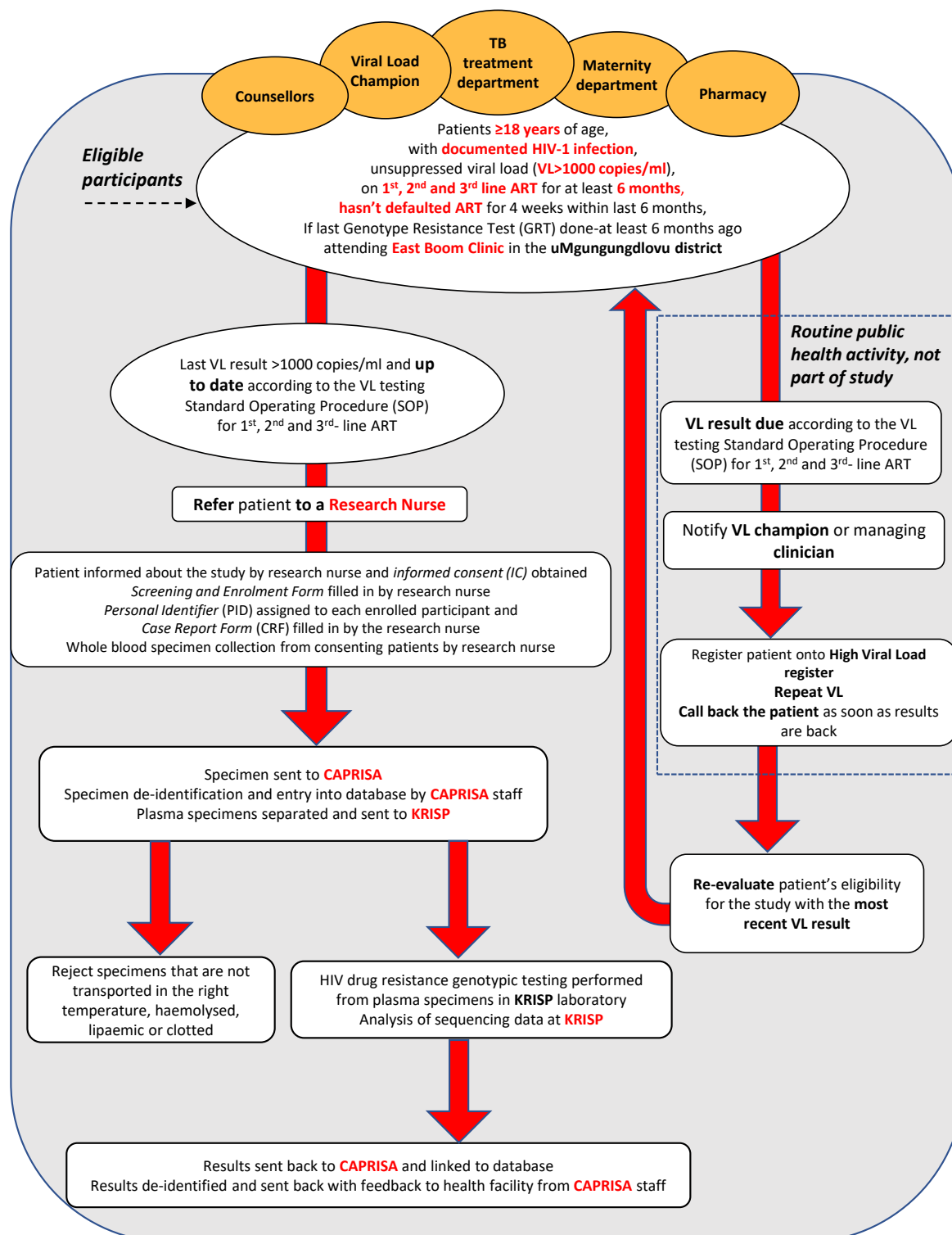


SUPPLEMENTARY INFORMATION



Additional file 1: Figure S1 Study flow diagram from participant selection to reporting of results in the acquired HIV drug resistance study in KwaZulu-Natal (KZN) province, South Africa, May-September 2019

Additional file 1: Table S1 Comparison of participant characteristics among samples excluded and included in final analysis in the acquired HIV drug resistance study in KwaZulu-Natal (KZN) province, South Africa, May-September 2019

Characteristic	Excluded (n=28)	Included (n=115)	p-value
Female, n (%)	14 (50)	62 (54)	0.710
Age in years, median (IQR)	44 (35-50)	38 (30-46)	0.011
Viral load (log ₁₀ copies/mL), median (IQR)	3.2 (3.0-3.6)	4.3 (3.7-4.9)	<0.001
CD4 count (cells/mm ³), median (IQR)	529 (193-737)	270 (136-394)	0.002

IQR, interquartile range; Excluded, refers to participant samples not successfully genotyped; Included, refers to participant samples that were successfully genotyped by Sanger sequencing and included in final analysis

Additional file 1: Table S2 Patterns of drug class resistance among participants on first- and second-line ART in the acquired HIV drug resistance study in KwaZulu-Natal (KZN) province, South Africa, May-September 2019

ART regimen	n (%)
First-line ART (n = 70)	
<i>Single class resistance</i>	3 (4.29)
<i>Dual class resistance</i>	62 (88.57)
<i>Triple class resistance</i>	0 (0.0)
Second-line ART (n = 44)	
<i>Single class resistance</i>	4 (9.09)
<i>Dual class resistance</i>	30 (68.18)
<i>Triple class resistance</i>	6 (13.46)

ART, antiretroviral therapy

Additional file 1: Table S3 Prevalence of specific acquired drug resistance mutations in the acquired HIV drug resistance study in KwaZulu-Natal (KZN) province, South Africa, May-September 2019

Mutation	Percentage with specific mutations		
	Overall, n (%)	First-line ART, (n = 70)	Second-line ART, (n = 44)
NNRTI mutations			
<i>k103ns</i>	68 (59.13)	64.29	50.0
<i>v106aimt</i>	36 (31.30)	42.86	13.64
<i>g190aeq</i>	25 (21.47)	22.86	20.46
<i>v108i</i>	17 (14.78)	15.71	13.64
<i>p225hr</i>	17 (14.78)	11.43	18.18
<i>k101ehp</i>	16 (13.91)	17.14	9.09
<i>y181ci</i>	14 (12.17)	12.86	9.09
<i>v179dflt</i>	12 (10.44)	11.43	9.09
<i>e138agkq</i>	11 (9.57)	10.0	9.09
<i>y188cl</i>	10 (8.70)	7.14	11.36
<i>a98g</i>	9 (7.83)	2.86	15.9
<i>l100i</i>	8 (6.96)	8.57	4.55
<i>h221y</i>	8 (6.96)	5.71	9.09
<i>f227cl</i>	6 (5.22)	7.14	2.27
<i>m230l</i>	5 (4.35)	5.71	2.27
<i>l234i</i>	1 (0.87)	1.43	0
NRTI mutations			
<i>m184iv</i>	92 (80.0)	84.29	75.0
<i>k65enr</i>	39 (33.91)	44.29	18.18
<i>y115f</i>	14 (12.17)	15.71	6.82
<i>a62v</i>	13 (11.30)	15.71	4.55
<i>l74vi</i>	10 (8.70)	11.43	4.55
<i>k70e</i>	9 (7.83)	10.0	4.55
TAMs			
<i>k219qer</i>	30 (26.09)	28.57	20.46
<i>d67n</i>	25 (21.74)	28.57	11.36
<i>k70r</i>	10 (8.70)	8.57	9.09
<i>m41l</i>	9 (7.83)	4.29	11.36
<i>t215insyf</i>	6 (5.22)	2.86	6.82
<i>l210w</i>	1 (0.87)	0	0
PI mutations			
<i>m46i</i>	7 (6.09)	0	13.64
<i>v82a</i>	4 (3.48)	0	9.09
<i>i54v</i>	3 (2.61)	0	6.82
<i>l76v</i>	3 (2.61)	0	6.82
<i>i84v</i>	1 (0.87)	0	2.27

ART, antiretroviral therapy; NNRTI, non-nucleoside reverse transcriptase inhibitor; NRTI, nucleoside reverse transcriptase inhibitor; PI, protease inhibitor; TAMs, thymidine analogue mutations

Additional file 1: Table S4 Relationship between patient characteristics and acquired drug resistance using multivariate logistic regression

Variable	OR	95% CI	p-value
Sex	1.20	0.23 – 6.18	0.829
Age (per 1-year increase)	0.91	0.83 – 0.99	0.027
CD4 count (per 50 cells/mm ³ increase)	0.82	0.69 – 0.96	0.013
Viral load (log ₁₀ copies/mL)	0.73	0.32 – 1.65	0.444
Duration on ART (per 1-year increase)	1.00	0.98 – 1.03	0.771

ART, antiretroviral therapy; OR, adjusted odds ratio; CI, confidence interval