

# NNRTI RALtegravir Lamivudine (NRL): the NatuRAL choice for ageing patients

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## BACKGROUND

Ageing patients with HIV may not be suitable for abacavir or tenofovir based HAART. There is a growing need for new treatment strategies.

## METHODS

The Joint HIV renal clinic identified 23 HIV positive patients on NNRTI Raltegravir Lamivudine(3TC) HAART and 1 patient who was on NNRTI + Raltegravir (no 3TC).

eGFR was calculated using CKD-EPI on all patients pre starting NRL and compared this to current eGFR or eGFR before switching off NRL.

Demographic, clinical and baseline data was also collected from patient records.

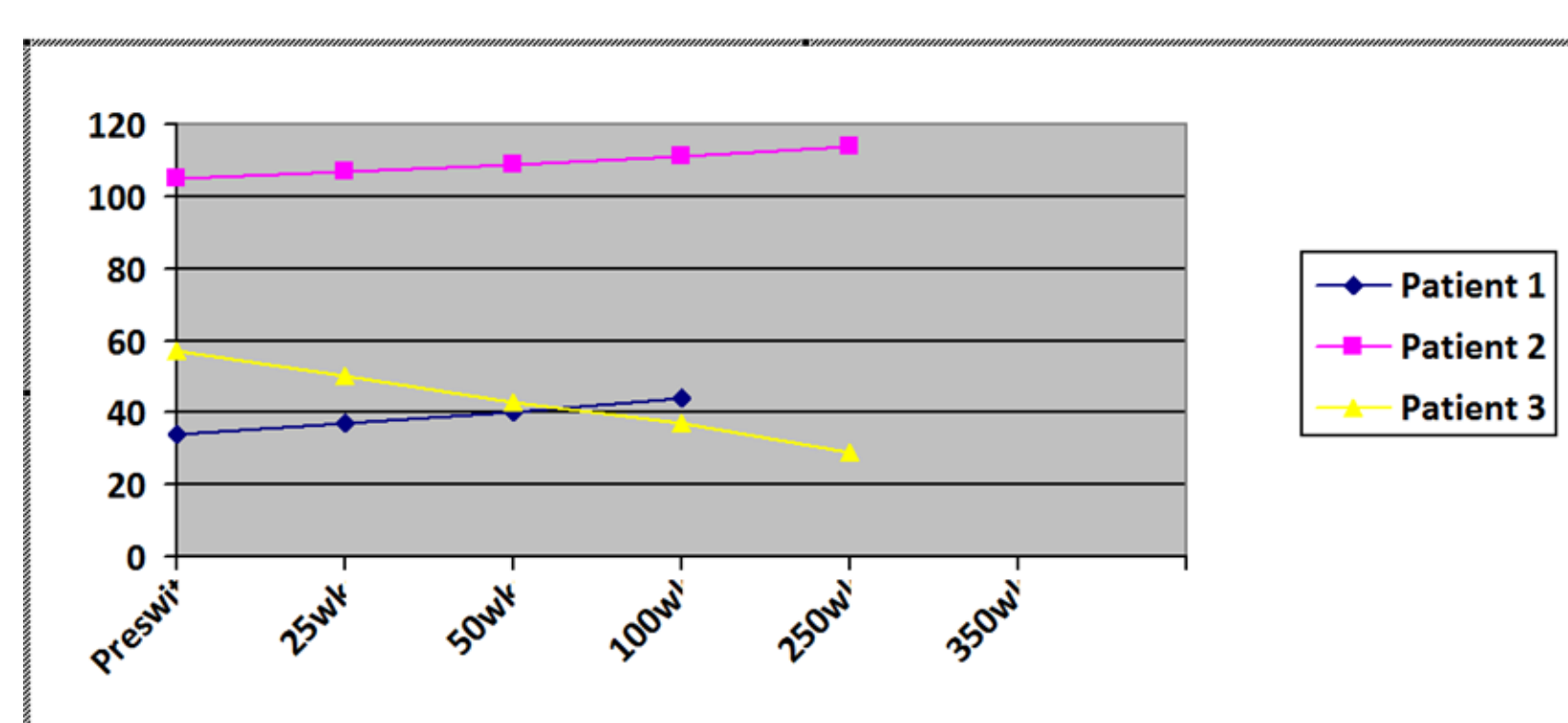
## Patients on NRL 24 (including 1 not on Lamivudine)

11 men and 13 women, average age 64years (31-94)

88% over age 50years.

- 10/24 (42%) diabetic,
- 14/24 (58%) hypertensive,
- 4/24 (16%) HIVAN
- 11/24 (46%) had CKD3 or worse pre-switch to NRL .
- 15/24 (58%) had a baseline HIV VL>100,000.

## eGFR changes using NRL 1<sup>st</sup> line



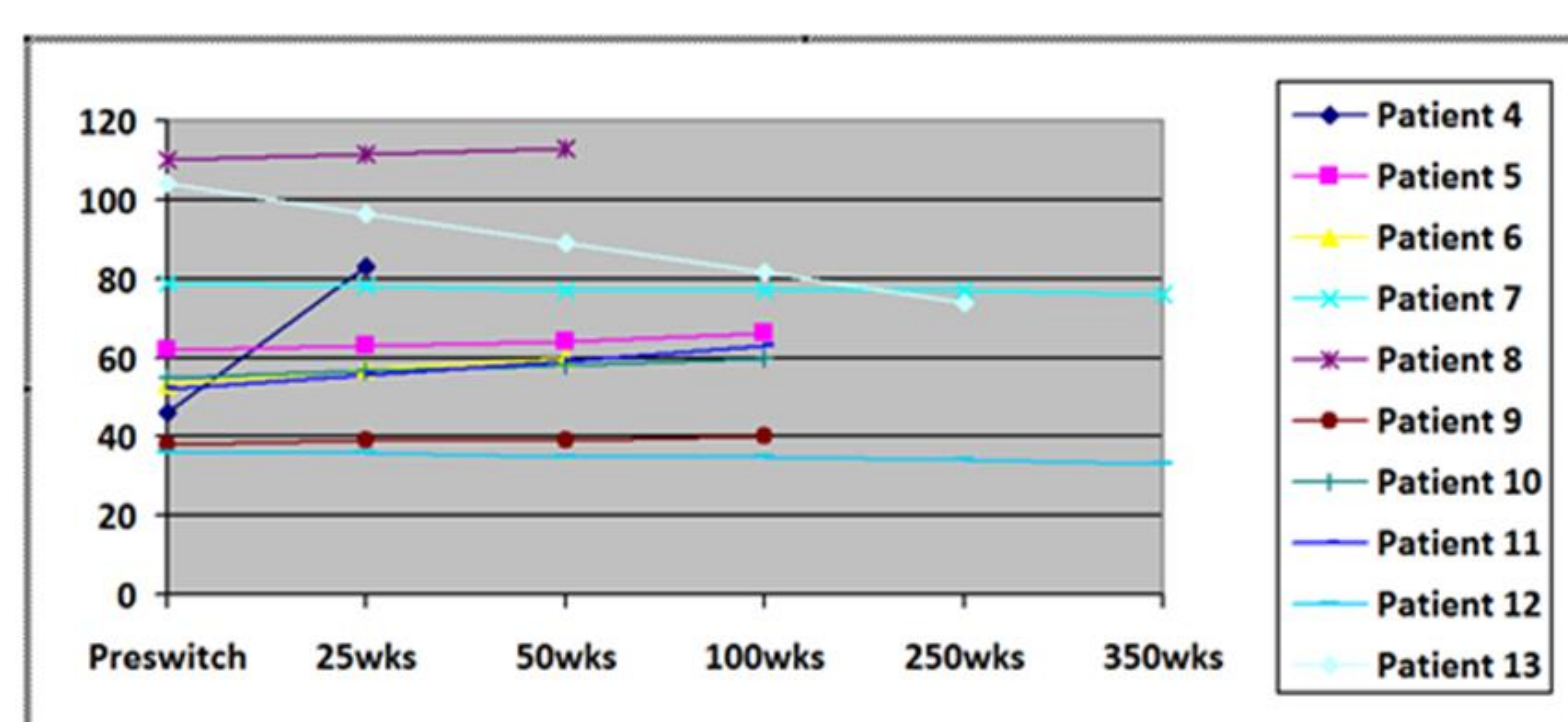
- Patient 1 BL VL 12,436
- HIVAN, Hypertension, Diabetes HbA1C 38
- Patient 2 BL VL 60,500
- Diabetes HbA1C 55 Hypertension
- Patient 3 BL VL 22,000
- Diabetic Hb1ac 49 Hypertension
- 100% VL<50

3 patients were new starters with Pre-treatment VL's were 12,436, 22,000, 60,500 copies/ml They have been on NRL for 92, 213 and 251 weeks respectively

eGFR improved in 2/3 new starters on NRL Patient 3 whose eGFR did not improve had evidence of suboptimal diabetic control.

All 3 patients were VL<50 copies/ml at last clinic visit.

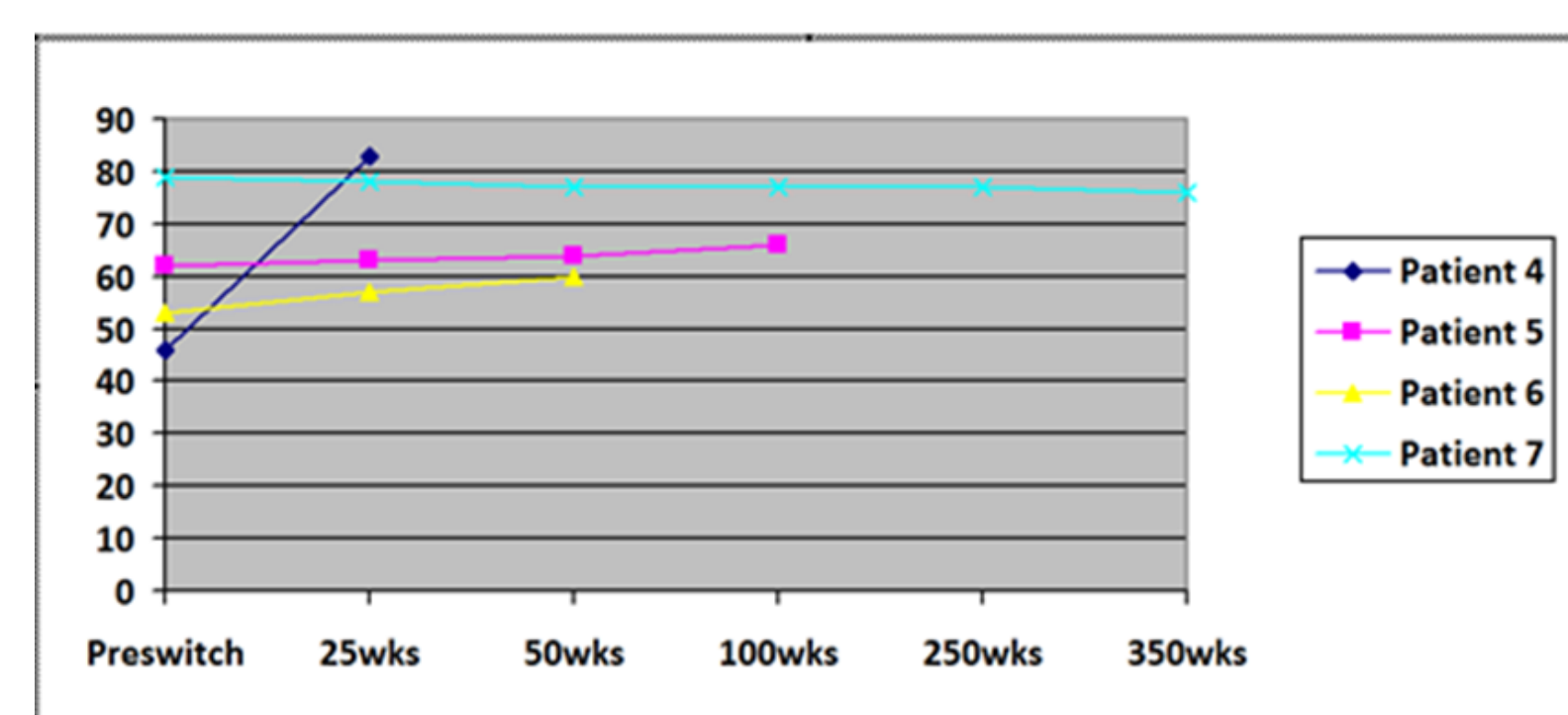
## eGFR changes switching Tenofovir containing HAART → NRL



- 70% patients improved eGFR
- Pre-switch 60% CKD 3 → Post switch 20% CKD 3
- Evidence poor diabetic & /or BP control in 30% with no eGFR improvement
- 80% improved UPCR
- 100% VL<50

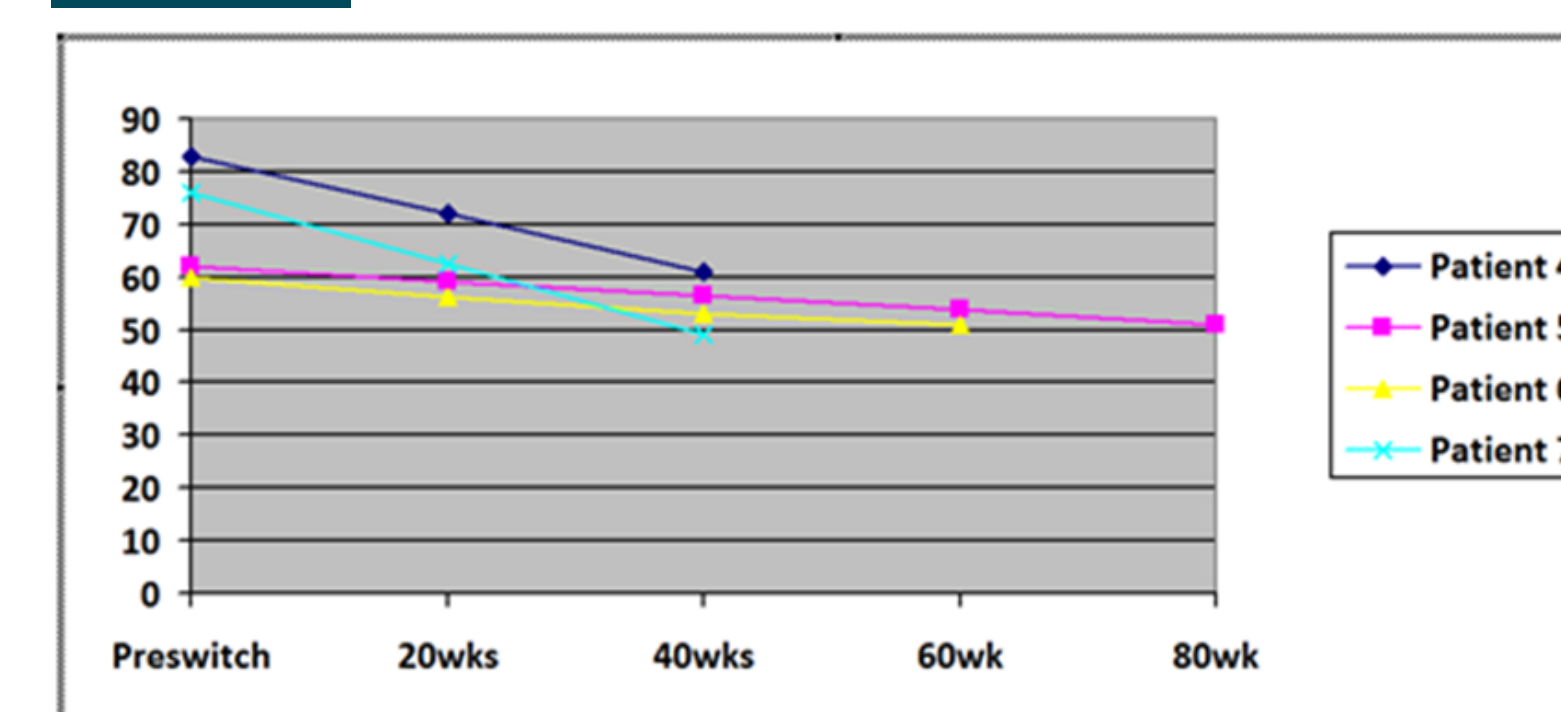
4 of these 10 were later switched from NRL to Tenofovir Alafenamide (TAF) based single tablet regimen (STR) for simplification reasons. All 4 were eGFR >60ml/min on NRL. Post TAF STR switch all showed loss in eGFR on average 18ml/min ( 9-27) with average length TAF STR treatment 55 weeks (33-84 weeks). 3/4 (75%) of these patients now have an eGFR<60ml/min.

### eGFR in patients 4,5,6,and 7 whilst on NRL



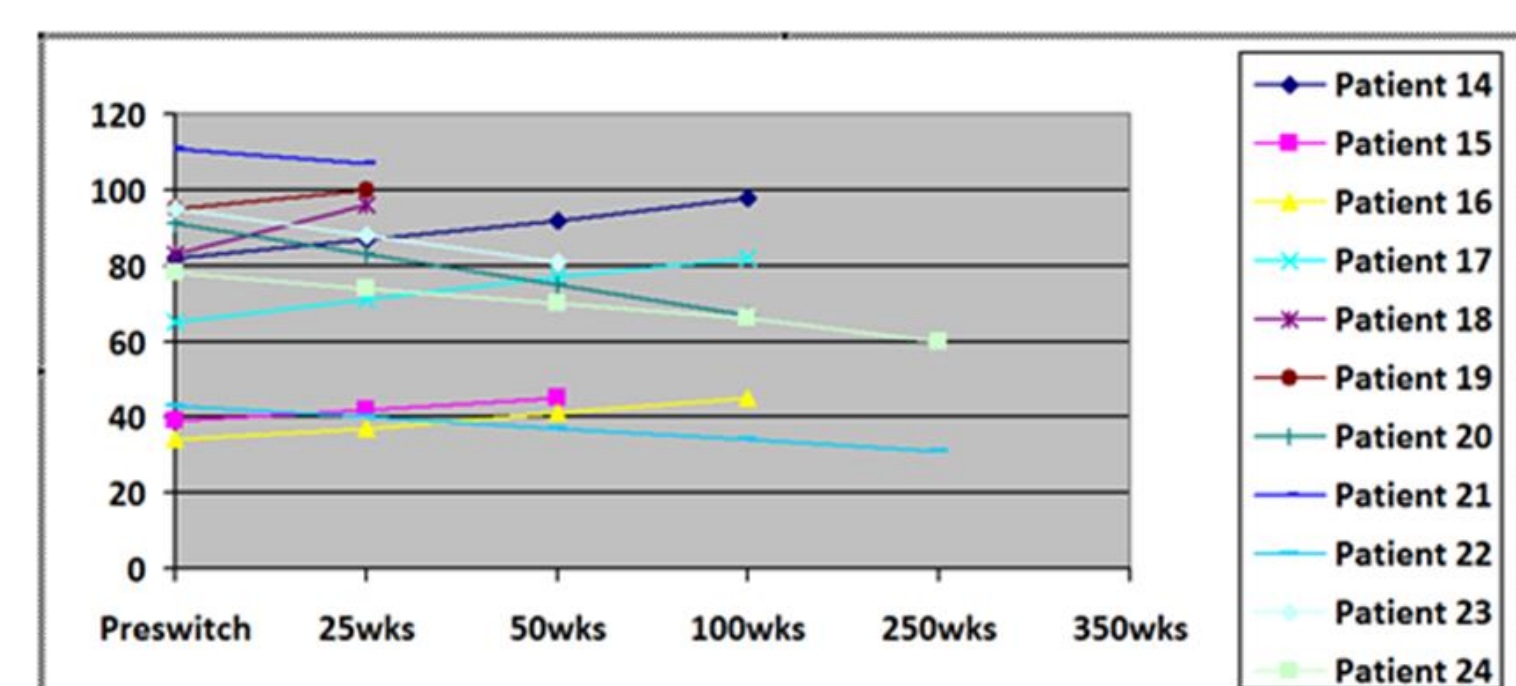
- 4 of these patients later switched to TAF →
- Patient 4 HIVAN
- Patient 5 Hypertension
- Patient 6 Diabetic Hb1ac 36 Hypertension & Gout
- Patient 7 Diabetes Hb1ac 94, Hypertension, IHD & Gout

### eGFR changes when NRL patients 4-7 later switched to TAF based HAART



eGFR loss average 18 ml/min (9-27) on TAF average 55 weeks (33-84 weeks)

## eGFR changes switching non Tenofovir containing HAART → NRL



- 54.5% patients improved eGFR
- Pre-switch 30% CKD 3 → Post switch 30% CKD 3
- Evidence suboptimal diabetic & /or BP control in 45.5% with no eGFR improvement
- 20% improved UPCR
- 10% worsened UPCR (SBP >90)
- 100% VL<50

## Summary of results

All 24 patients are currently virologically suppressed on NRL including 1 patient who is not on 3TC. Total length of time on NRL is 3,121 weeks, average 130 weeks (19-375) 18/24 >48 weeks (75%).

The patient on just Raltegravir + NNRTI (without 3TC) had an extremely low pre-treatment Viral Load of 3,124 copies/ml.

Pre-switch 11/24 (46%) had eGFR<60ml/min. Post switch 7/24 (29%) had eGFR<60ml/min. Overall 15/24 (62.5%) patients had eGFR improvement post switch to NRL.

Switching from TDF to NRL showed the most eGFR improvement.

There were 4 patients who were later switched from NRL to TAF STR for simplification reasons after an average time of 136 weeks (range 19-375weeks). All 4 showed eGFR decline after TAF switch (average 18ml/min).

20/24 (83%) patients have remained on NRL for an average time of 128 weeks (15-336 weeks) showing they are able to tolerate the pill burden of 4-5 tablets.

## Conclusions

NRL is an effective HAART option that is well tolerated with good preservation of renal function making it an ideal choice for ageing patients.

79% of these NRL patients are on generic NNRTI and 3TC making NRL extremely cost-effective.