LIVING: 48-week data on LPV/r pellets in 990 children in resource-limited settings

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Dalton C. Wamalwa[1], Victor Musiime[2], Adeodata R. Kekitiinwa[3], Juliet Mwanga-Amumpaire[4], Rachel N. Musoke[5], Joseph K. Mbuthia[6], Elizabeth Maleche-Obimbo[7], Winstone M. Nyandiko[8], Elizabeth A. Bukusi[9], Maja Weisser[10], Nzovu Ulenga[11], **Mariama Diallo[12]**, Vishal Goyal[12], Alistair Swanson[12] for LIVING study team

[1]Department of Paediatrics and Child Health, University of Nairobi, Nairobi, Kenya, [2]Joint Clinical Research Centre, Kampala, Uganda, [3]Baylor College of Medicine Children's Foundation, Kampala, Uganda, [4]Epicentre, Mbarara, Uganda, [5]Children of God Relief Institute, Nairobi, Kenya, [6]Gertrude's Children's Hospital, Nairobi, Kenya, [7]University of Nairobi, Nairobi, Kenya, [8]Department of Child Health and Paediatrics - Moi University, AMPATH and Moi Teaching and Referral Hospital, Eldoret, Kenya, [9]Centre for Microbiology Research, Kenya Medical Research Institute, Kisumu, Kenya, [10]Ifakara Health Institute, Ifakara, Tanzania, [11]Management Development for Health, Dar es Salaam, Tanzania, [12]Drugs for Neglected Diseases *initiative*, Geneva, Switzerland

BACKGROUND

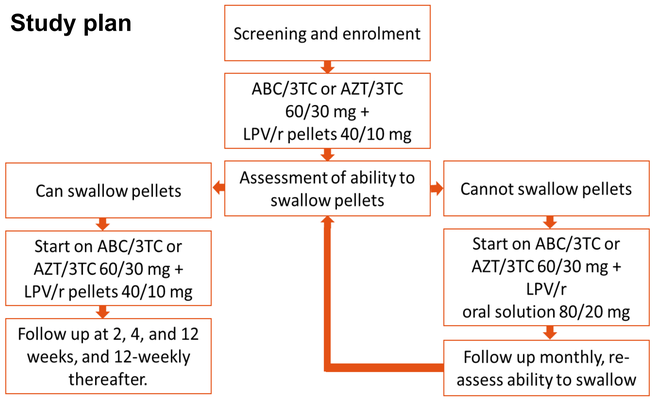
LPV/r-based regimens remain an important treatment for children living with HIV (CLHIV), with established safety and efficacy. Treatment outcome data from large cohorts of CLHIV in resource-poor settings are limited. LIVING (NCT02346487) addresses this data gap across paediatric age groups.

Aim: test the effectiveness, safety, and acceptability of LPV/r 40/10mg pellets given in combination with ABC/3TC (or AZT/3TC) dispersible tablets to CLHIV under field conditions.

METHODS

Study design: Single-arm phase IIIb implementation studies in Kenya, Uganda and Tanzania; open-label, prospective, non-randomized, non-comparative

Study plan



Eligibility: CLHIV; ≥ 3 to <25kg; ARV naïve, on liquid LPV/r or failing NNRTI based ART.

Dosing: twice daily by WHO weight bands.

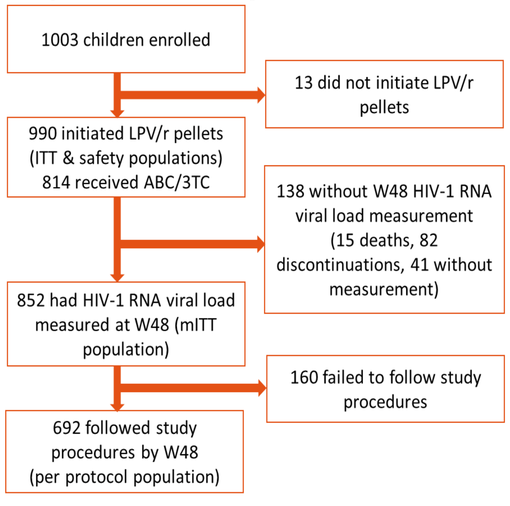
Acceptability: via caregiver questionnaire.

Primary endpoint = effectiveness, a composite of being alive and on study drug with HIV-1 RNA <1000 cp/mL at W48, analyzed in all children who received study drugs.

LPV/r pellets are *effective, well-tolerated, and well-accepted* in a **large cohort** of CLHIV with a significant proportion <24 months and with advanced/severe disease, in field conditions.

RESULTS

Disposition and Analysis Sets



Demographic and baseline characteristics

	Overall, N=990 n (%) or median (IQR)
Female	509/990 (51%)
Age (months) (N=987)	36.0 (IQR 19.7 to 56.0) [range: 2.0 to 148.0]
Aged <24 months	316/987 (32%)
Weight (kg)	12 (9 to 15)
WHO weight-for-age z-score (N=969)	-1.2 (-2.1 to -0.5)
ART naïve	93/988 (9%)
ART exposed	895/988 (91%)
HIV-1 RNA VL (log_{10} cp/mL) (N=929)	2.8 (1.6 to 4.7)
HIV-1 RNA VL ≥100,000 cp/mL	174/929 (19%)
CD4 cell count (cells/mm^3) (N=936)	1,459 (986 to 1,995)
HIV-associated immunodeficiency:	
WHO Advanced	110/937 (12%)
WHO Severe	187/937 (20%)

Effectiveness, efficacy

	ITT population n (%, 95% CI)	
Primary endpoint at **W48**		
VL<1,000copies/ml	683/990 (**69**, 66-72)	
VL≥1,000copies/ml	169/990 (17, 15-20)	
No VL	138/990 (14, 12-16)	
	mTT population n (%, 95% CI)	**PP population** n (%, 95% CI)
Secondary efficacy endpoints		
VL<1,000copies/ml at **W48**	683/852 (**80**, 77-83)	569/692 (82, 79-85)
VL<1,000copies/ml at **W96**	296/337 (88, 84-91)	235/265 (**89**, 84-92)
Immunological failure by **W48**	No	No
Clinical failure by **W48**	49/887 (6, 4-7)	21/686 (3, 2-5)

Safety

- Median treatment duration 72.1w (IQR 48.3-96.1).
- 222 grade 3-4 AEs occurred in 138/990 (14%) children.
- 95 treatment-related AEs in 75 (8%) children; most frequent being diarrhoea (3%). 157 SAEs in 88 (9%) children: one treatment-related (diarrhoea; grade 3). 17 deaths: one treatment-related (child with anaemia on AZT for 2 years before enrolment).

Acceptability

- On first and last assessment visits, 751/942 (80%) and 869/942 (93%) caregivers described pellets as easy/very easy to administer and 830/942 (88%) and 886/942 (94%) reported their children accepted pellets well.

CONCLUSIONS

LPV/r pellets plus ABC/3TC or AZT/3TC were well-tolerated, effective and well-accepted in a large CLHIV cohort, with a significant proportion < 24 months and with advanced/severe disease. This combination remains a good treatment option for CLHIV, as an alternative 1st line or following failure on DTG-based ART.

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Author contact: mdiallo@dndi.org