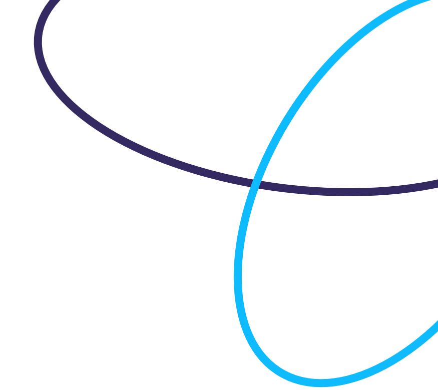
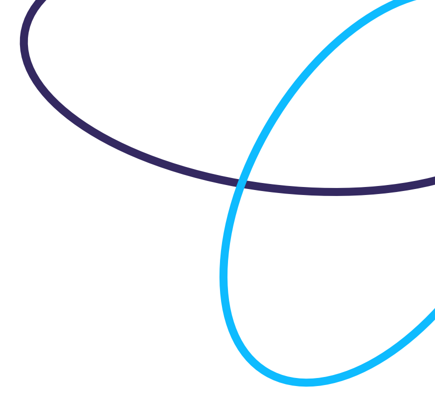


Gender Affirming Hormone Therapy and Antiretrovirals

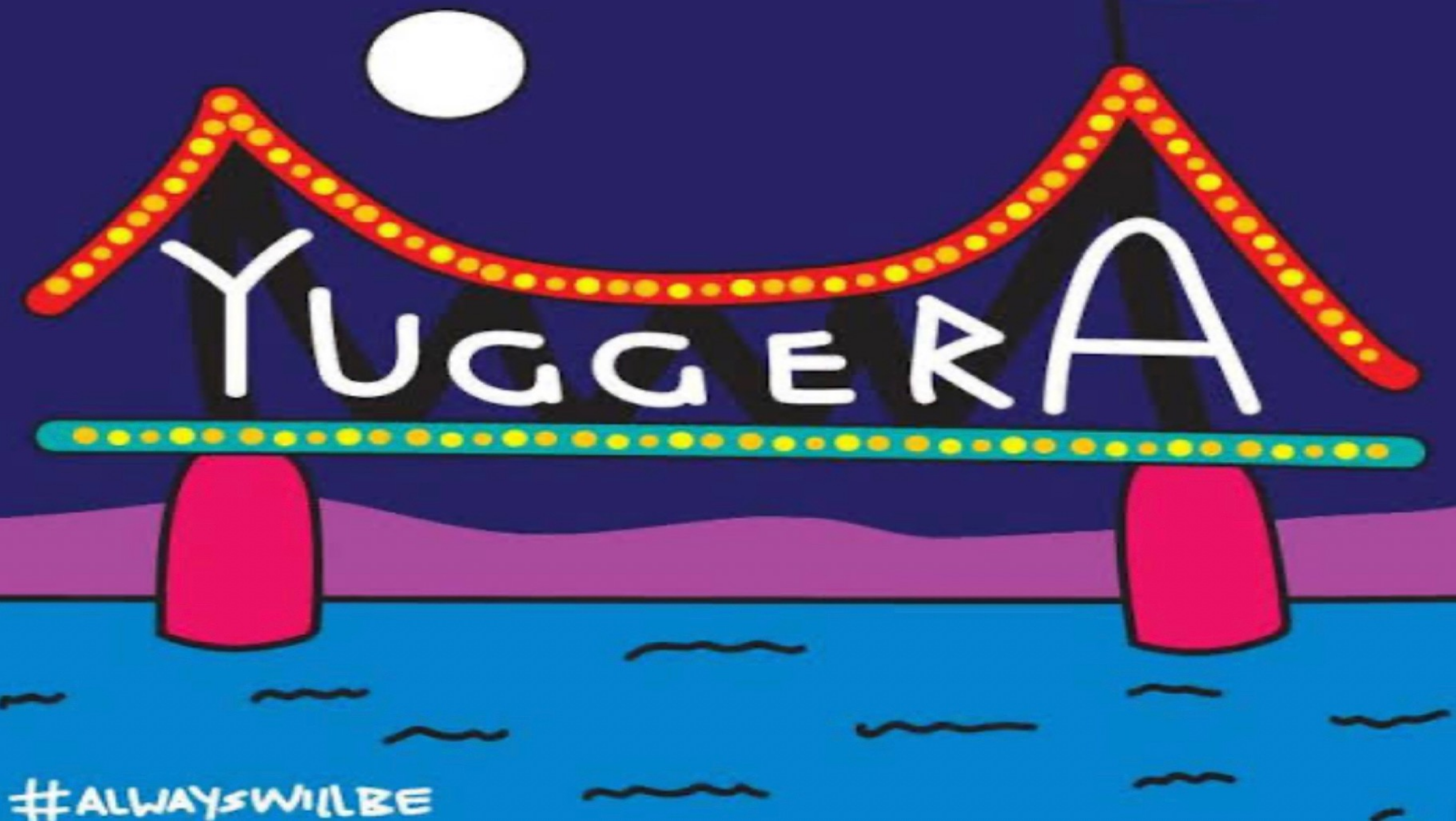
Dr Fiona Bisshop

Holdsworth House Medical Brisbane

Disclosures



- Honorarium from Liverpool University, IAS 2023
- Honoraria from Gilead, ViiV, MSD
- Advisory boards Gilead, ViiV


YUGGERA
#ALWAYSWILLBE

“There has probably never been a population both more heavily impacted and less discussed at scientific meetings than the transgender population around the world.”

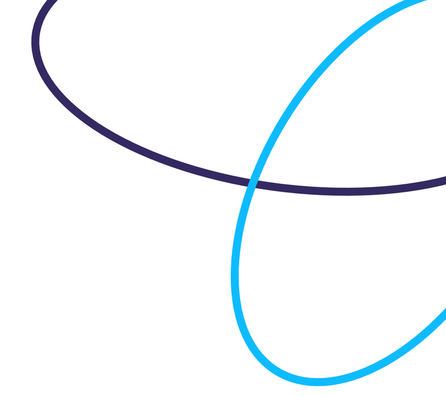
Dr Tonia Poteat, Conference on Retroviruses and Opportunistic Infection (CROI), 2016

Key Considerations

- Trans people are likely to prioritise GAHT over ART
- Both are likely to be lifelong therapies
- There are only a few important interactions
- Type of oestrogen is important
- Access to GAHT can be challenging
- Self-sourcing of hormones is common

Clinical Scenario

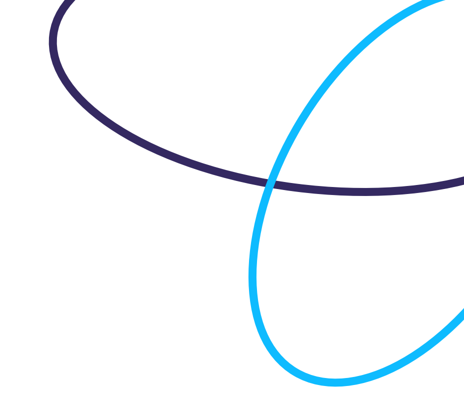
- Alia, 55 year old Colombian trans woman with HIV
- Attends sexual health clinic for first time
- “just need my antiviral scripts”
- Had been having her medications posted to her but last shipment never arrived



PMHx

- HIV Dx 1998
    - Commenced ART 2004, several Rx interruptions
    - No history of VF (no GRA available)
    - Undetectable VL since 2009 (letter from previous dr)
- Asthma, frequent exacerbations
- GAHT intermittently since 1995
- Breast augmentation 1997
- Smokes 15 cigarettes/day

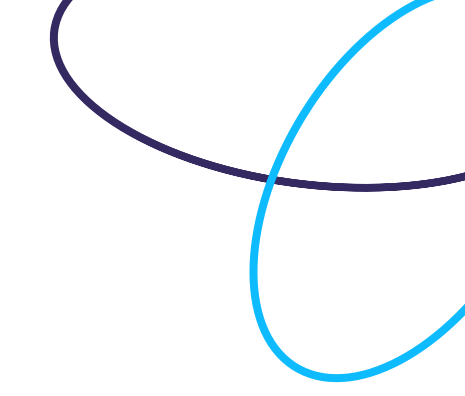
Medications



- ART: Tenofovir DF/emtricitabine + atazanavir/ritonavir
- GAHT: (sourced without prescription)
  - Microgynon 50 (ethinyl oestradiol 50mcg) 2/day
  - Spironolactone 100mg 1-2/day intermittently
- Fluticasone/vilanterol inhaler

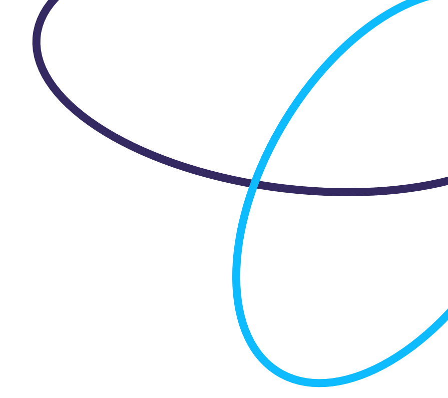
Red flags???

Liverpool Website DDI Checker



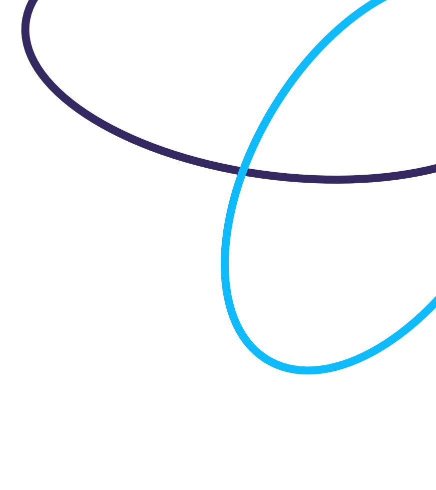
🔴 Do Not Coadminister 🟧 Potential Interaction ⚠️ Potential Weak Interaction 🔷 No Interaction Expected

	ATV/r	FTC/TDF
Ethinylestradiol	Potential Interaction	No Interaction Expected
Fluticasone	Do Not Coadminister	No Interaction Expected
Spironolactone	No Interaction Expected	No Interaction Expected
Vilanterol	Potential Interaction	No Interaction Expected



Plan

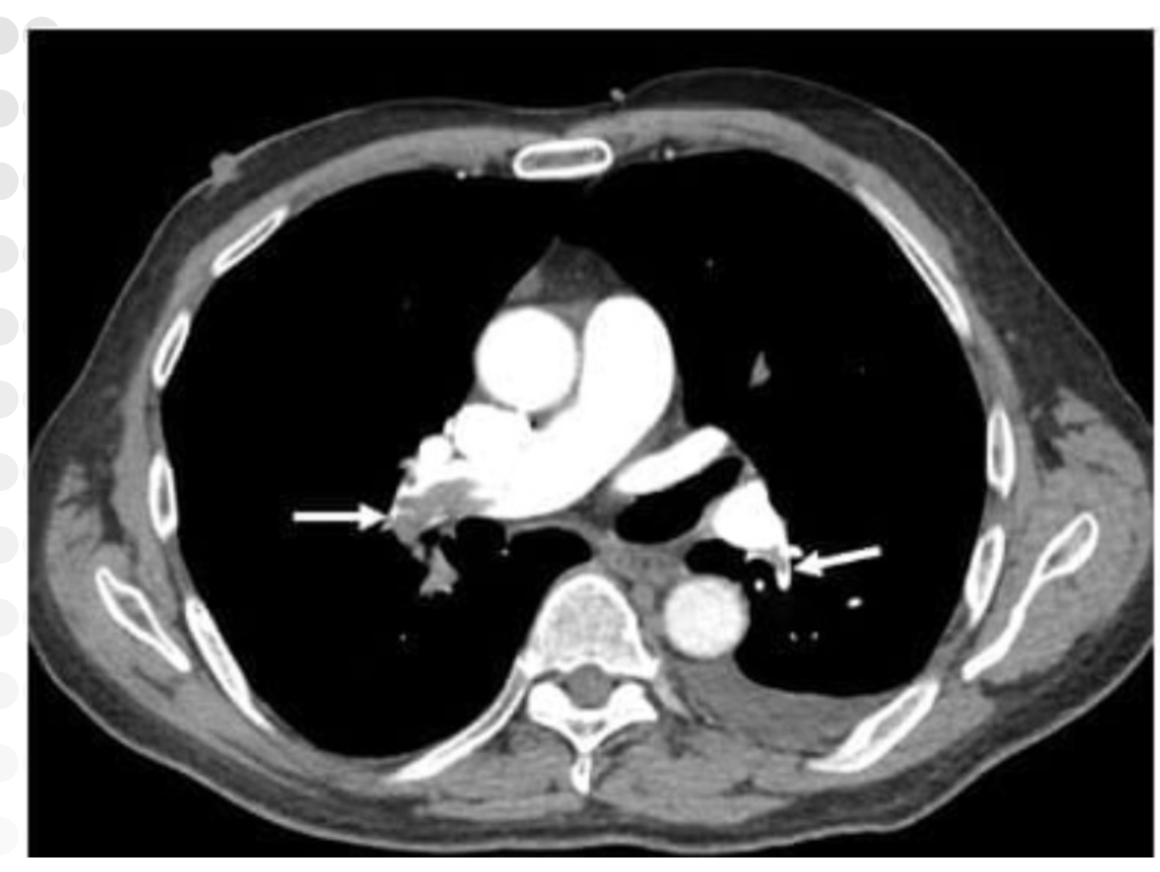
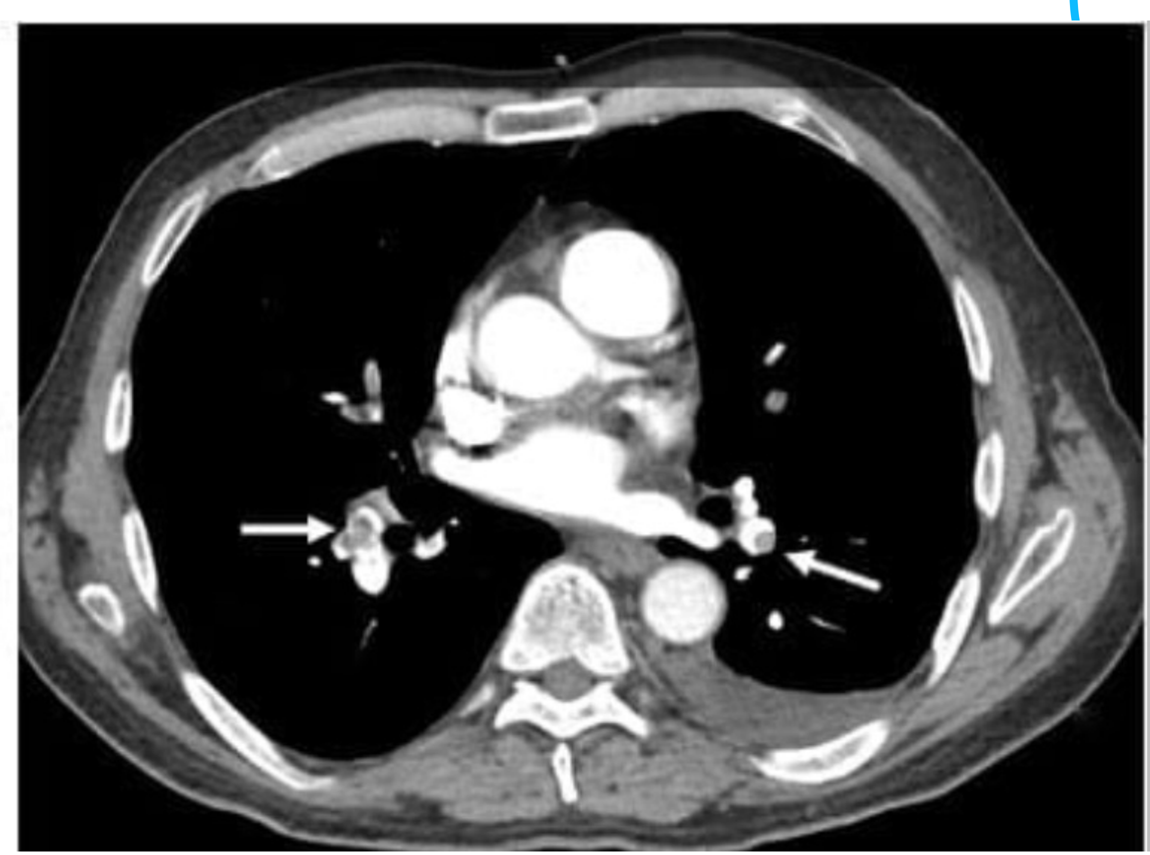
- Risk of steroid-induced Cushing’s
- Decision to switch off boosted regimen
- Commenced bictegravir/TAF/FTC
- VL remained undetectable 4/52 after switch



One Month Later…..

- Been visiting family in Colombia
- Dyspnoea and slight chest pain 3 days after arrival home
- Usual asthma puffers not providing relief

…what has happened?

LMAP
2023
LIVERPOOL MASTERCLASS IN
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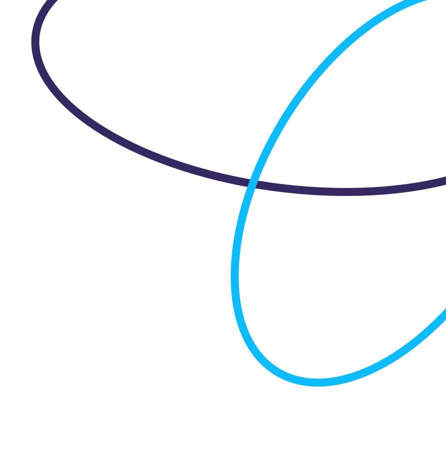


Investigations

- CTPA – **multiple bilateral PTEs**
- Venous duplex doppler scan – extensive DVT L calf
- CXR hyperinflated
- VL <20 copies/ml
- CD4 890 (43%)
- Oestradiol 42, Testosterone 2, LH <5

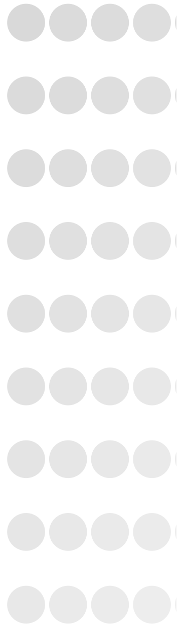
www.hiv-druginteractions.org

Contraceptive Treatment Selector

Charts revised March 2023. Full information available at www.hiv-druginteractions.org

For personal use only. Not for distribution. *For personal use only. Not for distribution.* *For personal use only. Not for distribution.* *For personal use only. Not for distribution.*

	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV oral	FTR	LEN	MVC	BIC/ F/TAF	CAB oral	CAB/ RPV	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	FTC/ TAF	FTC/ TDF
Estrogens																						
Ethinylestradiol	↑1% a	↓19% b	↓30% c	↓44% c	↓42% c	↓2%	↔↓ d	↑22%	↓20%	↑14%	↑40% e	↑	↓<1%	↑4%	↑2%	↔	↑3%	↓25% f	↓25% f	↓2%	↔	↔



- VTE risk depends on type of oestrogen, total dose and mode of delivery

- Oral ethinyl oestradiol
- Oral oestradiol valerate
- Transdermal oestradiol
  - Patches
  - Gel

HRT Treatment Selector

Charts revised February 2023. Full information available at www.hiv-druginteractions.org

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	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV oral	FTR	LEN	MVC	BIC/ F/TAF	CAB oral	CAB/ RPV	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	FTC/ TAF	FTC/ TDF
Estrogens																						
Conjugated estrogens	↑ a	↓ b	↑ a	↓ b	↓ b	↔	↓ b	↓ b	↓ b	↔	↑ a	↑ a	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Estradiol	↑ a	↓ b	↑ a	↓ b	↓ b	↔	↓ b	↓ b	↓ b	↔	↑ a	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Progestins (HRT)																						
Drospirenone	↑ a,c	↑ a,d	↑ a,d	↑ a,d	↑ a,d	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a,d	↑ a,d	↔	↔	↔
Dydrogesterone	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Levonorgestrel	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Medroxy-progesterone (oral)	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Norethisterone (Norethindrone)	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Norgestimate	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Norgestrel	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Progesterone	↑ a	↑ a	↑ a	↑ a	↑ a	↔	↓ b	↓ b	↓ b	↔	↔ e	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Other																						
Bazedoxifene	↑ a	↓ b	↑ a	↓ b	↓ b	↔	↓ b	↓ b	↓ b	↔	↑ a	↑	↔	↔	↔	↔	↔	↑ a	↑ a	↔	↔	↔
Tibolone	↔	? ↓	↔	? ↓	↔	↔	? ↓	? ↓	? ↓	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

Interactions with CAB/RPV long acting injections

Pharmacokinetic interactions shown are mostly with RPV.

QT interactions shown are with RPV.

Interactions with Lenacapavir

Residual LEN may affect exposure of sensitive CYP3A4 substrates

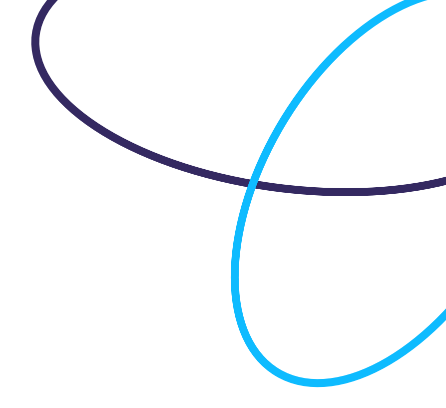
Interactions with Abacavir (ABC), Lamivudine (3TC), Tenofovir-DF (TDF) or Zidovudine (ZDV)

ABC: No clinically relevant interactions expected.

3TC: No clinically relevant interactions expected.

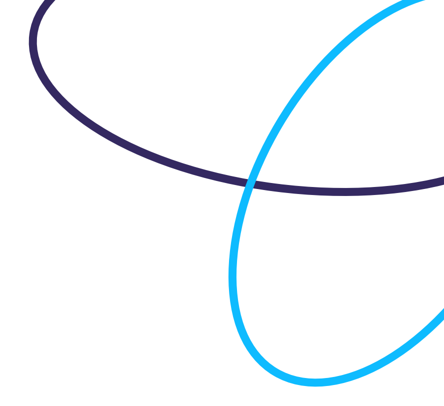
TDF: No clinically relevant interactions expected.

ZDV: No clinically relevant interactions expected.



New Plan!

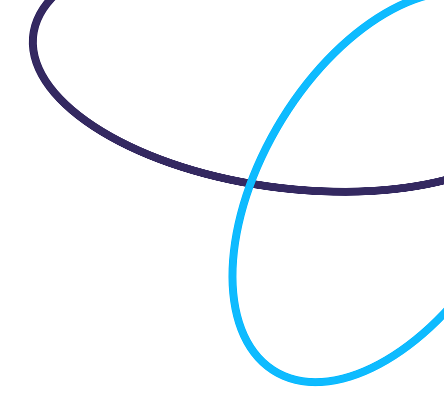
- Cease Microgynon 50
- Anticoagulation with a NOAC
- Switch to transdermal oestradiol gel
- Counsel re smoking cessation
- Test for coagulopathies
- Ask a haematologist ?lifelong anticoagulation



Six Months Later…

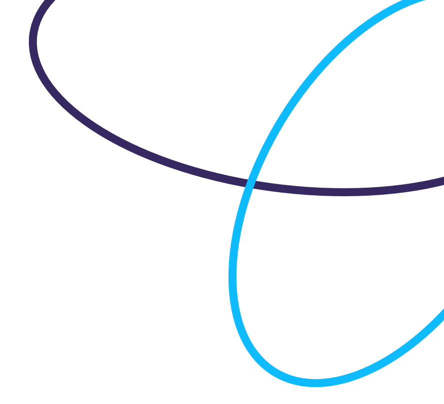
- Alia's sister aged 47 diagnosed with breast cancer
  - BRCA2+
- She is worried about her risk
- "should I be tested doc?"
- She's never had a mammogram or a PSA test

Feminising GAHT and cancer risk



- Increased risk of breast cancer
- 47-fold increase cf. cis men [1]
- Still 3x < than cis women
- Decreased risk of prostate cancer but ALSO lowers the PSA

1. De Blok CJM, Wiepjes CM et al BMJ 2019;365:1652



BRCA+ Risks

- Breast cancer – 45-70% absolute risk (in cis women)
    - Prophylactic mastectomy can be offered
    - Followed by breast reconstruction

- Prostate cancer – 20-40% absolute risk
    - Regular PSA testing +/- prostate exam

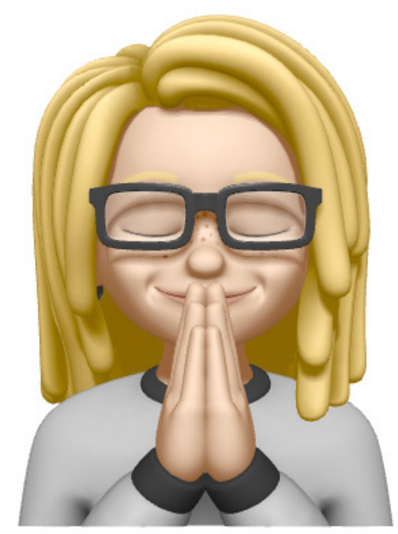
Next steps for Alia

- Referral for genetic counselling re BRCA testing
- If positive then best managed within an MDT with expertise from clinicans experienced in GAHT, and may offer:
    - Mastectomy + reconstruction or regular mammograms
    - Regular PSA and DRE
    - Consider reduction in oestradiol dose in consultation with Alia
- If negative then offer routine screening as above

Takeaway Messages

- VTE is actually not that common
- When switching ARVs, think about ALL medications affected
- Cancer screening in trans people on hormones requires an individualised approach
- Linking access to GAHT and ART will help the clinician to be more aware of prevent potential DDIs

Thank You



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