THE ALBION CENTRE
PARTNERSHIPS IN HEALTH

Durability of Single Tablet Regimens (STRs)

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Recommended Initial Antiretroviral Therapy (ART) Regimens

- Bictegravir plus tenofovir alafenamide/emtricitabine (evidence rating: AIa)
- Dolutegravir plus (all evidence ratings: AIa)
  - Tenofovir alafenamide/emtricitabine
  - Tenofovir disoproxil fumarate/emtricitabine
  - Tenofovir disoproxil fumarate/lamivudine
- Dolutegravir/lamivudine with caveats (evidence rating: AIa)


JAMA | Special Communication

Antiretroviral Drugs for Treatment and Prevention of HIV Infection in Adults
2020 Recommendations of the International Antiviral Society–USA Panel

Michael S. Saag, MD; Rajesh T. Gandhi, MD; Jennifer F. Hoy, MBBS; Raphael J. Landovitz, MD; Melanie A. Thompson, MD; Paul E. Sax, MD; Davey M. Smith, MD; Constance A. Benson, MD; Susan P. Buchbinder, MD; Carlos del Rio, MD; Joseph J. Eron Jr, MD; Gerd Fätkenheuer, MD; Huldrych F. Günthard, MD; Jean-Michel Molina, MD; Donna M. Jacobsen, BS; Paul A. Volberding, MD

JAMA. doi:10.1001/jama.2020.17025
Published online October 14, 2020.

Background

Most HIV treatment now 1 pill a day

Most patients suppressed on therapy
Historically treatment only changed if failing or causing toxicity
Progressive improvements in potency and tolerability

Is that reflected in transitioning from older to newer STRs?

Methodology

Pharmacy prescribing audit of all ASC patients prescribed STR between 2016-2020.

Age
Gender: Male, female, transgender male, transgender female, non-binary, other
Prior Aids diagnosis
Duration HIV infection
Duration ARV
Initial ARV combination
No. of pills in ARV
Most recent reported viral load
Most recent reported CD4 count
Known/suspected past ARV resistance
Cardiovascular risk factors: Documented hypertension, diabetes, smoker (or past smoker), hypercholesterolaemia, hyperlipidaemia, CV event Yes/No
Medicare eligibility status
Polypharmacy (> 5 other drugs)

Bolded variables listed below to be repeated for each new STR started

First STR start date
Which STR
STR stop
Reasons for switch 1. **Viral Failure** 2. **Toxicity** 3. **Anticipated toxicity** 4. **Convenience** 5. **Need for higher genetic barrier** 6. **Drug interaction concerns** 7. **Pregnancy** 8. **Clinical Trial**

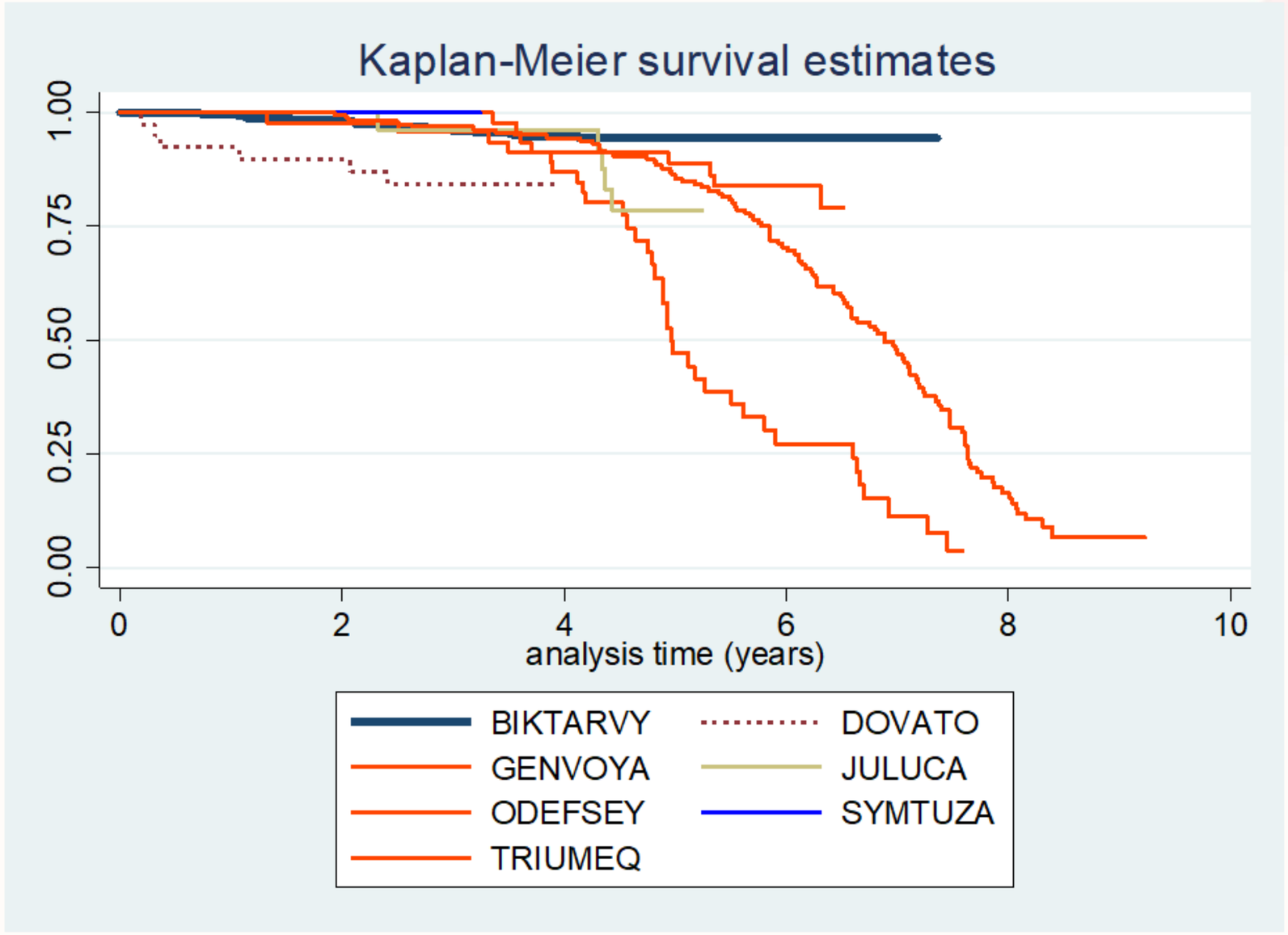
Results updated Q3 2023

Current STR usage

str_current	Freq.	Percent
BIKTARVY	550	62.93
DOVATO	39	4.46
GENVOYA	47	5.38
JULUCA	29	3.32
ODEFSEY	46	5.26
SYMTUZA	1	0.11
TRIUMEQ	162	18.54
Total	874	100.00

Viral load <200 at last assessment: 98.6%

Duration on STR

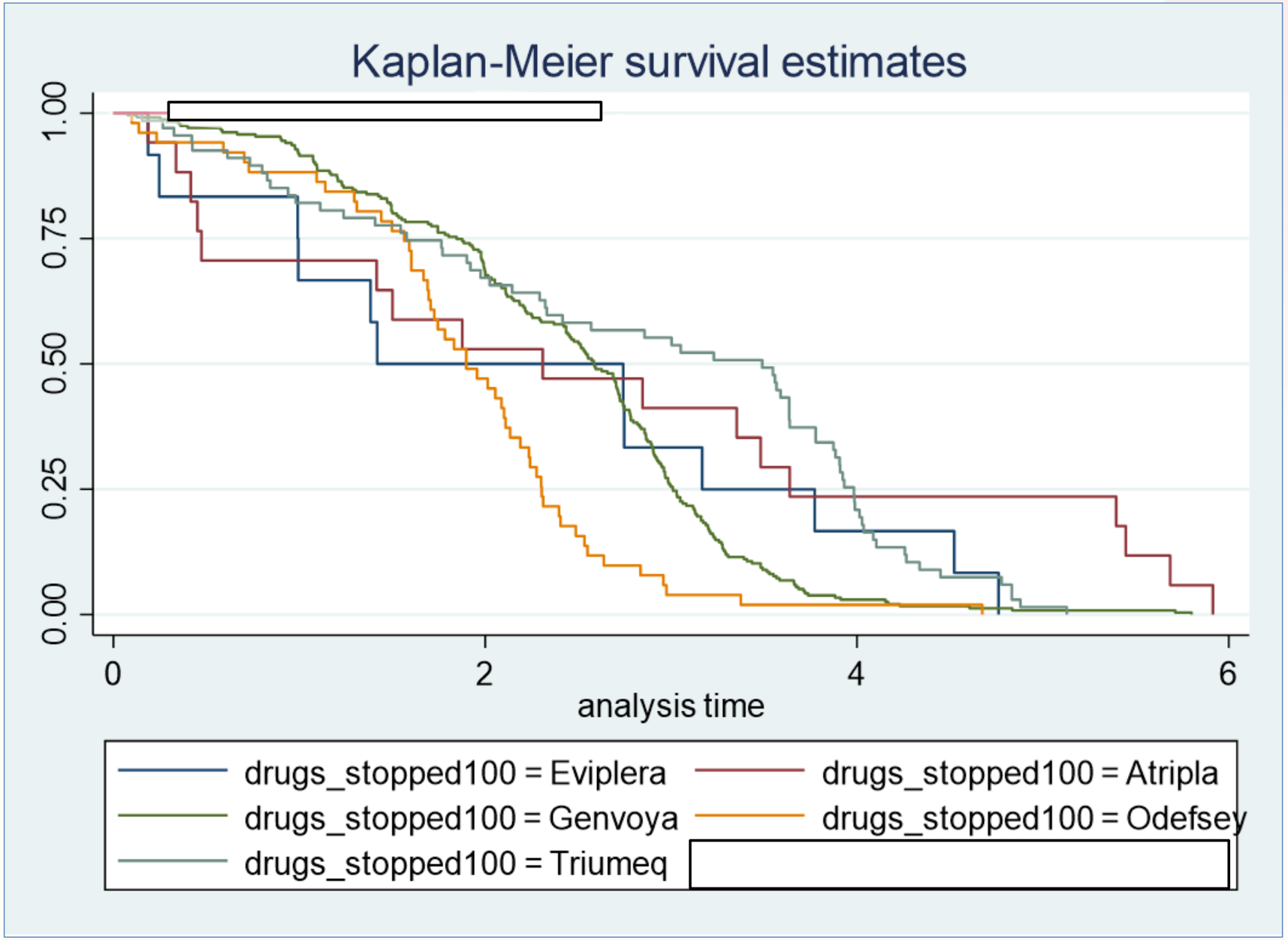


Different reasons for stopping

Most of the people who stopped Biktarvy were due to toxicity (n=20, 2.2%)

Most of the stoppings for GENVOYA and TRIUMEQ were due to anticipated toxicity n=16 (34%) and n=70 (43%) respectively (P<0.001)

Previous STR durations



Reasons for stopping previous STRs

	genetic barrier		convenience		toxicities	
Drug #1	Odds Ratio (95% CI)	p-value	Odds Ratio (95% CI)	p-value	Odds Ratio (95% CI)	p-value
Others	1		1		1	
Genyova	2.23 (1.46, 3.41)	<0.001	2.31 (1.28, 4.17)	0.005	0.13 (0.08, 0.22)	<0.001
Drug #2						
Others	1		1		1	
Odefsey	2.56 (1.40, 4.67)	<0.001	1.80 (0.90, 3.59)	0.097	0.24 (0.09, 0.63)	0.004
Drug #3						
Others	1		1		1	
Atripla	0.25 (0.083, 0.73)	0.012	0.061 (0.18, 2.10)	0.433	3.25 (1.45, 7.27)	0.004
Drug #43						
Others	1		1		1	
Eviplera	1.48 (0.47, 4.66)	0.506	0.43 (0.05, 3.38)	0.422	1.28 (0.38, 4.35)	0.688

Conclusions

In an environment where experienced prescribers are allowed unrestricted access to all STR options a progressive and more patient focused change in STR prescribing is seen from foundation STRs to predominately 2nd generation integrase inhibitors, with very low rates of treatment failure (1.4%).

Acknowledgments

Albion is a facility of SESLHN

This audit was supported by an unrestricted educational grant from Gilead Sciences.