

**Table S1.** Comparison of subtyping results of 134 samples based on ‘PR/RT’ and ‘POL’ region nucleotide sequences utilizing six subtyping tools.

No.	Samples <sup>1</sup>	GenBank Accession Numbers	REGA 3.0 <sup>4</sup>		COMET 2.3 <sup>5</sup>		jpHMM <sup>6</sup>		SCUEAL <sup>7</sup>		Stanford <sup>8</sup>		Geno2pheno 3.4 <sup>9</sup>		Discrepancy <sup>10</sup>		
			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
1	CY391	ON989213	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
2	CY393	ON989214	CRF02_AG	CRF02_AG	02_AG	02_AG	A1 G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	-	-	-
3	CY394	ON989215	CRF 35_AD	Rec. of 35_AD, G	35_AD	Unassigned; 35_AD, 14_BG, G, 20_BG, G, 24_BG, G, 14_BG, G	A1 D	A1 D G	A1, D recombinant	Complex	CRF35_AD	A + D	A1	A1	YES	YES	YES
4	CY395	ON989216	Rec. of 14_BG, A1	Rec. of A1, G	Unassigned; G, A1	Unassigned; A1, G	A1 G	A1 G	A1, G recombinant	A1, G recombinant	G	A	14_BG	A1	YES	YES	YES
5	CY396	ON989217	CRF02_AG	CRF02_AG	02_AG	02_AG	G	A1 G	Complex	CRF02-like	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
6	CY398	ON989218	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
7	CY399	ON989219	G-like	Rec. of 02_AG, G, A1	02_AG	02_AG	G	A1 G	G	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
8	CY401	ON989220	A1	A1	A1	A1	A1	A1	A1	A1, G recombinant	A	A	01_AE	A1	YES	YES	YES
9	CY403	ON989221	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
10	CY405	ON989222	CRF02_AG	CRF02_AG	02_AG	02_AG	G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
11	CY408	ON989223	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
12	CY409	ON989224	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
13	CY411	ON989225	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
14	CY413	ON989226	B	Rec. of B, A1	Unassigned; B, A1	Unassigned; B, A1	B	A1 B	B, G recombinant	A1, B recombinant	B	B	B	B	YES	YES	YES
15	CY414	ON989227	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
16	CY418	ON989228	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
17	CY421	ON989229	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
18	CY422	ON989230	CRF06_CPX	CRF06_CPX	06_cpx	06_cpx	D	A1 C D G J	CRF32-like	Complex	CRF06_cpx	CRF06_cpx	06_CPX	06_CPX	YES	YES	YES
19	CY423	ON989231	CRF02_AG	CRF02_AG	02_AG	A1 (check for 02_AG)	A1 G	A1 G	Complex	CRF02-like	CRF02_AG	CRF02_AG	02_AG	02_AG	-	-	-
20	CY424	ON989232	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
21	CY425	ON989233	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
22	CY427	ON989234	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
23	CY439	ON989235	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
24	CY443	ON989236	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
25	CY444	ON989237	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
26	CY447	ON989238	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-

No.	Samples <sup>1</sup>	GenBank Accession Numbers	REGA 3.0 <sup>4</sup>		COMET 2.3 <sup>5</sup>		jpHMM <sup>6</sup>		SCUEAL <sup>7</sup>		Stanford <sup>8</sup>		Geno2pheno 3.4 <sup>9</sup>		Discrepancy <sup>10</sup>		
			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
27	CY448	ON989239	Rec. of B, G	Rec. of B, A1, G	Unassigned; 02_AG, 56_cpx	Unassigned; 56_cpx, 02_AG, 63_02A1, 02_AG, 71_BF1, 25_cpx, 02_AG, C, 43_02G, 02_AG, 71_BF1, 05_DF, 71_BF1, 05_DF, 02_AG, A1, B	B G	A1 B G	B, G recombinant	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES
28	CY449	ON989240	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
29	CY450	ON989241	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
30	CY451	ON989242	C	C	C	C	C	C	C	C	C	C	C	C	-	-	-
31	CY452	ON989243	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
32	CY455	ON989244	A1	A1	A1	A1	A1	A1	A1	A1	A	A	01_AE	A1	YES	-	-
33	CY457	ON989245	B	Rec. of B, A1	B	Unassigned; B, A1	B	A1 B	B	A3, B recombinant	B	B	B	B	-	YES	YES
34	CY459	ON989246	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
35	CY461	ON989247	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
36	CY462	ON989248	CRF 06_CPX	CRF 06_CPX	06_cpx	06_cpx	A1 C G	A1 C G J	G, K recombinant	CRF06-like	CRF06_cpx	CRF06_cpx	06_CPX	06_CPX	YES	YES	YES
37	CY463	ON989249	01_AE	01_AE	01_AE	01_AE	01_AE	01_AE	AE	AE	CRF01_AE	CRF01_AE	01_AE	01_AE	-	-	-
38	CY465	ON989250	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
39	CY466	ON989251	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
40	CY467	OK584018	Rec. of G, A1	Rec. of G, A1, B	02_AG	Unassigned; 02_AG, 11_cpx, 01_AE, 90_BF1, B, D, B, D, B, D, B	G	A1 B G	G	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
41	CY470	ON989252	02_AG	CRF 02_AG	02_AG	02_AG	G	A1 G	G	CRF02-like	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
42	CY471	ON989253	A1	Rec. of A1, B	A1	Unassigned; A1, B	A1	A1 B	A1	A1, B recombinant	A	A	A1	A1	-	YES	YES

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			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
43	CY472	ON989254	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
44	CY473	ON989255	B	Rec. of B, G, A1	B	Unassigned; 02_AG, 38_BF1, B, 94_cpx, 08_BC, B, 08_BC, B, 07_BC, 90_BF1, 07_BC, 52_01B, 07_BC, 90_BF1, B, 68_01B, B, 90_BF1, B	B G	A1 B G	Complex	Complex	B	B	B	B	YES	YES	YES
45	CY477	ON989256	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
46	CY478	ON989257	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
47	CY479	ON989258	01_AE	01_AE	01_AE	01_AE	01_AE	01_AE	AE	AE	CRF01_AE	CRF01_AE	01_AE	01_AE	-	-	-
48	CY480	ON989259	CRF 02_AG	CRF 02_AG	02_AG	02_AG	A1 G	A1 G	A1, G recombinant	A, G recombinant	CRF02_AG	CRF02_AG	02_AG	02_AG	-	-	-
49	CY482	ON989260	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	-	-	-
50	CY483	ON989261	C	C	C	C	C	C	C	C	C	C	C	C	-	-	-
51	CY485	ON989262	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
52	CY486	ON989263	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
53	CY487	ON989264	CRF 02_AG	CRF 02_AG	02_AG	02_AG	G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
54	CY488	ON989265	Rec. of B, A1	Rec. of B, A1	Unassigned; 56_cpx, 02_AG, 90_BF1, 72_BF1, 90_BF1, 72_BF1, 90_BF1, 83_cpx	Unassigned; 56_cpx, 02_AG, 90_BF1, 72_BF1, 90_BF1, 83_cpx, 90_BF1, A1, 02_AG, 19_cpx, B, 90_BF1	A1 B	A1 B	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	03_AB	YES	YES	YES
55	CY490	ON989266	A1	A1	A1	A1	A1	A1	A1	A1	A	A	01_AE	A1	YES	-	-
56	CY492	ON989267	A1	A1	A1	A1	A1	A1	A1	A1	A	A	01_AE	A1	YES	-	-
57	CY493	ON989268	A1	A1	A1	A1	A1	A1	A1	A1	A	A	01_AE	A1	YES	-	-

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			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
58	CY494	OK283056	Rec. of G, A1	Rec. of 02_AG, G	02_AG	Unassigned; 02_AG, 11_cpx, 01_AE	G	A1 G	G	A-ancestral, G recombinant	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
59	CY495	ON989269	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
60	CY496	ON989270	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
61	CY497	ON989271	G	Rec. of A1, G	02_AG	02_AG	G	A1 G	G	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
62	CY498	ON989272	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
63	CY500	ON989273	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
64	CY504	ON989274	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
65	CY508	ON989275	G	Rec. of G, K	G	Unassigned; G, A1, D	G	B G	G	G, J recombinant	G	G	G	G	-	YES	YES
66	CY509	ON989276	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
67	CY510	ON989277	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
68	CY515	ON989278	Rec. of F1, B	Rec. of B, F1	F1	Unassigned; B, F1, A1, F1, F2	B F1	B F1	Complex	B, F1 recombinant	B	B	12_BF	B	YES	YES	YES
69	CY516	ON989279	CRF 03_AB	CRF 03_AB	03_AB	03_AB	A1 B	A1 B	CRF03	CRF03	CRF03_AB	A + B	03_AB	03_AB	-	-	-
70	CY519	ON989280	F1	Rec. of F1, A1	Unassigned; 71_BF1, A1	Unassigned; F1, A1, 01_AE, A1, G	F1	A1 F1	F1	Complex	F	F	F1	F2	YES	YES	YES
71	CY520	OK283057	Rec. of G, A1	Rec. of 02_AG, G	02_AG	Unassigned; 02_AG, 11_cpx, 01_AE	G	A1 G	G	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
72	CY523	ON989281	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
73	CY525	ON989282	Rec. of G, B	Rec. of B, A1, G	Unassigned; 02_AG, 56_cpx	Unassigned; 02_AG, 56_cpx, 90_BF1, B, 90_BF1, B, 56_cpx, B, 56_cpx, B, 39_BF, 51_01B, B, 51_01B, B, 90_BF1, 56_cpx,	B C G	A1 B G	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES

No.	Samples <sup>1</sup>	GenBank Accession Numbers	REGA 3.0 <sup>4</sup>		COMET 2.3 <sup>5</sup>		jpHMM <sup>6</sup>		SCUEAL <sup>7</sup>		Stanford <sup>8</sup>		Geno2pheno 3.4 <sup>9</sup>		Discrepancy <sup>10</sup>		
			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
						90_BF1											
74	CY526	ON989283	Rec. of G, B	Rec. of B, A1, G	Unassigned; 02_AG, 56_cpx	Unassigned; 02_AG, 56_cpx, 90_BF1, B, 90_BF1, B, 56_cpx, B, 39_BF, 90_BF1, 39_BF, B, 69_01B, 90_BF1, 56_cpx	B G	A1 B G	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES
75	CY528	ON989284	B	B-like	B	B	B	B	B	B	B	B	B	B	-	-	-
76	CY529	ON989285	Rec. of G, B	Rec. of B, A1, G	Unassigned; 02_AG, 56_cpx	Unassigned; 02_AG, 56_cpx, 90_BF1, B, 90_BF1, B, 56_cpx, B, 56_cpx, B, 39_BF, 90_BF1, B, 90_BF1, 56_cpx	B C G	A1 B G	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES
77	CY530	ON989286	CRF 02_AG	CRF 02_AG	02_AG	02_AG	A1 G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	-	-	-
78	CY533	OK283058	Rec. of G, A1	Rec. of 02_AG, G, A1	02_AG	Unassigned; 02_AG, 11_cpx, 01_AE	G	A1 G	G	A, G recombinant	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
79	CY534	ON989287	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
80	CY535	ON989288	CRF 02_AG	CRF 02_AG	02_AG	02_AG	A1 D G	A1 C G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
81	CY537	ON989289	Rec. of G, B	Rec. of B, A1, G	Unassigned; 02_AG, 90_BF1, 31_BC, 56_cpx	Unassigned; 02_AG, 90_BF1, 31_BC, 56_cpx, 90_BF1, B, 90_BF1, B,	B C G	A1 B G	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES

[illegible]

No.	Samples <sup>1</sup>	GenBank Accession Numbers	REGA 3.0 <sup>4</sup>		COMET 2.3 <sup>5</sup>		jpHMM <sup>6</sup>		SCUEAL <sup>7</sup>		Stanford <sup>8</sup>		Geno2pheno 3.4 <sup>9</sup>		Discrepancy <sup>10</sup>		
			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
106	CY575	ON989314	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
107	CY576	ON989315	CRF 02_AG	CRF 02_AG	02_AG	02_AG	A1 G	A1 B G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	-	YES	YES
108	CY579	ON989316	CRF 02_AG	CRF 02_AG	02_AG	02_AG	C G	A1 G	Complex	CRF02-like	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
109	CY580	ON989317	D	D-like	D	D	D	D	D	D	D	D	D	D	-	-	-
110	CY581	ON989318	CRF 02_AG	Rec. of 02_AG, G, A1	02_AG	02_AG	A1 G	A1 G	G	A, G recombinant	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
111	CY583	ON989319	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
112	CY584	ON989320	B	Rec. of B, A1	B	Unassigned; B, A1	B	A1 B	B, D recombinant	A1, B recombinant	B	B	B	B	YES	YES	YES
113	CY585	ON989321	02_AG	CRF 02_AG	02_AG	02_AG	A1 G	A1 G	A1, G recombinant	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	-	-	-
114	CY587	ON989322	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
115	CY591	ON989323	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
116	CY593	ON989324	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
117	CY594	ON989325	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
118	CY599	ON989326	CRF 02_AG	CRF 02_AG	02_AG	02_AG	G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
119	CY601	ON989327	C	C	C	C	C	C	C	C	C	C	C	C	-	-	-
120	CY602	ON989328	CRF 02_AG	CRF 02_AG	02_AG	A1 (check for 02_AG)	G	A1 G	Complex	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
121	CY604	ON989329	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
122	CY605	ON989330	A1	A1	A1	A1	A1	A1	A1	A1	A	A	A1	A1	-	-	-
123	CY607	ON989331	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
124	CY609	ON989332	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
125	CY611	ON989333	Rec. of 18_cpx, G	CRF 18_cpx	F1 (check for 18_cpx)	18_cpx	B G	A1 C F1 G	AE, G recombinant	G, K recombinant	CRF18_cpx	CRF18_cpx	K	02_AG	YES	YES	YES
126	CY612	ON989334	CRF 06_CPX	CRF 06_CPX	06_cpx	06_cpx	C G	A1 C G J	CRF06-like	Complex	CRF06_cpx	CRF06_cpx	06_CPX	06_CPX	YES	YES	YES
127	CY614	OK283059	Rec. of G, A1	Rec. of 02_AG, G, A1	02_AG	Unassigned; 02_AG, 11_cpx, 01_AE	G	A1 G	G	Complex	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	YES	YES
128	CY615	ON989335	A1	A1	A1	A1	A1	A1	A1	A1	A	A	01_AE	01_AE	YES	YES	YES
129	CY616	ON989336	B	B	B	B	B	B	B	B	B	B	B	B	-	-	-
130	CY617	ON989337	F1	F1	F1	F1	F1	F1	F1	F1	F	F	F1	F1	-	-	-
131	CY619	ON989338	G	G	G	G	G	G	G	G	G	G	G	G	-	-	-
132	CY620	ON989339	B	Rec. of B, A1	B	Unassigned; B, A1	B	A1 B	B, D recombinant	Complex	B	B	B	B	YES	YES	YES

No.	Samples <sup>1</sup>	GenBank Accession Numbers	REGA 3.0 <sup>4</sup>		COMET 2.3 <sup>5</sup>		jpHMM <sup>6</sup>		SCUEAL <sup>7</sup>		Stanford <sup>8</sup>		Geno2pheno 3.4 <sup>9</sup>		Discrepancy <sup>10</sup>		
			PR/RT <sup>2</sup>	POL <sup>3</sup>	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	PR/RT	POL	Regions
133	CY624	ON989340	CRF 02_AG	CRF 02_AG	02_AG	02_AG	C G	A1 G	Complex	CRF02-like	CRF02_AG	CRF02_AG	02_AG	02_AG	YES	-	-
134	CY625	ON989341	Rec. of B, G	Rec. of B, A1, G	Unassigned; 02_AG, B, 56_cpx	Unassigned; 02_AG, B, 56_cpx, 90_BF1, B, 56_cpx, B, 51_01B, B, 69_01B, 90_BF1	A1 B G	A1 B G	Complex	Complex	B + CRF02_AG	B + CRF02_AG	02_AG	B	YES	YES	YES

The cells highlighted in light-pink color show the discrepant subtyping of 'PR/RT' regions (corresponding to nucleotides 2253 to 3359 on the HXB2 genome), and the cells highlighted in light-gray color show the discrepant subtyping of 'POL' regions (corresponding to nucleotides 2253 to 5250 on HXB2 genome). <sup>1</sup> 'Samples' corresponds to the coded naming of study subject samples that contains five characters; e.g., in CY001, the first two characters, CY, denote Cyprus, the country of origin. The next three characters, 001, denote the study subject's number. <sup>2</sup> 'PR/RT' denotes nucleotide sequences of *protease* and partial *reverse transcriptase* genes (corresponding to nucleotides 2253 to 3359 on the HXB2 genome). <sup>3</sup> 'POL' denotes nucleotide sequences of *protease*, *reverse transcriptase*, *integrase*, and partial *vif* genes (corresponding to nucleotides 2253 to 5250 on the HXB2 genome). <sup>4</sup> REGA HIV-1 subtyping tool version 3.0 identifies the subtypes via using phylogenetic methods; the various recombinations are analyzed with bootscanning methods. It is available at: <http://dbpartners.stanford.edu:8080/RegaSubtyping/stanford-hiv/typingtool/>, accessed on 14 October 2022. <sup>5</sup> COMET 2.3 is the abbreviation for "COntext-based Modeling for Expeditious Typing", while version 2.3 has additional support for HIV-1 nucleotide sequences for CRFs as well as URFs. It is available at: <https://comet.lih.lu/>, accessed on 14 October 2022. <sup>6</sup> jpHMM ('jumping profile hidden Markov model') predicts the genomic recombination of HIV-1 and the accurate breakpoints between the subtypes. It is available online at: <http://jphmm.gobics.de/>, accessed on 14 October 2022. <sup>7</sup> SCUEAL is an algorithm that can subtype only *pol* sequences. It is available at: [http://classic.datamonkey.org/dataupload\\_scueal.php](http://classic.datamonkey.org/dataupload_scueal.php), accessed on 14 October 2022. <sup>8</sup> Stanford University curates the HIV Drug Resistance Database, which provides the public with the HIVdb Program. Its main function is to accept *pol* sequences and, in return, predict the resistance to various drugs, subtyping the sequence in parallel. It is available at: <https://hivdb.stanford.edu/hivdb/by-sequences/>, accessed on 14 October 2022. <sup>9</sup> Geno2pheno (resistance) 3.4 aligns HIV-1 *pol* gene nucleotide sequences to the HXB2 genome in order to predict resistance to ART drugs. It is available at: <https://www.geno2pheno.org/index.php>, accessed on 14 October 2022. <sup>10</sup> 'Discrepancy' denotes the disagreements in subtyping generated by the aforementioned subtyping tools. Discrepancy in the 'PR/RT' region indicates the disagreements in the subtyping of each *PR/RT* nucleotide sequence (corresponding to nucleotides 2253 to 3359 on the HXB2 genome) among different subtyping tools. Discrepancy in the 'POL' region indicates the disagreements in the subtyping of each *pol* nucleotide sequence (corresponding to nucleotides 2253 to 5250 on the HXB2 genome) among different subtyping tools. Discrepancy in 'Regions' denotes the verdict of discrepant result, where the disagreements in both 'PR/RT' and 'POL' regions or 'POL' region only indicate that there are discrepancies among the subtyping tools. Samples identified as discrepant in 'Regions' were selected to proceed with near-full-length HIV-1 genome sequencing.