ANRS - AC 43: RESISTANCE GROUP
GENOTYPE INTERPRETATION FOR HIV-2

GENOTYPE INTERPRETATION: NUCLEOSIDE AND NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS [1]

	Mutations associated with resistance	Mutations associated with « possible resistance »
ZDV	• Q151M • S215A/C/F/L/Y + 1 mutation among K65R, N69S/T, K70R, Y115F, K223R	• S215A/C/F/L/Y
3TC/FTC	• M184I/V	• K65R
ABC	• K65R • Q151M • M184I/V + 1 mutation among: L74V, Y115F	• 2 mutations among: D67N, K70N/R, M184V/I, S215A/C/F/L/Y
TDF/TAF	• K65R • Q151M + V111I	

ZDV: zidovudine, 3TC: lamivudine, FTC: emtricitabine, ABC: abacavir, TDF: tenofovir, TAF: tenofovir alafenamide

Didanosine and stavudine are not recommended

GENOTYPE INTERPRETATION: PROTEASE INHIBITORS [1]

	Mutations associated with resistance	Mutations associated with « possible resistance »
LPV	• **2 mutations among: I82F, I84V, L90M** • **I54M** • **V47A**	• **V62A + L99F** • **1 mutation among: I82F, I84V, L90M**
DRV	• **I50V** • **I54M** • **I84V + L90M**	• **1 mutation among: I84V, L90M**

LPV: lopinavir, DRV: darunavir

For indinavir and saquinavir refer to previous rules (See Archives, Version 27, September 2017)
Atazanavir and tipranavir are not recommended

GENOTYPE INTERPRETATION: INTEGRASE STRAND TRANSFER INHIBITORS [1-5]

	Mutations associated with resistance	Mutations associated with « possible resistance »
RAL	• N155H/R • Q148K/R/H [3,4,5] • E92Q + T97A • Y143C/G/R + 1 mutation among: E92Q, T97A • Insertion at codon 231 [5]	• E92Q • Y143C/G/R
EVG	• E92G/Q • Q148K/R/H [3,4,5] • N155H • T97A + Y143C • Insertion at codon 231 [5]	• Y143C
DTG	• Q148K • G140S + Q148R/H [3,4,5] • E92Q + N155H • T97A + N155H • Insertion at codon 231 [5]	• Q148R/H [3] • N155H • E92Q • T97A + Y143C
CAB*	• Q148K • G140S + Q148R/H [3,4,5] • E92Q + N155H • T97A + N155H • Insertion at codon 231 [5]	• Q148R/H [3] • N155H • E92Q • T97A + Y143C
BIC*	• Q148K • G140S + Q148R/H [5] • E92Q + N155H • T97A + N155H	• Q148R/H • N155H • E92Q • T97A + Y143C • Insertion at codon 231 [5]

RAL: raltegravir, EVG: elvitegravir, DTG: dolutegravir, CAB: cabotegravir, BIC: bictegravir

***Due to the very close structures of dolutegravir and cabotegravir, rules for dolutegravir are transposed to cabotegravir with the exception of the insertion at codon 231 for bictegravir**

NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS
• **Naturally resistant to all NNRTI [2]**
FUSION INHIBITOR
• **Naturally resistant to enfuvirtide [2]**
ATTACHEMENT INHIBITOR
• **Naturally resistant to fostemsavir [6]**

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