Interactive ART Cases From the Clinic(ians): Case-Based Panel Discussion

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Financial Relationships With Ineligible Companies (Formerly Described as Commercial Interests by the ACCME) Within the Last 2 Years:

Dr Saag has received research grants and support awarded to his institution from Gilead Sciences, Inc and ViiV Healthcare. (Updated 8/30/22)

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Learning Objectives

After attending this presentation, learners will be able to assess and select antiretroviral therapy in patients who:

- Are starting initial therapy
- Have ARV-associated weight gain
- Are or plan to become pregnant
- Have a virologic blip
- Have discordant CD4 cell count response
- Are at risk for anal carcinoma

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Question

What regimen should I use as initial therapy?

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Case 1

- 48 yo man presents with newly diagnosed HIV infection
- Asymptomatic
- **Initial:** HIV RNA 280,000 c/ml
  CD4 count 65 cells/ul
- Other labs are normal
- Genotype is Wild-type virus
- No prior medical history. Normal renal function
- Okay to start therapy

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ARS Question 1: Which regimen would you choose?

ⓘ Start presenting to display the poll results on this slide.

Question

What regimen should I use as initial therapy (3 years from now)?

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ARS Question 2: Which regimen would you choose?

1. TAF/ FTC (fdc) + DTG
2. TAF/ FTC / BIC (fdc)
3. Cabotegravir + RPV IM every 8 weeks
4. Islatravir + Lenacapavir SQ q 6 mon
5. bNAB + (Leronlimab or Albuvirtide) SQ QOW
6. Some other option….

- 48 yo man newly dx HIV
- Asymptomatic
- HIV RNA 280,000 c/ml
  CD4 65 cells/ul
- Other labs are normal
- Wild-type virus
- No prior medical history
- HBV immune
- Normal renal function
- Ok to start therapy

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ARS Question 2: Which regimen would you choose?

ⓘ Start presenting to display the poll results on this slide.

Question

Seems like we are now starting ARV therapy for about everyone, what about starting therapy for an **Elite Controller**?

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Case 2

- 30 yo male was diagnosed with HIV infection 7 years ago
- Asymptomatic
- **Initial:** HIV RNA < 50 c/ml (HIV DNA positive)
  CD4 count 870 cells/ul
- Other labs are normal
- Genotype determined from DNA is wild-type
- No prior medical history.
- Ok to start therapy if you think he should

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ARS Question 3: Would you start ARV Rx now?

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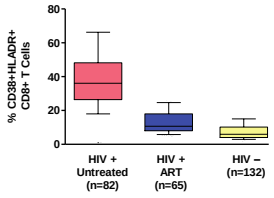
T cell "activation" is lower in treated than untreated adults, but consistently higher than "normal"



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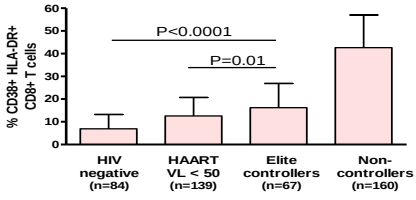
Hunt et al JID 2003, PLoS ONE 2011 and unpublished



Activation higher in elites that other "aviremic" groups even after adjustment of CD4, age and other factors

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Hunt JID 2008 (see also Lopez Abstract 366)

Question

How do I manage 'blips'?

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Case 3

- 48 yo man presents with newly diagnosed HIV infection
- Asymptomatic
- **Initial:** HIV RNA 280,000 c/ml
  CD4 count 65 cells/ul
- He is started on Bic/TAF/FTC 2 years ago
- HIV RNA remained undetectable until:
  - 4 months ago: HIV RNA 91 c/ml
  - 2 months ago: HIV RNA 185 c/ml
  - 1 week ago: HIV RNA 220 c/ml

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ARS Question 4: He claims full adherence. Which of the following is the most likely cause of the virologic failure?

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Question

How should ARV associated weight gain be managed?

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Case 4

- 47 yo woman started BIC/FTC/TAF 12 months ago as her first regimen
- **Initial:** HIV RNA 28,000 c/ml (Wild-type virus)
  CD4 count 450 cells/ul
- **Current:** HIV RNA <20 c/mL / CD4+ count 930 /uL
- Since starting her current regimen her weight has increased from **145 lbs to 171 lbs**

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ARS Question 5: At this point you would

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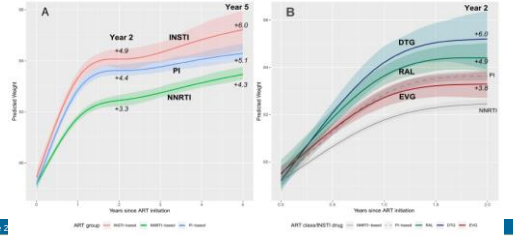
Change in Weight Overtime – NA-ACCORD

Bourgi et al CROI 2019

INSTI distribution: 4,740 Total; **1,681 (35%)** RAL; **2,124 (45%)** EVG; **935 (20%)** DTG

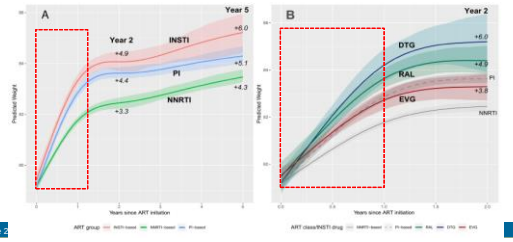


Slide 2

Change in Weight Overtime – NA-ACCORD

Bourgi et al CROI 2019

INSTI distribution: 4,740 Total; **1,681 (35%)** RAL; **2,124 (45%)** EVG; **935 (20%)** DTG



Slide 2

Change in Weight Overtime – NA-ACCORD

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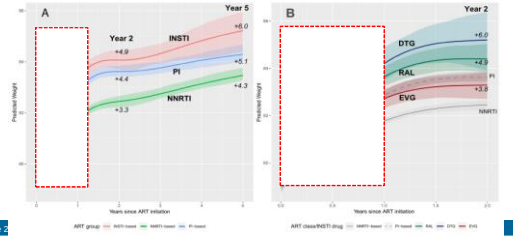

Slide 2

Question

What regimen should I use as initial therapy in a pregnant patient?

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Case 5

- 30 yo woman presents with newly diagnosed HIV infection
- Asymptomatic, 6 weeks pregnant
- **Initial:** HIV RNA 28,000 c/ml
  CD4 count 650 cells/ul
- Other labs are normal; HLA-B*5701 neg
- Genotype is Wild-type virus
- No prior medical history. First pregnancy
- Ok to start therapy

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ARS Question 6: At this point which regimen would you choose?

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DHHS Guidelines Dec 30, 2021: What to Start in Pregnancy

Two NRTIs

Abacavir/3TC or
TAF/FTC, TAF/3TC or
TDF/FTC, TDF/3TC

Plus

Bictegravir (limited data)
Elvitegravir/cobi (PK concerns)
DRV/cobi (PK concerns)
ATV/cobi (PK concerns)
DOR (no data)
Fostemsavir (limited data)
Oral or IM CAB/RPV (insufficient data)

Integrase inhibitor:
Raltegravir (twice daily) or
Dolutegravir

or

Protease inhibitor:
Darunavir/ritonavir (twice daily) or
Atazanavir/ritonavir

Slide per Dr. Raj Gandhi

Pregnancy https://clinicalinfo.hiv.gov/en/guidelines/perinatal/whats-new-guidelines

Question

How do I simplify a complex regimen?

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Case 6

- 55 yo man referred to you for evaluation
- Diagnosed 24 years ago with HIV infection
- **Initial:** HIV RNA 936,000 c/ml
  CD4 count 70 cells/ul
- **Current:** HIV RNA < 20 c/ml
- CD4 count 525 cells/ul
- Started on NEL/D4T/3TC; subsequently treated with
  - LOP-r / TDF/FTC
  - EFV/ FTC/ TDF (fdc)
  - Now **DTG / DRV/c / TAF / FTC**
- No historical resistance tests are available

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ARS Question 7: Should the Regimen be Changed?

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Question

What do I do with a patient who has persistently detectable viremia?

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Case 7

- 55 yo man referred to you for evaluation
- Diagnosed 18 years ago with HIV infection
- **Initial:** HIV RNA 936,000 c/ml
  CD4 count 70 cells/ul
- **Current:** HIV RNA 85 c/ml (prior value 62 c/ml)
  CD4 count 525 cells/ul
- Started on NEL/D4T/3TC; subsequently treated with
  - LOP-r / TDF/FTC
  - EFV/ FTC/ TDF (fdc)
  - Now **DTG / DRV/c / 3TC**
- No historical resistance tests are available

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ARS Question 8: Should you change ARV therapy now?

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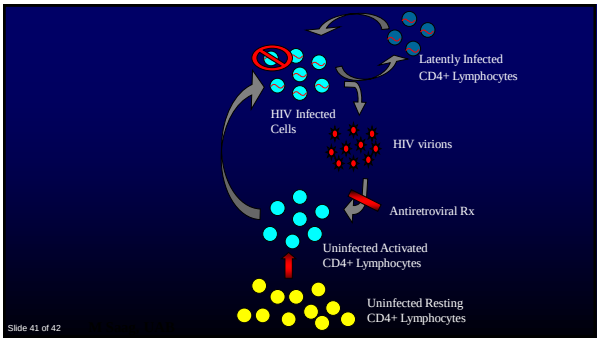

Question

What do I do with a patient who has a 'discordant' CD4 count response?

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Case 8

- 30 yo Female started on TDF / FTC /DRV / cobi 4 years ago
- **Initial:** HIV RNA 78,000 c/ml
  CD4 count 80 cells/ul
- **Now:** HIV RNA < 50 c/ml (persistently)
  CD4 167 cells/ul
- She is tolerating the regimen well

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ARS Question 9: Which regimen would you choose?

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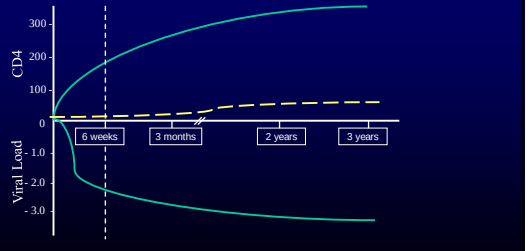
What is Immunologic Failure ?



Question

How and when do I check for anal dysplasia?

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Case 9

- 35 yo MSM is followed by you
- Diagnosed 10 years ago with HIV infection
- **Current:** HIV RNA < 20 c/ml
  CD4 count 525 cells/ul
- On BIC/ TAF / FTC
- Has a history of receptive anal intercourse
- Anal Pap smear is abnormal
- Referred for High Resolution Anoscopy (HRA)
- Noted to have High Grade Squamous Intraepithelial lesion (HSIL)

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ARS Question 10: What do you recommend at this point?

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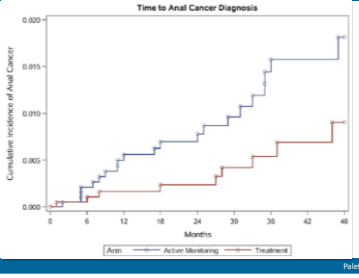
Anchor Study



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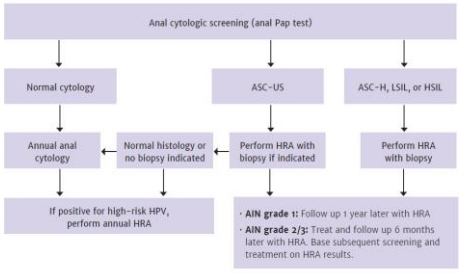
Palefsky J, et al. CROI 2022. Abstract 10

Figure 1. Follow-up of Anal Cytologic Screening Results



Conclusions

- ARV therapy should be initiated with an InSTI-based regimen (unless otherwise indicated), as close to time of Dx as possible
- Watch out for divalent cation intake in PWH taking InSTIs
- Weight gain is associated with initiation of ARV Rx, with more weight gain observed in InSTI- and TAF-containing regimens
- DTG is a drug of choice in pregnant women (GIVE FOLATE)
- Simplification of complex regimens is 'do-able'
- Virologic "Blips" are not Virologic Failure, it's biology!
- "Immunologic" Failure is not "Failure," it's biology (too)!
- Screen MSM patients for anal cancer; treat early lesions

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Question-and-Answer Session