



T.C. SAĞLIK BAKANLIĞI
SAĞLIK BİLİMLERİ ÜNİVERSİTESİ
TEPECİK
EĞİTİM VE ARAŞTIRMA
HASTANESİ

HASTANESİ



Yapay zeka/aplikasyon kullanıyor muyuz?



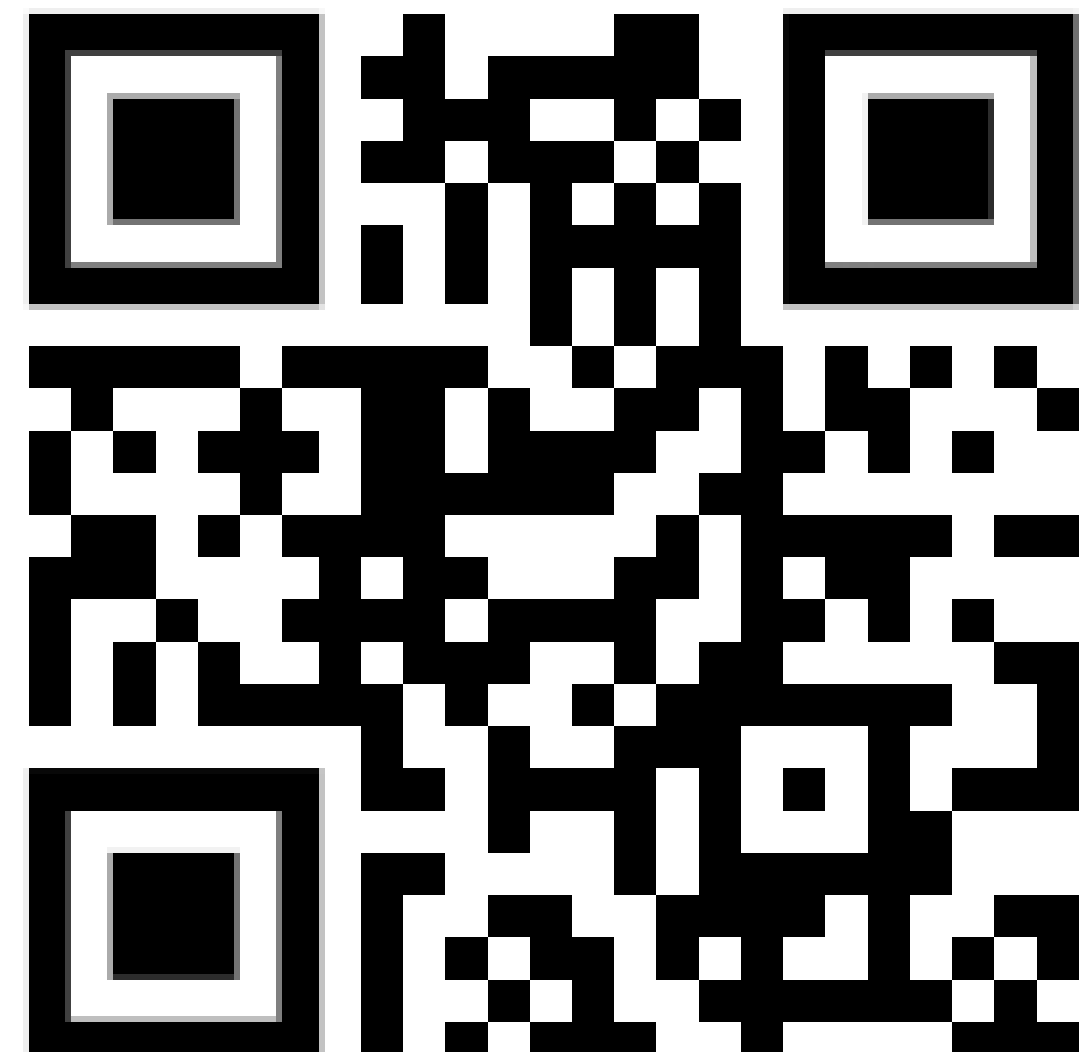
İlkay AKBULUT

S.B.Ü. Tepecik Eğitim ve Araştırma Hastanesi, İZMİR

20.05.2024

 **HIVASSIST**

 **TSISSAVIH**

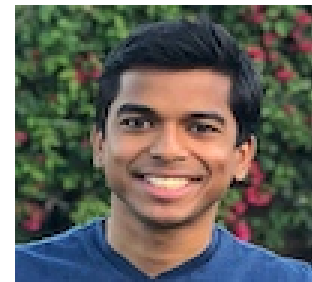


HIV-ASSIST Ekibi

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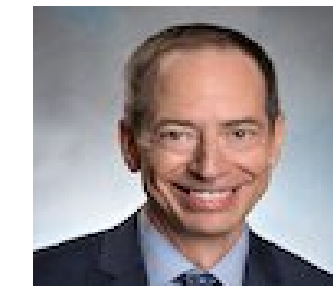


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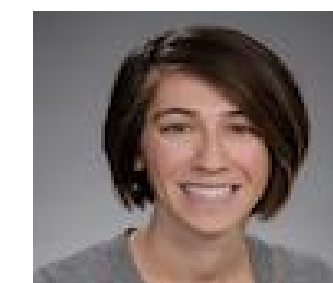
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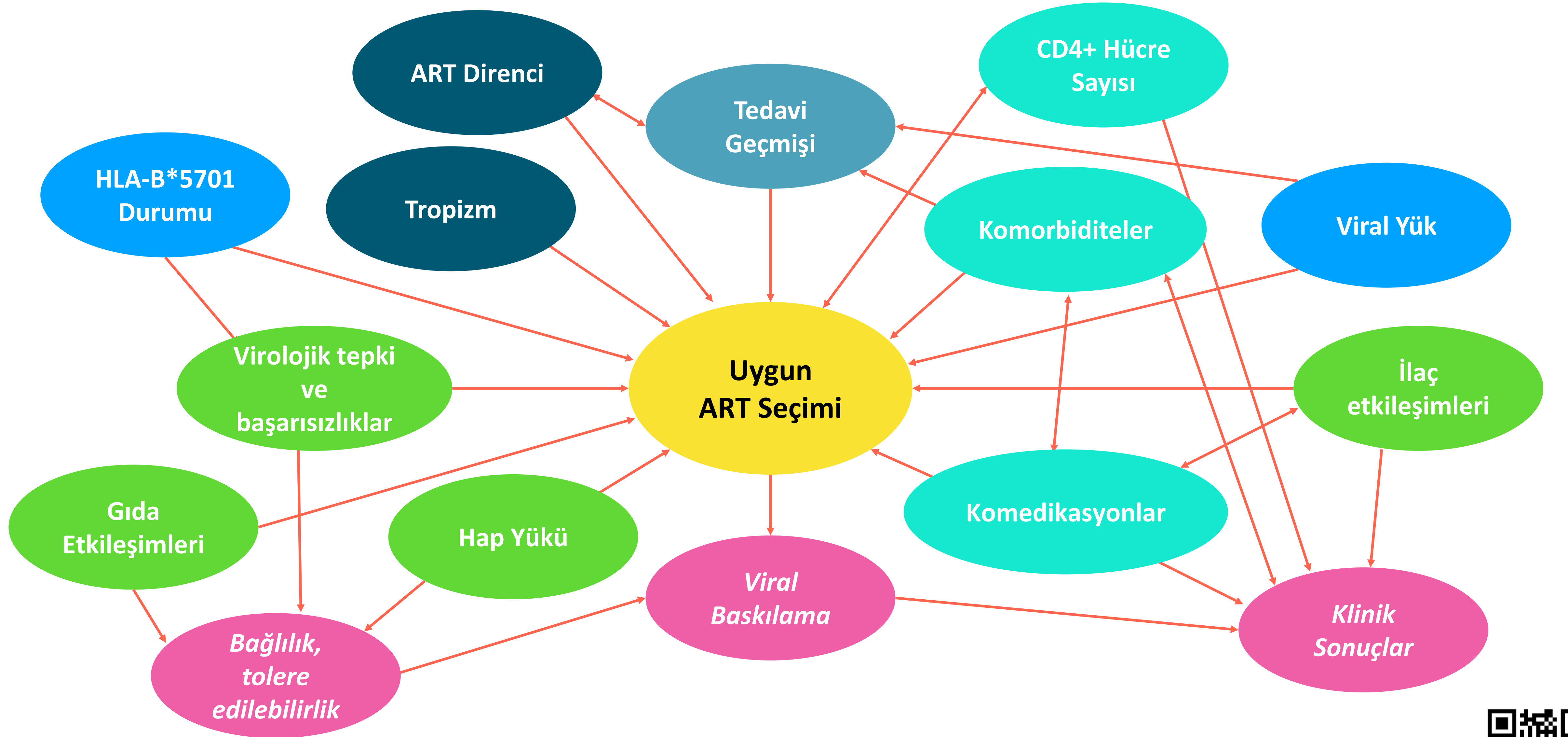
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ART Seçimi Giderek Karmaşıklaşıyor



HIV Rehberleri ve ART: Doğal Zorluklar

Rehberler

- Sık sık güncellenir
- Aynı anda birden fazla klinik değişkenin değerlendirilmesine yardımcı olamaz
- Hasta ve doktor hedefleri veya öncelikleri değerlendirmek zor
- Bireyselleştirilmiş düşünceler ve hasta tercihleri (çok sayıda karmaşık tablo)
- Belirli bir hasta için kesin olarak en iyi rejimi bildiremez

ARV'ler

- Birçok teorik ARV kombinasyonu
- Polifarmasi tüm hastalarda, özellikle de PWH'de yaygın bir sorundur ¹
- İlaç-ilaç, ilaç-hastalık, ilaç-gıda etkileşimleri
- Komorbiditeler
- Direnç

Çok Kriterli Karar Analizi (MCDA) Yardımcı Olabilir mi?

- **Çok amaçlı** herhangi bir kararı kapsayan karar teorisi
- Alternatifleri ve öncelikleri değerlendirme süreci
- Bir MCDA'daki Adımlar

1: Karar problemini tanımlayın; Hap yükü, ilaç etkileşimleri ve diğer olumsuz olayları en aza indirirken, en yüksek viral baskılanma

2: İlgili kriterleri/sonuçları seçin: Viral baskılama, tolere edilebilirlik

3: Ağırlık kriterleri : Bilimsel danışma paneli

4: Her bir kritere göre ART seçeneklerinin performansını ölçün

5: Sonuçları rapor edin ve inceleyin, yineleme/geri bildirim yoluyla iyileştirme

HIV-ASSIST: ARV Seçimi İçin Bir Karar Destek Aracı

Welcome to HIV-ASSIST

HIV-ASSIST is a free, interactive, educational tool to inform clinical decision making for ARV selection

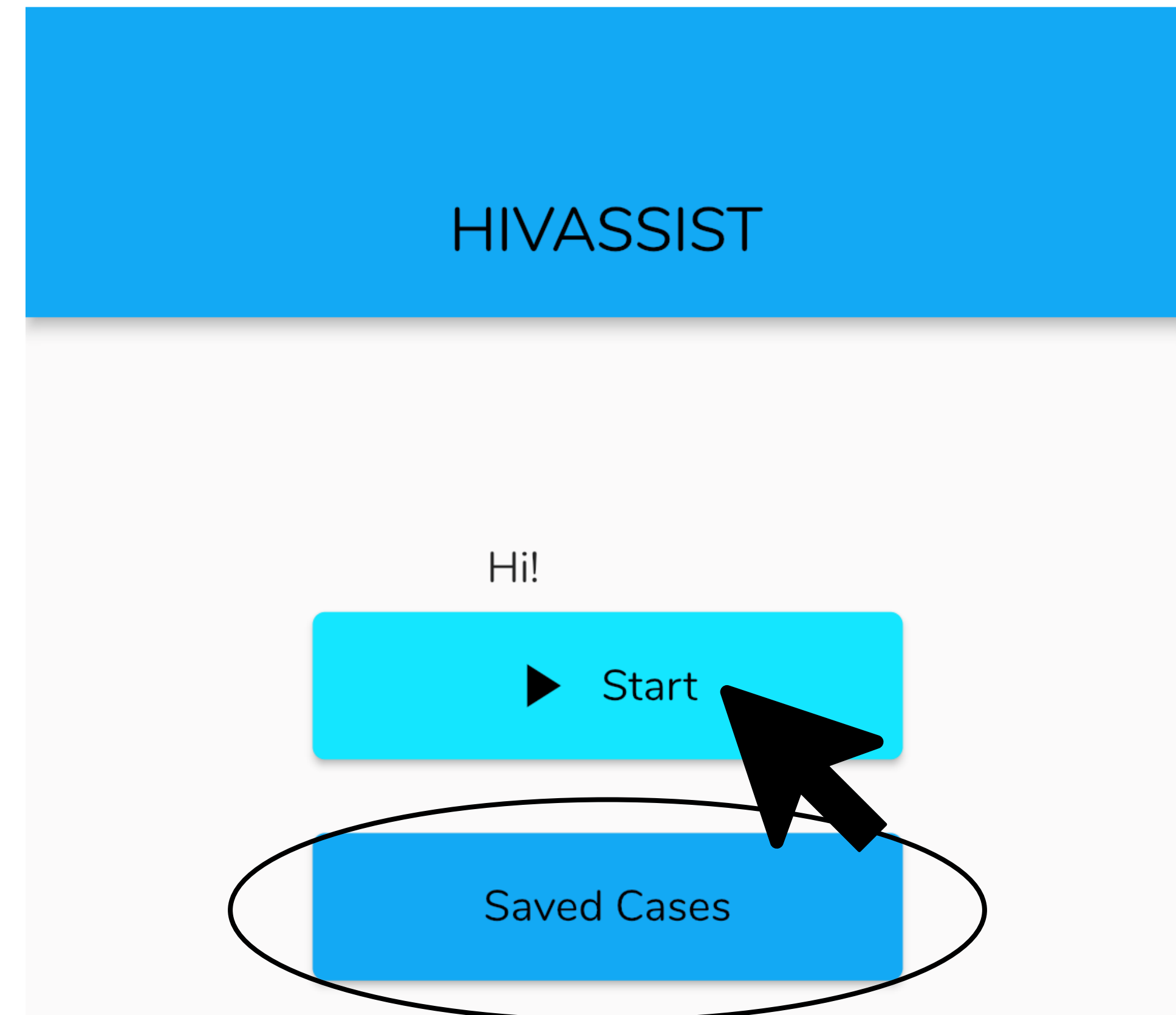
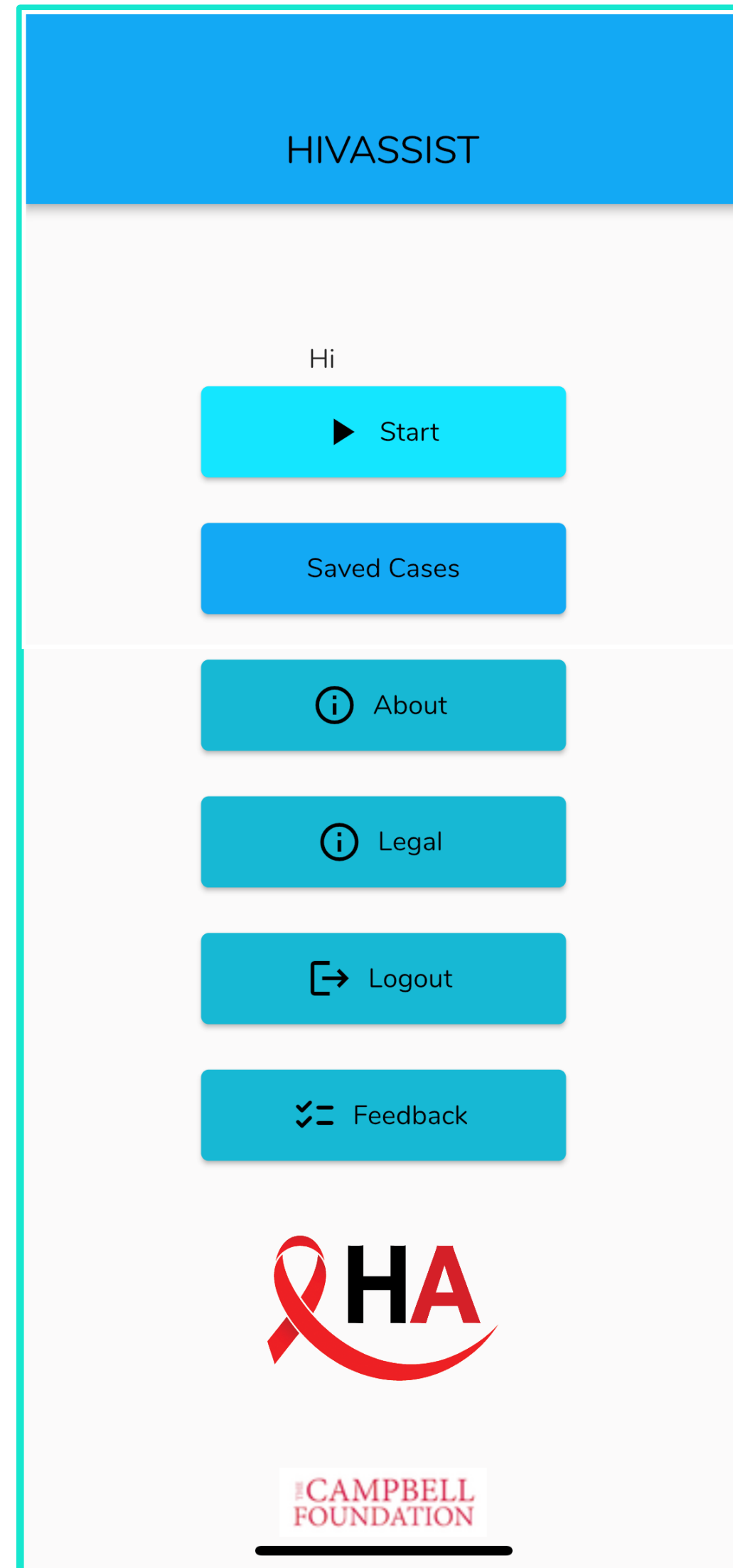
Start Now →

Take the tour ↗

www.hivassist.com



HIV-ASSIST: Mobil Uygulama



HIV-ASSIST: Kullanıcı Dostu Web Tabanlı Bir Araçla «Anahtar» Viral ve Hasta Özellikleri Girilir

HIVASSIST Home ARV Selection Tool - About - Contact Donate Log in

Home / ARV Selection Tool

Mutations

M184V

Enter the patient's HIV mutations here, either with or without the mutated amino acid but using uppercase (eg, M184V or 184V). You can use "ins" or "del" as needed (eg, K67del). Separate mutations with commas. Example: 184V, 65R

Viral Load

Suppressed (<50) for more than 6 months

Suppressed (<50) for less than 6 months or Low Level Viremia (<200)

Low (200 - 100,000)

High (100,000 - 500,000)

Very high ($\geq 500,000$)

Unknown

Select the patient's HIV viral load (if known).

CD4 Cell Count

≤ 50

≤ 100

≤ 200

> 200

Unknown

Select the patient's CD4 cell count (if known).

Adherence

Pill burden: Prioritize fewer and smaller pills

Pill frequency: Prioritize once daily dosing

Intermittent adherence: Prioritize drugs with higher barrier to resistance

Intermittent adherence: Prioritize at least 3 active drugs

Administration preference: Penalize IV/IM/SC dosing

Administration preference: Prioritize IV/IM/SC dosing

Options for patients with poor adherence.

HLA-B5701

Positive (or unknown)

Negative

Select the patient's HLA-B5701 status (if known).

Tropism

R5 virus

X4 virus

Dual Tropic virus

Unknown

Select the patient's HIV tropism (if known).

Comorbidities, ARV Side Effects, or Pregnancy

x Hyperlipidemia

Select (from drop-down list) or enter the patient's comorbidities or side effects from current ARV medications, or if the patient is pregnant.

Treatment History (Prior Failing Regimens)

x AZT (Zidovudine/Retrovir; Generic)

Enter the patient's previous ART medications on which the patient had detectable viremia (i.e., failing regimen). Do not include the current regimen (if any).

Co-medications

x Disopyramide

Select (from drop-down list) or enter patient's current medications.

Current Regimen

x CAB (Cabotegravir/Apretude)

Enter the patient's current regimen (if any).

HIV-ASSIST: Girdi, Her Hastanın Viral Özelliklerine Göre Bireyselleştirilir

Viral Özellikler

Viral yük

Direnç mutasyonları

Tropizm

Hasta Özellikleri

Komorbiditeler

Komedikasyonlar

Tedavi geçmişi

CD4+ hücre sayısı

HLA-B*5701

Bağlılık

Bireysel ARV Puanı

Hasta özelliklerine ve seçilen ART kombinasyonunun beklenen etkinliğine ve tolere edilebilirliğine dayalı ARV fayda puanı

- Stanford HIV İlaç Direnci Veritabanından mutasyon bilgileri
- Liverpool Üniversitesi'nden İlaç Etkileşimi bilgileri HIV İlaç Etkileşim Denetleyicisi

Çoklu Kriterli Karar analizi HIV-ASSIST Ağırlıklı Puanı

Rejim aktivitesi veya viral baskılanma olasılığı

- Rejimdeki tamamen veya kısmen aktif ARV sayısı
- Viral yük, CD4+ hücre sayısı ve tedavi deneyimine göre sınıflandırılmış etkinlik

Tolerans/Tercih

- Hap yükü, dozlama sıklığı
- Bireysel ARV fayda puanı (ilaç etkileşimleri, komorbidite değerlendirilmesi)
- Advers olay

Ek önceliklendirme için hasta seçenekleri:

- Haplardan hoşlanmayan hastalar (daha küçük haplara öncelik verin)
- Günde tek dozlamayı tercih eden hastalar
- Aralıklı uyumu olan hastalar
- ≥3 aktif ilacın önceliklendirmesini artırın
- IV/IM dozlama ile rejimleri cezalandırın

HIV-ASSIST Sonuçlarının Önerilen Yorumu

HIV-ASSIST ağırlıklı puanına göre sıralanan alaylar

Puan 0-2:

Etkinlik ve tolere edilebilirliğin bileşik hedefi için daha güçlü kanıt

Orta Düzey Puan:

Etkinlik için azaltılmış kanıt veya azaltılmış tolere edilebilirlik

Puan 10+:

Zayıf etkinlik, zayıf tolere edilebilirlik veya kullanım için sınırlı kanıt

HIV-ASSIST Akılcı Seçimler sunar: Klinisyen Artıları ve Eksileri Tartmalıdır!!!

- Her ART seçeneği için tek bir bağımsız bileşik puan
- Düşük ağırlıklı puanlar (< 2) "daha iyidir": viral baskılanma olasılığı ve 'iyi tolere edilir'
- Daha yüksek puanlar (≥ 2), kendi içinde "vazgeçilebilirlik" içerir.
- Klinisyenin "önceliklendirmeleri" ve "cezaları" değerlendirebilmesi için gerekçe sağlar.

Regimen	Weighted Score [▲]	Active Drugs	Total Pills	Frequency (x/day)
DTG/3TC	1	2	1	1
BIC/TAF/FTC	1	3	1	1
DTG+TAF/FTC	1	3	2	1
DTG+TDF/FTC	1	3	2	1
DTG/ABC/3TC	1.3	3	1	1
DRV/c/TAF/FTC	1.5	3	1	1
DOR/TDF/3TC	1.6	3	1	1
DOR+TAF/FTC	1.6	3	2	1
DRV/c+TDF/FTC	1.6	3	2	1

Provide feedback on these results
to help us improve HIV-ASSIST.

HIV-ASSIST Validasyonu:

Deneyimli HIV Klinisyenlerinin Algoritma Uyumunun Prospektif Analizi

- 10 farklı hipotetik vaka için uzman klinisyen ART seçimiyle karşılaştırıldı
 - Naif olgular (n = 4),
 - Tedavi deneyimli / viremi (n = 3),
 - Tedavi deneyimli / baskılanmış (n = 3)



MASSACHUSETTS
GENERAL HOSPITAL

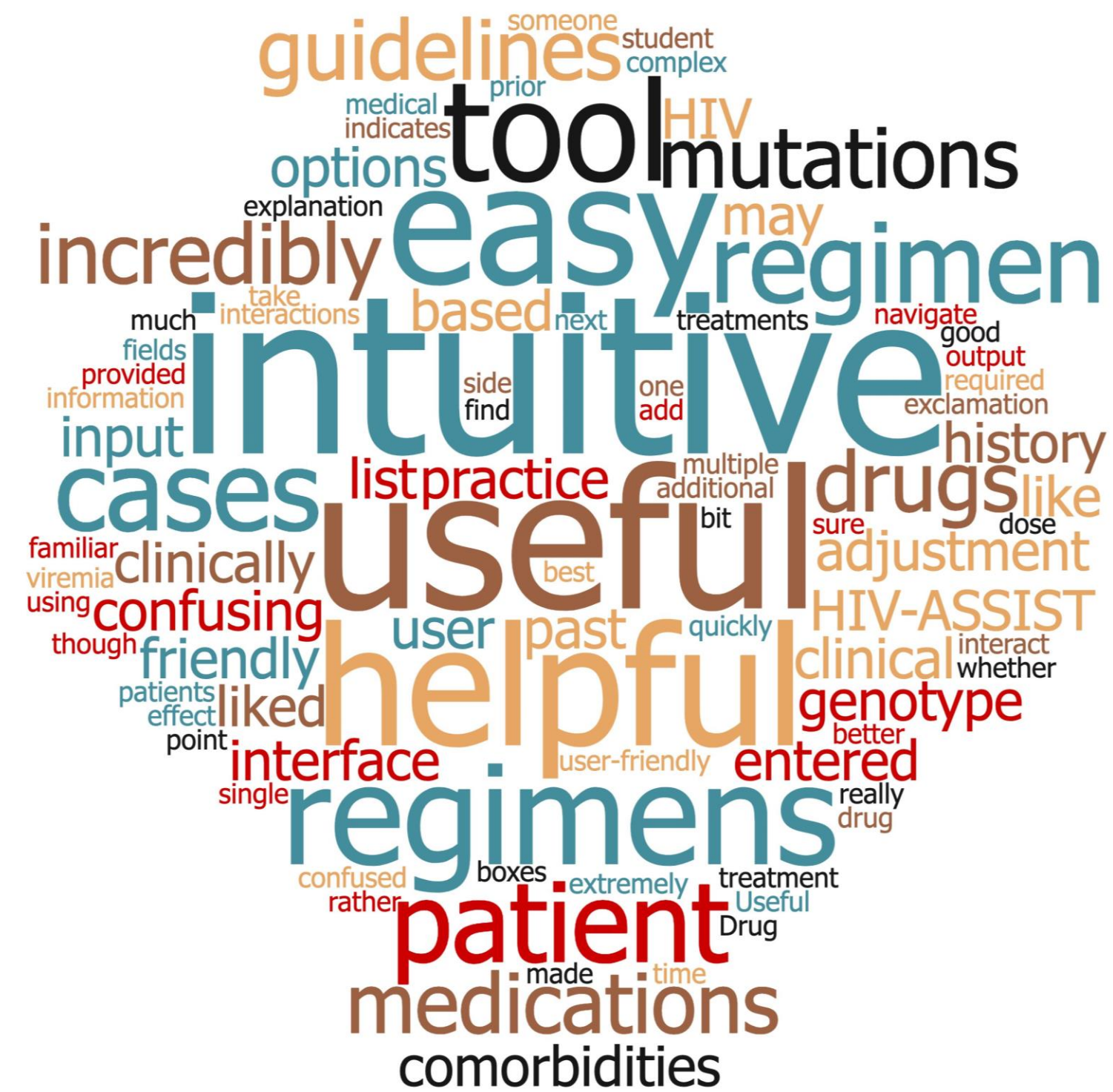
- **Birincil sonuç** : Tercih edilen uzman rejimi ile HIV-ASSIST ilk 5 rejimi arasındaki uyum

Niteliksel Geri Bildirim

- Tek başına DHHS yönergeleri:



- HIV-ASSIST ile:



HIV-ASSIST/Dışlanan İlaçlar: Varsayılan Ayar????

Her ülke/durum/hasta için bireyselleştirilebilir

Exclude these ARVs

- | | | |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> 3TC (Lamivudine/Epivir) | <input checked="" type="checkbox"/> SQV/r (Saquinavir-ritonavir/Invirase and Norvir) | <input type="checkbox"/> FOS (Fostemsavir/Rukobia) |
| <input type="checkbox"/> FTC (Emtricitabine/Emtriva) | <input checked="" type="checkbox"/> IDV/r (Indinavir-ritonavir/Crixivan and Norvir) | <input checked="" type="checkbox"/> 3TC/AZT (Combivir) |
| <input type="checkbox"/> ABC (Abacavir/Ziagen) | <input checked="" type="checkbox"/> NFV (Nelfinavir/Viracept) | <input checked="" type="checkbox"/> TDF/FTC (Truvada) |
| <input type="checkbox"/> TAF (Tenofovir/Vemlidy) | <input type="checkbox"/> ATV/r (Atazanavir-ritonavir/Reyataz and Norvir) | <input type="checkbox"/> ABC/3TC (Epzicom) |
| <input checked="" type="checkbox"/> TDF (Tenofovir/Viread) | <input type="checkbox"/> ATV/c (Atazanavir-cobicistat/Evotaz) | <input type="checkbox"/> TAF/FTC (Descovy) |
| <input checked="" type="checkbox"/> AZT (Zidovudine/Generic) | <input type="checkbox"/> ATV (Atazanavir/Reyataz) | <input type="checkbox"/> DTG/RPV (Juluca) |
| <input checked="" type="checkbox"/> D4T (Stavudine/Zerit) | <input type="checkbox"/> DRV (Darunavir/Prezista) | <input type="checkbox"/> BIC/TAF/FTC (Biktarvy) |
| <input checked="" type="checkbox"/> DDI (Didanosine/Videx) | <input type="checkbox"/> DRV/r (Darunavir-ritonavir/Prezista and Norvir) | <input type="checkbox"/> DTG/ABC/3TC (Triumeq) |
| <input type="checkbox"/> EFV (Efavirenz/Sustiva) | <input type="checkbox"/> DRV/c (Darunavir-cobicistat/Prezcobix) | <input checked="" type="checkbox"/> EVG/c/TDF/FTC (Stribild) |
| <input type="checkbox"/> ETR (Etravirine/Intelence) | <input type="checkbox"/> RAL (Raltegravir/Isentress) | <input type="checkbox"/> EVG/c/TAF/FTC (Genvoya) |
| <input type="checkbox"/> RPV (Rilpivirine/Edurant) | <input type="checkbox"/> EVG/c (Elvitegravir-cobicistat/Vitekta) | <input checked="" type="checkbox"/> RPV/TDF/FTC (Complera) |
| <input checked="" type="checkbox"/> NVP (Nevirapine/Viramune) | <input type="checkbox"/> DTG (Dolutegravir/Tivicay) | <input type="checkbox"/> RPV/TAF/FTC (Odefsey) |
| <input type="checkbox"/> DOR (Doravirine/Pifeltro) | <input type="checkbox"/> BIC (Bictegravir/NA) | <input checked="" type="checkbox"/> EFV/TDF/FTC (Atripla) |
| <input checked="" type="checkbox"/> LPV/r (Lopinavir-ritonavir/Kaletra) | <input type="checkbox"/> MVC (Maraviroc/Selzentry) | <input type="checkbox"/> DRV/c/TAF/FTC (Symtuza) |
| <input checked="" type="checkbox"/> FPV/r (Fosamprenavir-ritonavir/Lexiva and Norvir) | <input type="checkbox"/> IBA (Ibalizumab/Trogarzo) | <input checked="" type="checkbox"/> DOR/TDF/3TC (Delstrigo) |
| <input checked="" type="checkbox"/> TPV/r (Tipranavir-ritonavir/Aptivus and Norvir) | | <input type="checkbox"/> DTG/3TC (Dovato) |
| | | <input type="checkbox"/> CAB (Cabotegravir/Apretude) |
| | | <input type="checkbox"/> CAB/RPV (Cabenuva) |
| | | <input checked="" type="checkbox"/> DTG/TDF/3TC (TLD) |

Check any ARVs you would like to exclude due to Allergies, Side Effects or other reasons. Older and less preferred ARVs are pre-selected for exclusion. This will exclude any regimens that include the checked ARVs from the results. ARVs that are in the current regimen will not be excluded.

What is your preferred regimen?

Select the ART regimen you are considering for this patient.

İsteğe bağlı: düşündüğünüz bir rejim ekleyin

Submit

HIV-ASSIST Çıktısı: *Rapor* Sekmesi, En Üst Sıradaki Rejimin ve Tercih edilen Rejimin Gerekçelerini İçerir

Mutations: None
Comorbidities: Hyperlipidemia
Comedications: Atorvastatin
Treatment history: None
Current regimen: None

Adherence: No options selected
CD4: Unknown
Viral load: Unknown
HLA-B5701: Positive (or unknown)
Tropism: Unknown

[View results](#)

Instructions (Click to expand)

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HIV-ASSIST Expert Guidance **Report** Additional Information ▾

Regimen	Weighted Score ▲	Active Drugs	Total Pills	Frequency (x/day)
DTG+TDF/FTC	0.55	3	2	1
DTG+TAF/FTC	0.75	3	2	1
BIC/TAF/FTC	0.9	3	1	1
DOR/TDF/3TC	0.9	3	1	1
DOR+TAF/FTC	1.4	3	2	1
RAL+TDF/FTC	1.9	3	3	1
DRV/c+TDF/FTC	2.1	3	2	1

HIV-ASSIST Çıktısı: *Rapor* Sekmesi

Report

Preferred regimen based on the HIV-ASSIST algorithm: DTG+TDF/FTC

DTG+TDF/FTC had the lowest weighted score (0.55) among all regimens HIV-ASSIST evaluated. In general, lower HIV-ASSIST weighted scores are considered preferable with respect to achieving viral suppression and maximizing tolerability. Your patient may have other considerations we did not factor and this report should not be considered a guarantee of likely success with this patient. Please use clinical judgement in making final ARV selections. Other regimens you may wish to consider are listed below. A full list of ARV regimens analyzed by the HIV-ASSIST algorithm can be found by clicking the Expert Tab above.

Regimen	Weighted Score	Active Drugs	Total Pills	Frequency (x/day)
DTG+TDF/FTC	0.55	3	2	1

The rationale behind why this regimen was chosen by our algorithm as the most appropriate is shown below:

Score (Change)	Explanation
1.2 (+1.2)	Base score for this regimen
1.2 (+0)	Pill burden: All regimens with more than one pill once per day incur a pill burden penalty.
1.2 (+0)	Mutations: A mathematical mutation penalty was incorporated based on mutation scores from the Stanford Database.
0.7 (-0.5)	Comorbidities: This regimen was prioritized due to use of TDF in Hyperlipidemia.
0.45 (-0.25)	Comorbidities: This regimen was prioritized due to use of DTG in Hyperlipidemia.
0.55 (+0.1)	ARV-ARV Interactions: This regimen incurred a penalty due to interactions between DTG and TDF.
0.55 (Final)	Final weighted score

Hiperlipidemi ile
DTG ve TDF'ye
öncelik verildi

HIV-ASSIST: *Ek Bilgi* Sekmesi, Bireysel ARV'lerin Komorbiditelere Göre Puanlanması

HIV-ASSIST Expert Guidance Report Additional Information

Comorbidities, Side Effects, and Pregnancy Interactions

HIV-ASSIST incorporates a mathematical penalty into our algorithms for ARVs that are less preferred due to comorbidities or side-effects, based on recommendations from DHHS guidelines and HIV-ASSIST clinician and pharmacist expertise. In general, higher penalties suggest that the listed ARV is less favored in the presence of the stated comorbidity or side effect.

Chronic Renal (Kidney) Disease GFR 30-60	
3TC - penalty: 0.05	
FTC - penalty: 0.05	
ABC - penalty: 0	
TAF - penalty: 0.05	
TDF - penalty: 1	
Penalty:	1
HIV-ASSIST Notes:	Consider avoiding TDF if GFR < 60ml/min as it has been associated with renal tubulopathy. Most experts recommend switching to a TAF or TAF containing fixed dose combination, or avoiding tenofovir. When given individually, TDF is dosed 300mg q48hrs at Cr Cl 30-49. As part of TDF/FTC, dosed at 1 tablet q48hours. TDF/FTC coformulations are not recommended under CrCl < 50. More information: https://www.hiv.uw.edu/go/basic-primary-care/primary-care-medical-management/core-concept/all#chronic-kidney-disease
AZT - penalty: 0	
D4T - penalty: 0.1	
DDI - penalty: 0.25	
EFV - penalty: 0	
ETR - penalty: 0	

Bireysel ARV'ler için cezanın açıklamasını gösterir

HIV-ASSIST: *Ek Bilgi* Sekmesi, Liverpool HIV İlaç Etkileşimleri

Atorvastatin	
DRV/r - penalty: 0.5	
Penalty:	0.5
HIV-ASSIST Notes:	DVRr plus atorvastatin 10mg similar to atorvastatin 40mg administered alone. Titrate atorvastatin dose carefully and do not exceed 20mg atorvastatin daily.
Liverpool Interaction Status:	Amber/Moderate: Interaction Expected (Low Quality of Evidence)
Liverpool Notes:	Coadministration of atorvastatin (10 mg once daily) and darunavir/ritonavir (at a dose lower than recommended or with a different dosing regimen) increased atorvastatin AUC by 3-4-fold, increase Cmin by ~5.5-10-fold and increased Cmax by ~2-fold. When administration of atorvastatin and boosted darunavir is desired, it is recommended to start with an atorvastatin dose of 10 mg once daily. A gradual dose increase of atorvastatin may be tailored to the clinical response. Prezista Summary of Product Characteristics, Janssen-Cilag Ltd, July 2018. Coadministration of atorvastatin (40 mg once daily alone, 10 mg once daily with darunavir/ritonavir) and darunavir/ritonavir (300/100 mg twice daily) was studied in 15 subjects. Atorvastatin Cmax and AUC decreased by 44% and 15%, respectively and Cmin increased by 81%. Co-administration of darunavir/ritonavir with HMG-Co A reductase inhibitors may lead to adverse events such as myopathy. Titrate atorvastatin dose carefully and use the lowest necessary dose while monitoring for adverse events. Do not exceed atorvastatin 20 mg/day. Prezista Prescribing Information, Janssen Pharmaceuticals Inc, January 2018., Summary:Note: this interaction was studied using a darunavir/ritonavir dose lower than that licensed. Coadministration increases atorvastatin concentrations. Coadministration of atorvastatin (10 mg once daily) and darunavir/ritonavir (300/100 mg twice daily) resulted in atorvastatin exposure that was only 15% lower than that obtained with atorvastatin 40 mg once daily alone. When coadministered it is recommended to start with atorvastatin 10 mg once daily. A gradual dose increase may be tailored to the clinical response. A daily dose of 40 mg atorvastatin should not be exceeded with careful safety monitoring. (Note, the US product label for Prezista states not to exceed atorvastatin 20 mg/day.)

HIV-ASSIST: Herhangi Bir Rejim için Eğitim Sayfaları

Mutations: None
Comorbidities: Hyperlipidemia
Comedications: Atorvastatin
Treatment history: None
Current regimen: None

Adherence: No options selected
CD4: Unknown
Viral load: Unknown
HLA-B5701: Positive (or unknown)
Tropism: Unknown

[View results](#)

Instructions (Click to expand)

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HIV-ASSIST Expert Guidance [Report](#) [Additional Information](#)

Regimen	Weighted Score [▲]	Active Drugs	Total Pills	Frequency (x/day)
DTG+TDF/FTC	0.55	3	2	1
DTG+TAF/FTC	0.75	3	2	1
BIC/TAF/FTC	0.9	3	1	1
DOR/TDF/3TC	0.9	3	1	1
DOR+TAF/FTC	1.4	3	2	1
RAL+TDF/FTC	1.9	3	3	1
DRV/c+TDF/FTC	2.1	3	2	1

HIV-ASSIST: Herhangi Bir Rejim için Eğitim Sayfaları

Mutations: None
Comorbidities: Hyperlipidemia
Comedications: Atorvastatin
Treatment history: None
Current regimen: None

Adherence: No options selected
CD4: Unknown
Viral load: Unknown

[View results](#)

Education Sheet for DTG+TDF/FTC

Info Sheet **Dosing Info** Rationale

This is a generic educational information sheet for 2 NRTIs + 1 INSTI regimens.

[HIV-ASSIST Expert Guidance](#) [Report](#) [Additional](#)

Regimen	Weighted
DTG+TDF/FTC	0.55
DTG+TAF/FTC	0.75
BIC/TAF/FTC	0.9
DOR/TDF/3TC	0.9
DOR+TAF/FTC	1.4
RAL+TDF/FTC	1.9
DRV/c+TDF/FTC	2.1

Overview

Regimens containing one INSTI (i.e. RAL, EVG/c, and DTG, BIC) combined with 2 NRTI are well-studied and supported in literature. Current recommendations by DHHS (2022) and IAS-USA (2022) suggest that an INSTI + 2NRTI are "Recommended as an initial regimen" in most treatment naïve patients. **DTG with TAF/FTC or TDF/FTC, and BIC/TAF/FTC are considered the preferred regimens within HIVASSIST for treatment naïve patients.** DTG/ABC/3TC continues to be recommended in DHHS (2022) guidance, but ABC containing regimens are no longer preferred in IAS-USA guidance owing to "concerns about its association with cardiovascular disease, risk of abacavir hypersensitivity, burden of HLA B*B5701 testing, and no substantial advantage over DTG/3TC." EVG/c/TAF/FTC and EVG/c/TDF/FTC are also available coformulated, but have the disadvantage of including an INSTI with a lower barrier to resistance and inclusion of a booster which can have drug interactions. Consequently, EVG/c regimens are no longer preferred in most instances, and have a higher HIVASSIST 'weighted score'. Similarly RAL containing regimens (with TAF/FTC or TDF/FTC) are regimens that can be 'recommended in certain clinical situations' according to DHHS (2022) guidelines; RAL containing regimens are ranked lower within HIVASSIST owing to a lower barrier to resistance and the potential for treatment emergent virus after failure.

3 2 1

HIV-ASSIST Çıktısı: Eğitim Sayfaları Önemli Literatürden Kanıtların Özetlerini İçerir

[Efficacy in Clinical Trials](#)

[TREATMENT NAİVE DTG or BIC](#)

Trial Name	Drugs Compared	Participants	Study Results
SINGLE	ABC/3TC/ DTG vs. TDF/FTC/EFV	833 tx-naive	At week 48, the proportion of participants with an HIV-1 RNA level of less than 50 copies per milliliter was significantly higher in the ABC/3TC/DTG group than in the TDF/FTC/EFV group (82% vs. 81%) due primarily to discontinuations because of adverse events (2% in the ABC/3TC/DTG group and 10% in the TDF/FTC/EFV group). At week 144, ABC/3TC/DTG remained superior (71% vs 63% viral suppression). ^[9, 10]
FLAMINGO	2 NRTIs plus DRV/r or DTG	484 tx-naive	At 48 weeks, DTG outperformed DRV/r (viral suppression 83%, respectively). Discontinuation due to adverse effects was higher in the DRV/r group than the DTG group (2% vs. 10%, respectively), which contributed to the difference in the rate. DTG continued to outperform DRV/r at 96 weeks (viral suppression 80% vs 66%). ^[11, 12]
SPRING-2	2 NRTIs plus DTG or RAL	822 tx-naive	At 48 and 96 weeks, once-daily DTG was non-inferior to once-daily RAL (88% vs 85% viral suppression at 48 weeks, and 76% at 96 weeks), with a similar safety profile. ^[13, 14]
ARIA	ABC/3TC/ DTG vs. TDF/FTC+ATV/r	495 tx-naive women	At 48 weeks, ABC/3TC/DTG was superior in terms of virologic suppression (82% vs 71%). There were fewer virological nonresponses and fewer discontinuations due to adverse events in the ABC/3TC/DTG arm. ^[15]
Trial 1490	TAF/FTC/ BIC vs. TAF/FTC/DTG	657 tx-naive	At week 96, HIV-1 RNA less than 50 copies per mL was achieved by 269 (84%) of 320 participants in the bicitegravir group and 281 (86%) of 325 in the dolutegravir group (difference -2.3%, 95% CI -7.9 to 3.2), demonstrating non-inferiority of the bicitegravir regimen compared with the dolutegravir regimen. ^[16]
Trial 1489	TAF/FTC/ BIC vs. ABC/3TC/DTG	631 tx-naive	At week 96, bicitegravir, emtricitabine, and tenofovir alafenamide was non-inferior to dolutegravir, abacavir, and lamivudine, with 276 (88%) of 314 participants in the bicitegravir group versus 283 (90%) of 315 participants in the dolutegravir group achieving HIV-1 RNA less than 50 copies per mL (difference -1.9%; 95% CI -6.9 to 3.1). ^[17]
Trial 1475	BIC /TAF/FTC versus DTG + TAF/FTC	125 tx-naive	At week 24, BIC/TAF/FTC and DTG + TAF/FTC both showed high efficacy. 63/65 (96.9%) in the bicitegravir group had HIV-1 RNA loads of less than 50 copies/ml compared with 31/33 (93.9%) in the dolutegravir group (weighted difference 2.9%, 95% CI -8.5 to 14.2; p=0.50). ^[18]



Uygulama ile tanışma / Çalışma fikri



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HIV-ASSIST



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HIV Infectious Disease

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HIV-ASSIST: Choosing ART With Coinfections

Released: May 30, 2023

Podcast Episodes

Choosing ART for HIV With HBV and HCV Coinfections: Using HIV-ASSIST





HIV-ASSIST Uygulamasının Klinik Pratikte Korelasyonu



Amaç

Türkiye'de antiretroviral tedavi kararında klinisyenin seçimi ile HIV ASSIST önerilerinin uyumu ve etkileyen faktörleri incelemek amaçlanmıştır.



Metot

- Elektronik tıbbi kayıtlar kullanılarak kesitsel retrospektif
- Son 6 ayda tedavi kararı verilen tüm HIV'le yaşayan birey
- ART deneyimsiz / deneyimli 101 olgu
- Birincil sonlanım noktası; reçete edilen ART rejimleri ile HIV-ASSIST sonuçları arasındaki uyum
- Uyumu etkileyebilecek faktörler

İncelenen ortak değişkenler

[Home](#)[ARV Selection Tool](#)[About](#)[Contact](#)[Donate](#)[Log in](#)[Home](#) / [ARV Selection Tool](#)

Mutations

Enter the patient's HIV mutations here, either with or without the mutated amino acid but using uppercase (eg, M184V or 184V). You can use "ins" or "del" as needed (eg, K67del). Separate mutations with commas. Example: 184V, 65R

Viral Load

- Suppressed (<50) for more than 6 months
- Suppressed (<50) for less than 6 months or Low Level Viremia (<200)
- Low (200 - 100,000)
- High (100,000 - 500,000)
- Very high (\geq 500,000)
- Unknown

Select the patient's HIV viral load (if known).

CD4 Cell Count

- \leq 50
- \leq 100
- \leq 200
- $>$ 200
- Unknown

Select the patient's CD4 cell count (if known).

Comorbidities, ARV Side Effects, or Pregnancy

Select (from drop-down list) or enter the patient's comorbidities or side effects from current ARV medications, or if the patient is pregnant.

Treatment History (Prior Failing Regimens)

Enter the patient's previous ART medications on which the patient had detectable viremia (i.e., failing regimen). Do not include the current regimen (if any).

Adherence

- Patients with pill aversion (prioritize smaller pills)
- Patients who prefer once daily dosing
- Patients with intermittent adherence
- Increase prioritization of at least 3 active drugs
- Penalize regimens with IV/IM/SQ dosing

Options for patients with poor adherence.

HLA-B5701

- Positive (or unknown)
- Negative

Select the patient's HLA-B5701 status (if known).

Tropism

- R5 virus
- X4 virus
- Dual Tropic virus
- Unknown

Select the patient's HIV tropism (if known).

Co-medications

Select (from drop-down list) or enter patient's current medications.

Current Regimen

Enter the patient's current regimen (if any).



- Mevcut rehberler uygun ART rejimi seçimi için tek bir referans standardı olmadığını belirtmektedir.



Reçete edilen rejim, HIV-ASSIST'in önerilen ilk beş rejimi arasında yer almıyorsa, rejimler uyumsuz kabul edildi.¹



Ek olarak, klinisyenin reçete ettiği rejim ile en yüksek dereceli HIV-ASSIST önerisi (1 numaralı rejim) aynı olan rejimlerin oranını değerlendiren başka bir analiz yaptık (mutlak uyum).

Mutations: None
Comorbidities: None
Comedications: None
Treatment history: None
Current regimen: None

Adherence: No options selected
CD4: Unknown
Viral load: Unknown
HLA-B5701: Negative
Tropism: Unknown

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Instructions (Click to expand)

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HIV-ASSIST Expert Guidance

Report

Additional Information

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Show 15 entries

Regimen	↑↓ Weighted Score	↑↓ Active Drugs	↑↓ Total Pills	↑↓ Frequency (x/day)
BIC/TAF/FTC	1	3	1	1
DTG+TAF/FTC	1	3	2	1
DTG/ABC/3TC	1.3	3	1	1
DRV/c/TAF/FTC	1.5	3	1	1
DOR+TAF/FTC	1.6	3	2	1
DRV/r+TAF/FTC	1.7	3	3	1
DTG+DRV/c	2	2	2	1
EVG/c/TAF/FTC	2	3	1	1
RAL+TAF/FTC	2.1	3	3	1

Exclude these ARVs

- | | | |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> 3TC (Lamivudine/Epivir) | <input checked="" type="checkbox"/> IDV/r (Indinavir-ritonavir/Crixivan and Norvir) | <input type="checkbox"/> ABC/3TC (Epzicom) |
| <input type="checkbox"/> FTC (Emtricitabine/Emtriva) | <input checked="" type="checkbox"/> NFV (Nelfinavir/Viracept) | <input type="checkbox"/> TAF/FTC (Descovy) |
| <input type="checkbox"/> ABC (Abacavir/Ziagen) | <input type="checkbox"/> ATV/r (Atazanavir-ritonavir/Reyataz and Norvir) | <input type="checkbox"/> DTG/RPV (Juluca) |
| <input type="checkbox"/> TAF (Tenofovir alafenamide/Vemlidy) | <input type="checkbox"/> ATV/c (Atazanavir-cobicistat/Evotaz) | <input type="checkbox"/> BIC/TAF/FTC (Biktarvy) |
| <input checked="" type="checkbox"/> TDF (Tenofovir diproxil fumarate/Viread) | <input type="checkbox"/> ATV (Atazanavir/Reyataz) | <input type="checkbox"/> DTG/ABC/3TC (Triumeq) |
| <input checked="" type="checkbox"/> AZT (Zidovudine/Retrovir; Generic) | <input type="checkbox"/> DRV (Darunavir/Prezista) | <input checked="" type="checkbox"/> EVG/c/TDF/FTC (Stribild) |
| <input checked="" type="checkbox"/> D4T (Stavudine/Zerit) | <input type="checkbox"/> DRV/r (Darunavir-ritonavir/Prezista and Norvir) | <input type="checkbox"/> EVG/c/TAF/FTC (Genvoya) |
| <input checked="" type="checkbox"/> DDI (Didanosine/Videx) | <input type="checkbox"/> DRV/c (Darunavir-cobicistat/Prezcobix) | <input checked="" type="checkbox"/> RPV/TDF/FTC (Complera) |
| <input type="checkbox"/> EFV (Efavirenz/Sustiva) | <input type="checkbox"/> RAL (Raltegravir/Isentress) | <input type="checkbox"/> RPV/TAF/FTC (Odefsey) |
| <input type="checkbox"/> ETR (Etravirine/Intelence) | <input type="checkbox"/> EVG/c (Elvitegravir/NA) | <input checked="" type="checkbox"/> EFV/TDF/FTC (Atripla) |
| <input type="checkbox"/> RPV (Rilpivirine/Edurant) | <input type="checkbox"/> DTG (Dolutegravir/Tivicay) | <input type="checkbox"/> DRV/c/TAF/FTC (Symtuza) |
| <input checked="" type="checkbox"/> NVP (Nevirapine/Viramune) | <input type="checkbox"/> BIC (Bictegravir/NA) | <input checked="" type="checkbox"/> DOR/TDF/3TC (Delstrigo) |
| <input type="checkbox"/> DOR (Doravirine/Pifeltro) | <input type="checkbox"/> MVC (Maraviroc/Selzentry) | <input type="checkbox"/> DTG/3TC (Dovato) |
| <input checked="" type="checkbox"/> LPV/r (Lopinavir-ritonavir/Kaletra) | <input type="checkbox"/> IBA (Ibalizumab/Trogarzo) | <input type="checkbox"/> CAB (Cabotegravir/Apretude) |
| <input checked="" type="checkbox"/> FPV/r (Fosamprenavir-ritonavir/Lexiva and Norvir) | <input type="checkbox"/> FOS (Fostemsavir/Rukobia) | <input type="checkbox"/> CAB/RPV (Cabenuva) |
| <input checked="" type="checkbox"/> TPV/r (Tipranavir-ritonavir/Aptivus and Norvir) | <input checked="" type="checkbox"/> 3TC/AZT (Combivir) | <input checked="" type="checkbox"/> DTG/TDF/3TC (TLD) |
| <input checked="" type="checkbox"/> SQV/r (Saquinavir-ritonavir/Invirase and Norvir) | <input checked="" type="checkbox"/> TDF/FTC (Truvada) | <input type="checkbox"/> LEN (lenacapavir/Sunlenca) |

Check any ARVs you would like to exclude due to Allergies, Side Effects or other reasons. Older and less preferred ARVs are pre-selected for exclusion. This will exclude any regimens that include the checked ARVs from the results. ARVs that are in the current regimen will not be excluded. Please note, if a specific individual ARV is excluded (e.g., TDF), all combinations that include this drug (e.g., TDF/FTC) will also be excluded.

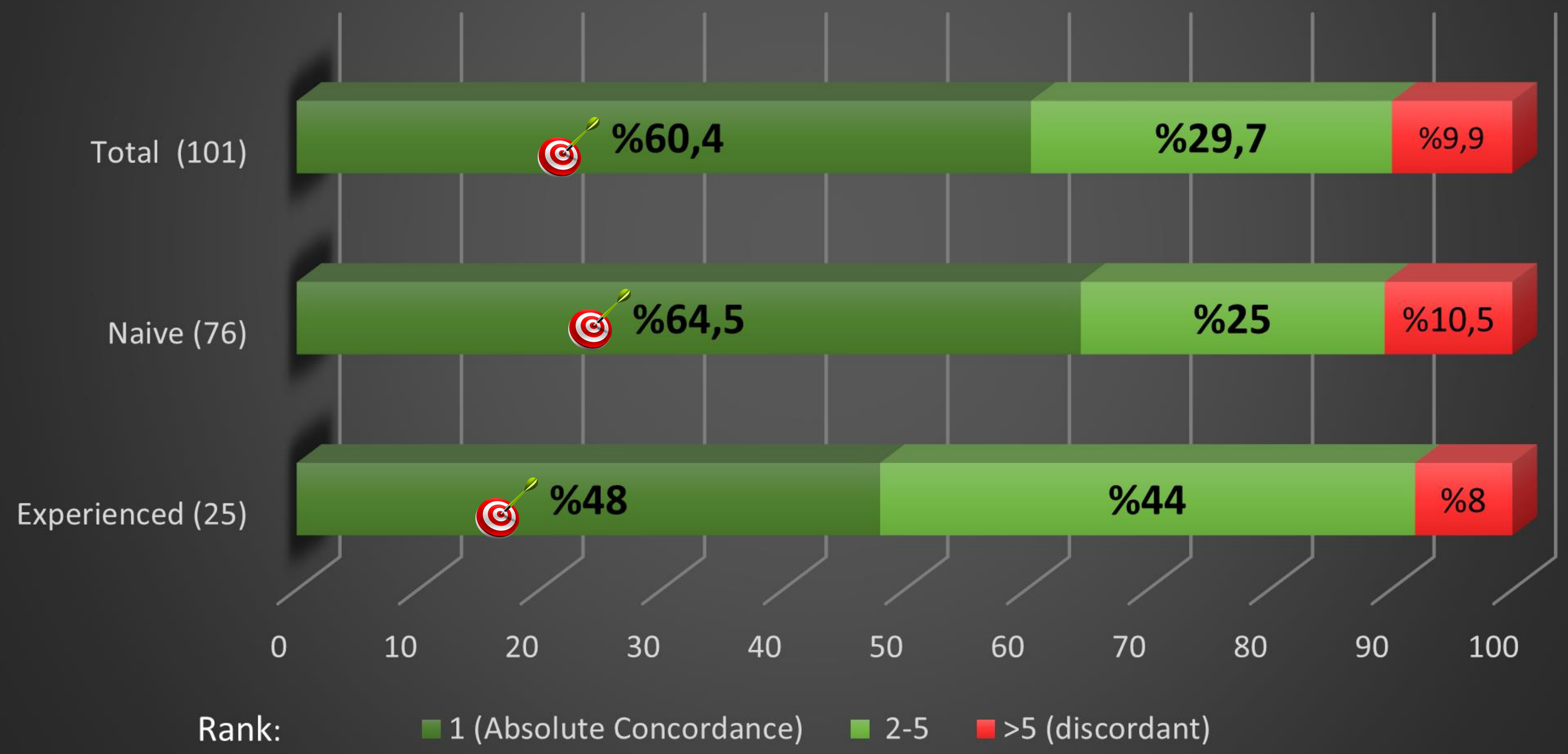


Türkiye'de ART²

- Henüz onaylanmamış moleküller;
 - Cabotegravir, fostemsavir, ibalizumab
- İlaç pazarında olmayan moleküller;
 - Atazanavir, doravirin
- Kombine tek tablet preparatı olmayanlar;
 - TAF/FTC, ABC/3TC, DTG/3TC, DTG/TDF/3TC, DRV/c, Efavirenz ve Rilpivirin tüm kombinasyonları
- Kombine halde olup moleküller tek tableti olmayanlar;
 - FTC
- Düşük doz tabletler;
 - 3TC 150 mg



Concordance and Absolute Concordance of Clinician-Prescribed ART Regimen with HIV-ASSIST Recommendation Ranking



- Treatment-experienced cases' concordance: **92%**
- Treatment-naive cases' concordance: **89.5%**
- Total cases' concordance: **90.1%**

Top 5



Association of Viral and Patient Characteristics and Differences Between Clinician Prescribed ARV Regimen and HIV-ASSIST **Top Five Recommendation**

ALL PATIENTS Concordance	Number disagreement (%)	Univariate		Multivariate	
		OR (95% CI)	p*	OR (95% CI)	p*
BMI					
<25	5 (8.3)	Reference			
>24.99	5 (12.2)	1.528 (0.413-5.656)	0.526	1.222 (0.15-9.926)	0.851
Alcohol consumption					
Yes	3 (4.8)	0.232 (0.056-0.961)	0.044	0.152 (0.01-1.211)	0.075
No	7 (17.9)	Reference			
Single tablet request					
Yes	2 (15.4)	1.818 (0.341-9.685)	0.484	8.048 (0.279-231.935)	0.224
No	8 (9.1)	Reference			
Hyperlipidemia					
No	7 (7.9)	Reference			
Yes	3 (25)	3.905 (0.856-17.81)	0.079	24.628 (1.76-344.681)	0.017
Co-trimoxazole prophylaxis					
No	5 (6.2)	Reference			
Yes	5 (25)	5.067 (1.303-19.694)	0.019	27.431 (2.27-331.11)	0.009



Association of Viral and Patient Characteristics and Differences Between Clinician Prescribed ARV Regimen and the **Highest Ranked** HIV-ASSIST Recommendation

ALL PATIENT Absolute concordance	Number disagreement (%)	Univariate		Multivariate	
		OR (95% CI)	p*	OR (95% CI)	p*
BMI					
<25	25 (41.7)	Reference			
>24.99	15 (36.6)	0.808 (0.357-1.828)	0.608	0.366 (0.077-1.752)	0.208
Alcohol consumption					
Yes	22 (35.5)	0.642 (0.284-1.452)	0.287	0.324 (0.078-1.345)	0.121
No	18 (46.2)	Reference			
Single tablet request					
Yes	3 (23.1)	0.414 (0.106-1.608)	0.202	0.613 (0.043-8.745)	0.718
No	37 (42)	Reference			
Viral load (copy/mm³)					
More than 6 Months <50	4 (21.1)	Reference			
Less than 6 Months <50, LLV	4 (40)	2.5 (0.467-13.393)	0.285	1,024 (0.088-11,878)	0.985
200-100,000	12 (35.3)	2,045 (0.553-7.567)	0.284	0.724 (0.084-6.28)	0.770
100,000-500,000	8 (47.1)	3.333 (0.776-14.313)	0.105	1.026 (0.092-11.441)	0.984
>500000	12 (60)	5.625 (1.359-23.274)	0.017	0.961 (0.079-11.722)	0.975
Hyperlipidemia					
No	33 (37.1)	Reference			
Yes	7 (58.3)	2.376 (0.697-8.092)	0.166	7.804 (1.196-50.901)	0.032
Co-trimoxazole prophylaxis					
No	23 (28.4)	Reference			
Yes	17 (85)	14.29 (3.821-53.438)	<0.001	95.257 (8.687-1044.532)	<0.001



Exclude these ARVs

- | | | |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
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Sonuçlar

Bireyselleştirilmiş ARV seçimi

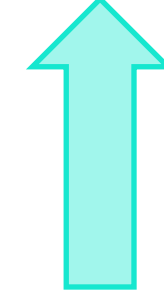
Rehberler + Multifaktöriyel sentez + Deneyim



Rehberlerin deęişikliklerinin sıklığı

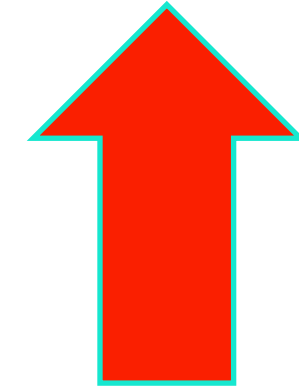


Terapötik seçeneklerin kullanılabilirliği



Klinik karar vermeyi desteklemek için

yenilikçi ve doğrulanmış araçlara duyulan ihtiyaç





Sonuçlar-2

- Kılavuzlar;
 - ART seçimi veya geçişi için tek değişkenli öneriler
- HIV-ASSIST klinisyenlerin birden fazla değiştirici faktörü aynı anda değerlendirmelerine yardımcı olabilir.



Sonuçlar-3

- Klinisyenler karar verme süreçlerine HIV-ASSIST algoritmaları tarafından yakalanmayan diğer değişkenleri dahil edebilirler.



19th European AIDS Conference

The 19th European AIDS
Conference will be held in
Warsaw, Poland, 18-21
October, 2023.




EACS
European
AIDS
Clinical
Society

ePoster 089: «Comparison of clinician preference and HIV-ASSIST recommendations in antiretroviral therapy decision-making:

A single center experience from Turkey»

Comparison of clinician preference and HIV-ASSIST recommendations in antiretroviral therapy decision-making: A single center experience from Turkiye

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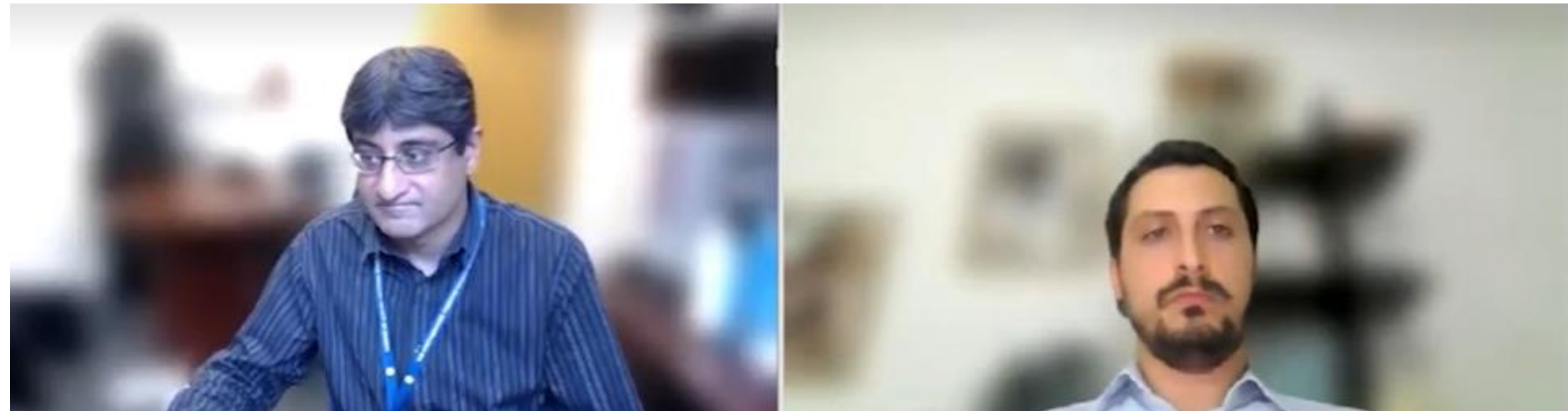
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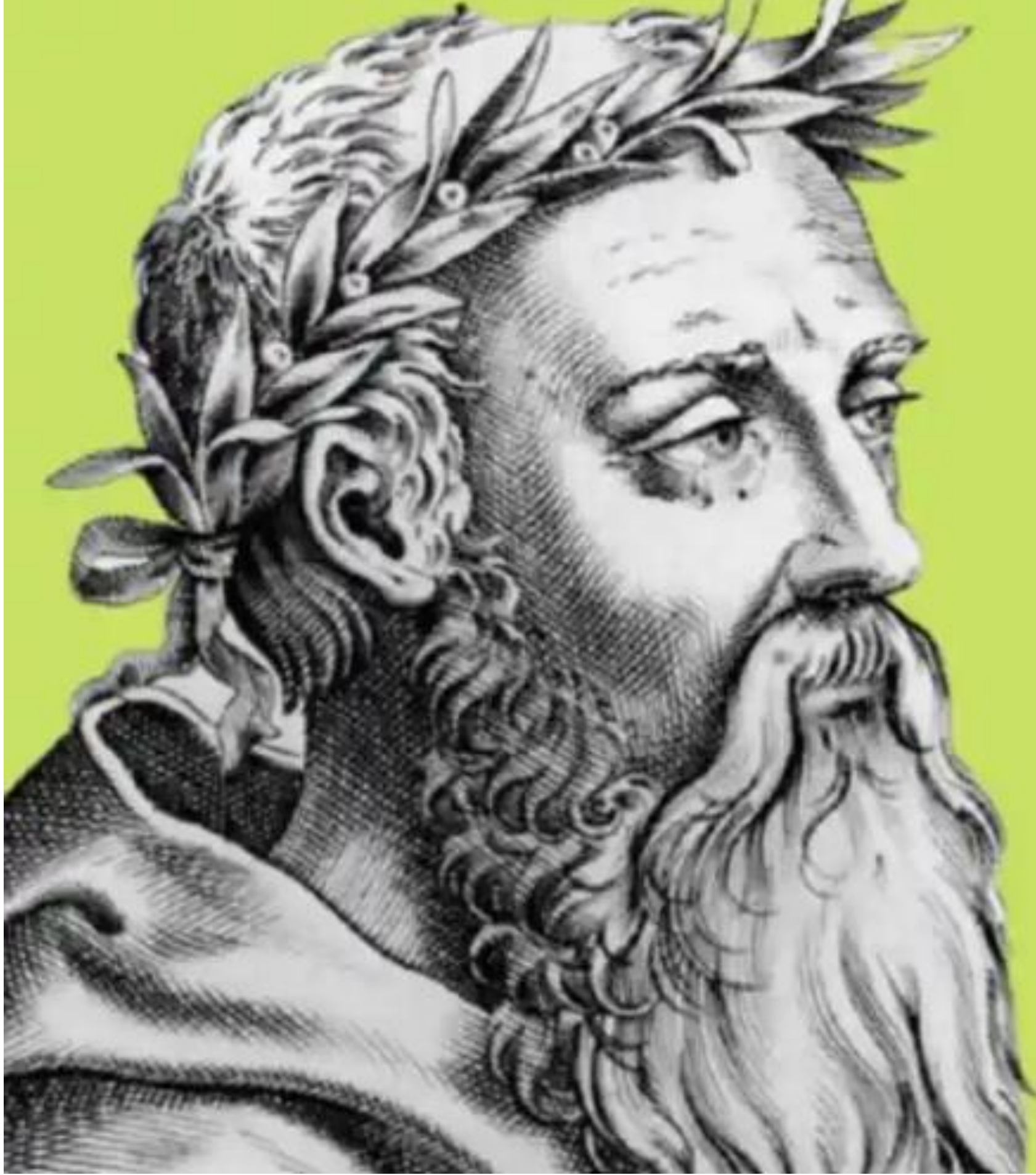




Teşekkürler

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- Dr. Manoj Maddali
- Dr. Jonathan Li
- Dr. Paul Sax





**"Değişmeyen
tek şey
değişimin
kendisidir."**

Herakleitos