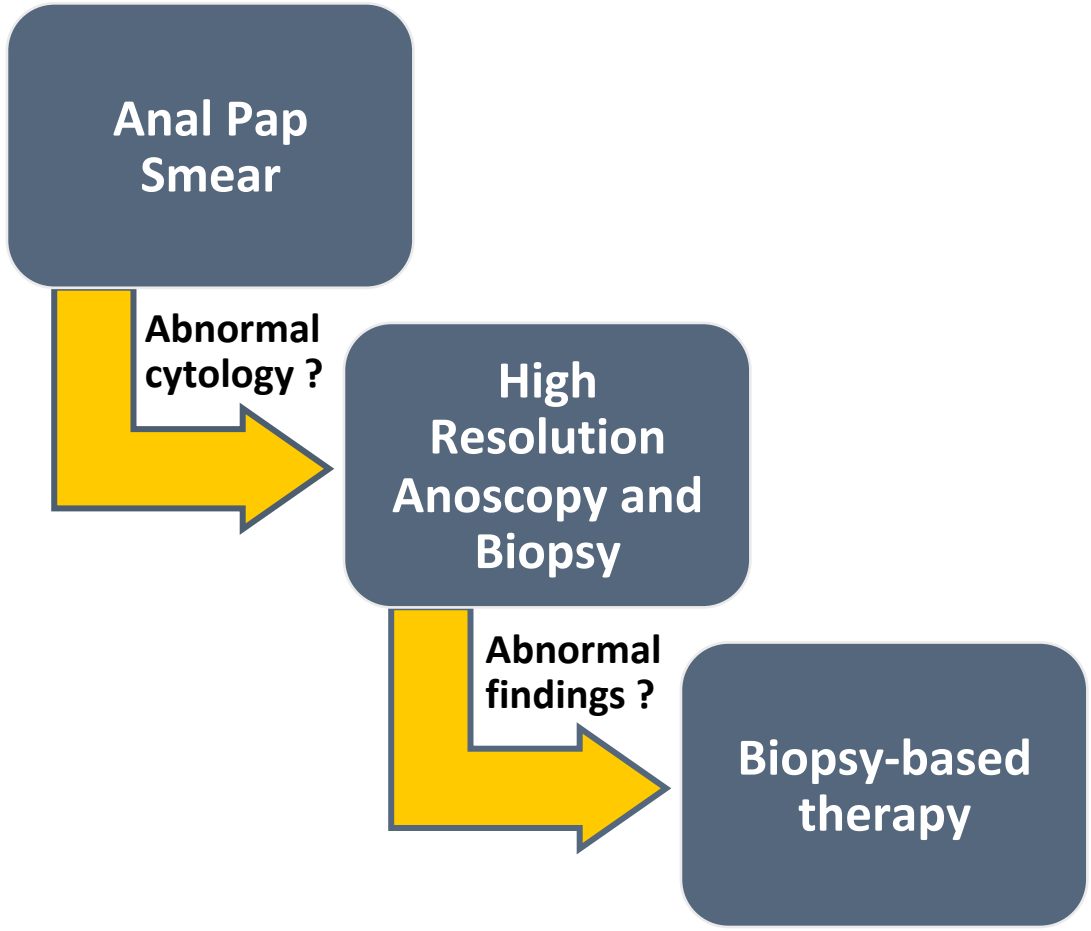
Colposcopy & Biopsy

- ASCUS (Atypical Squamous Cells of Unknown Significance)
- Low & High grade squamous intraepithelial lesion
- Atypical glandular cells
- Squamous Carcinoma

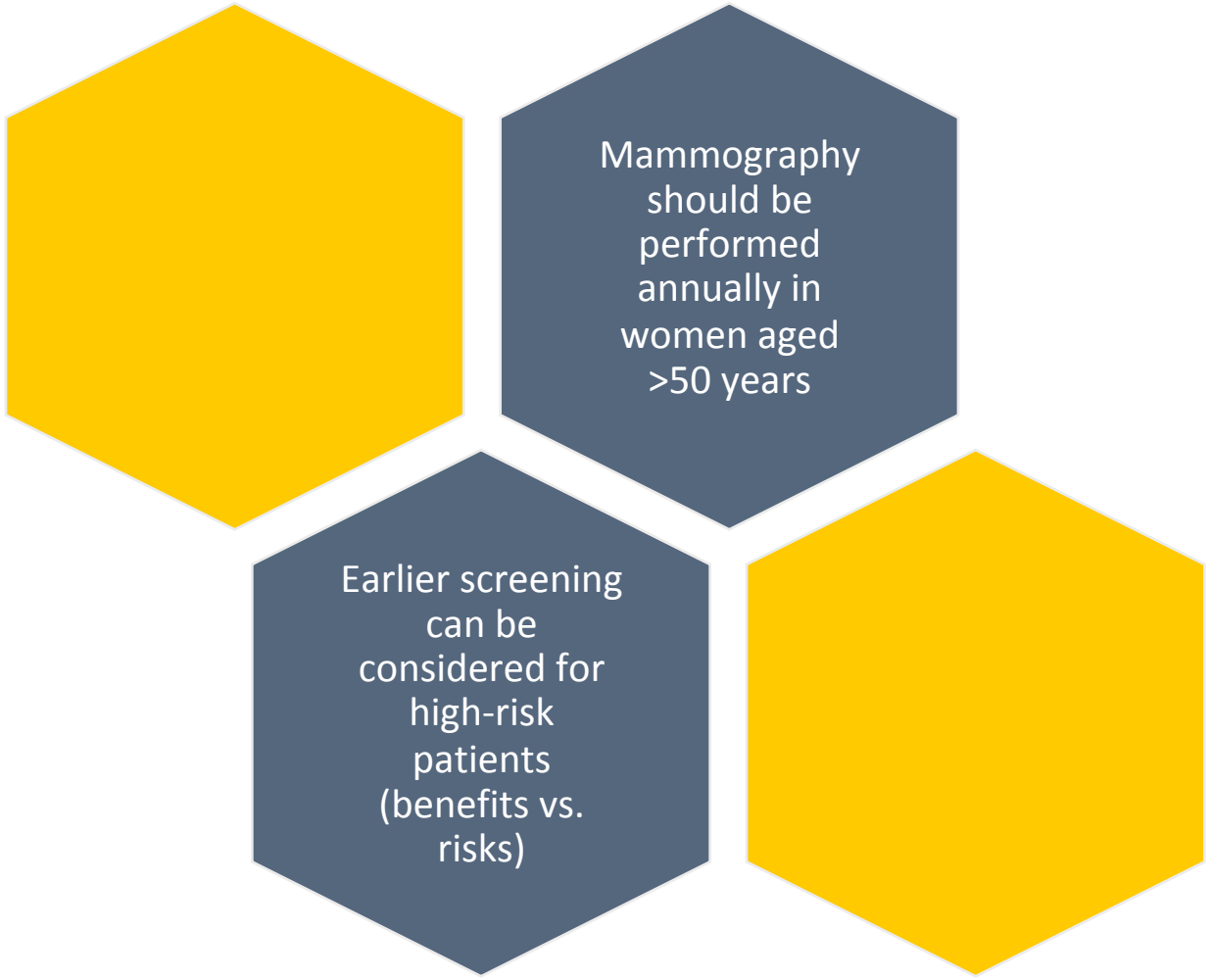
Anal Cancer Screening

Who, among PLWH, to screen:

- MSM
- Women with history of receptive anal intercourse
- Women with abnormal cervical pap smears
- Men and women with genital warts



Breast Cancer Screening



Colorectal Cancer Screening

Age:

- Start at age 50 (average risk patient)
- Stop at age 75 – 85

Modalities:

- Colonoscopy (10 years)
- CT colonography (5 years)
- FIT: Fecal Immunochemistry testing (annually)
- FIT (annually) + sigmoidoscopy (10 years)
- FIT-DNA: Multitargeted fecal DNA testing (3 years)

High risk patients:

- Start screening earlier and perform more often
- Personal history of CRC or polyps, IBD, first degree relative with CRC …

Lung Cancer Screening

Smoking cessation is the most effective way to prevent lung cancer.

Who

PLWH with 30 pack-year smoking history age ≥ 55 years.

Applicable if patients quit smoking up to 15 years prior.

Modality

Annual screening with low-dose CT lungs.

Stop

Continue screening until age 80 for patients in good health.

Alternatively until 15 years elapsed from date of smoking cessation.

Section 3:

Screening and special considerations in management of metabolic disorders in PLWH

Screening for Dyslipidemia

- At baseline, prior to initiating ART
- Within 1 – 3 months after starting a new regimen
- Every 6 to 12 months thereafter

Hypertriglyceridemia

Rationale for treatment is to decrease risk of pancreatitis & ± lower CVD risk

- Risk for pancreatitis becomes significant when TG > 880 mg/dL
- TREAT if > 880 mg/dL
- GOAL < 500 mg/dL

Hypertriglyceridemia

Drug class	Example	Serum LDL cholesterol (% change)	Serum HDL cholesterol (% change)	Serum triglycerides (% change)
Bile acid sequestrants	Cholestyramine	↓ 15 to 30	0 to slight increase	No change or increase
Cholesterol absorption inhibitors	Ezetemibe	↓ 17	↑ 1	↓ 7 to 8
Fenofibrate (micronized form)	TriCor	↓ 6 to 20	↑ 5 to 20	**↓ 41 to 53**
Gemfibrozil	Lopid	↓ 10 to 15	↑ 5 to 20	**↓ 35 to 50**
Nicotinic acid	Niacin	↓ 10 to 25	↑ 15 to 35	↓ 25 to 30
Omega 3 fatty acids	Omega 3	↑ 4 to 49	↑ 5 to 9	↓ 23 to 45
PCSK9 inhibitors	Repatha	↓ 38 to 72	↑ 4 to 9	↓ 2 to 23
Statins	Atorvastatin	↓ 20 to 60	↑ 5 to 10	**↓ 10 to 33**

Dyslipidemia Risk Assessment

Framingham

- Assesses 10-year risk of having a heart attack in patients over 20 yrs. of age.
- Not applicable for patients with established CHD
- Risk Categories:
  - Low (<10%): No statin
  - Mod (10 – 20%): Mod dose statin
  - High (> 20%): High dose statin

ASCD

- Assess 10- year risk of atherosclerotic CVD for patients over 40 years of age.
- Allows monitoring response to therapy.
- Risk:
  - Low (<7.5 %): No statin
  - High (>7.5%): High dose statin

TDF → TAF Switch & Dyslipidemia

Study	Regimen switch	Changes in lipid profile
Arribas, J. R., et al. (2017). J Acquir Immune Defic Syndr.	TDF/FTC/EVGc → TAF/FTC/EVGc	↑ Cholesterol, LDL and TG = total cholesterol to high density lipoprotein ratio
DeJesus, E., et al. (2017). Lancet HIV.	TDF/FTC/EFV → TAF/FTC/RPV	Lipid changes were too small
Orkin, C., et al. (2017). Lancet HIV.	TDF/FTC/RPV → TAF/FTC/RPV	↑ LDL, HDL and TG ↑ number of patients started on statins
Raffi, F., et al. (2017). J Acquir Immune Defic Syndr.	Switch to TAF/FTC VS stay on TDF/ FTC	↑ in fasting cholesterol levels

Switching off PIs & Dyslipidemia

Study	Regimen switches	Changes in lipid profile
SWITCHMRK	LPV/r → RAL	Chol -12.5%; non HDL -15%; TG -42%
SPIRAL	PI/r → RAL	Reduction in all lipid profiles
STRATEGY-PI	PI → EVG	Decreased TG No changes in other lipids

Screening for DM

When to screen:

- Baseline
- Within 1 – 3 months after starting a new regimens
- Every 3 – 6 months thereafter

Limitations:

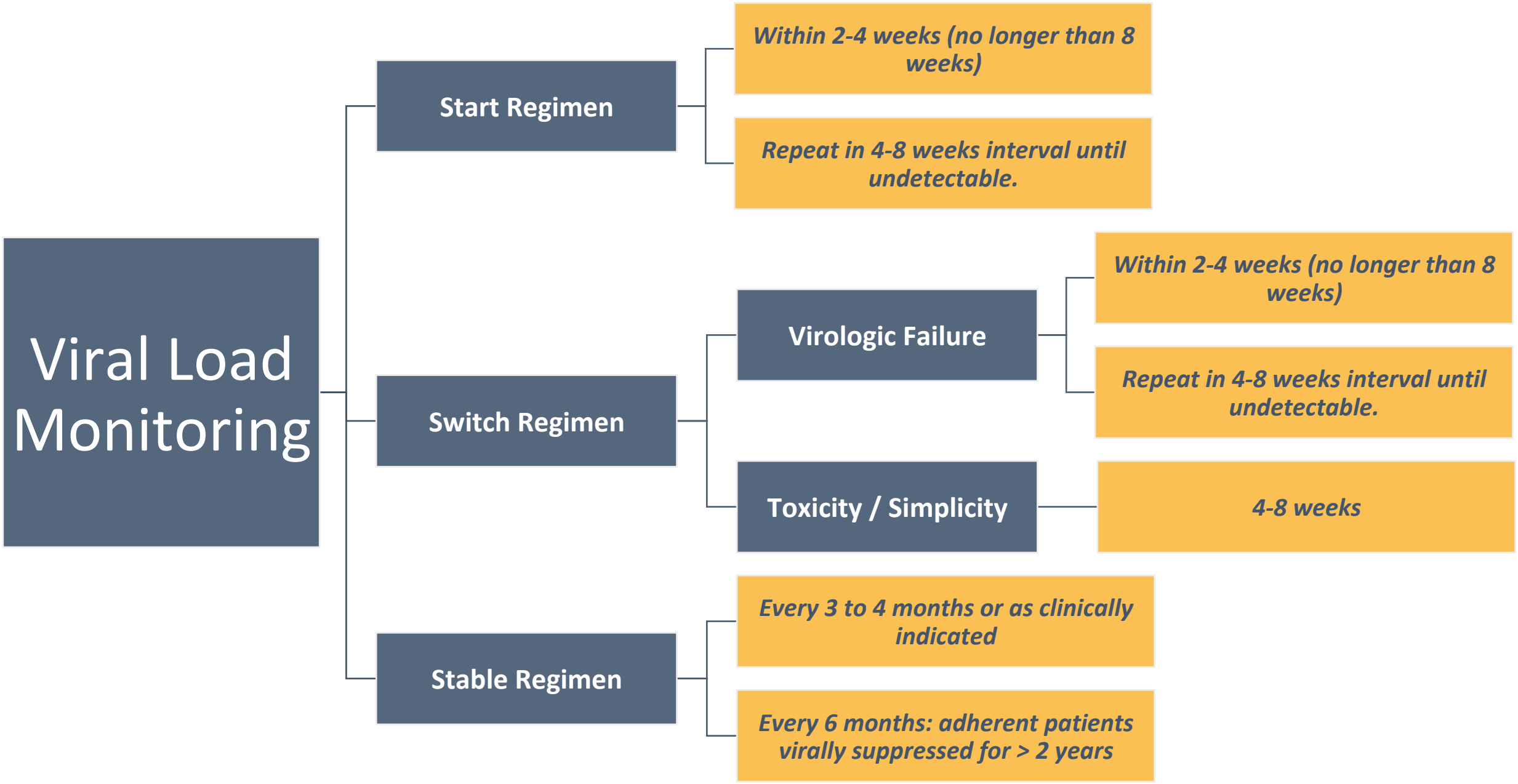
- A1C level may underestimate DM risk in PLWH:
  - Multicenter AIDS Cohort Study, A1C was lower in men living with HIV compared with uninfected men.
  - Lower CD4 cell counts and ART use were independently associated with a lower A1C.

Hypertension & CKD Screening

- Screening BP at least annually
- Obtain baseline creatinine for: calculated creatinine clearance or estimated glomerular filtration rate.
- Obtain a screening urinalysis to evaluate for proteinuria at baseline and then annually in high risk patients.
- High risk for nephropathy: black patients living with HIV, patients with advanced AIDS and those with multiple comorbid conditions (DM, hypertension, HCV).

Section 4:

HIV- disease related testing


Viral Load Monitoring
Start Regimen
Within 2-4 weeks (no longer than 8 weeks)
Repeat in 4-8 weeks interval until undetectable.
Switch Regimen
Virologic Failure
Within 2-4 weeks (no longer than 8 weeks)
Repeat in 4-8 weeks interval until undetectable.
Toxicity / Simplicity
4-8 weeks
Stable Regimen
Every 3 to 4 months or as clinically indicated
Every 6 months: adherent patients virally suppressed for > 2 years

Genotype Resistance Testing

- Initiation of care
- Repeat testing if therapy is deferred (superinfection)
- Virologic failure
  - Preferably while patient is still on medicine
  - Cut-off VL

Drug Resistance Not Usually Recommended

- **After therapy is discontinued:** Drug-resistance testing is not usually recommended more than 4 weeks after ARV drugs are discontinued.

- **In patients with low HIV RNA levels:** Drug-resistance testing is not usually recommended in patients with a plasma viral load <500 copies/mL.

- **INSTI resistance testing** is not recommended in treatment naïve patients with no known risk of INSTI resistance.

Quick Reference Pocket Guide

- https://www.seaetc.com/provider-resources/reference/

IDSA Guidelines

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