

Une patiente avec charge virale quantifiable persistante à bas bruit - Caen

InterCorevih

Bretagne – Normandie

19 janvier 2023

Madame X née le 02/08/1950

- Découverte de séropositivité VIH en juin 2005 (A3), sous-type A1
- Retraitée
- Antécédents
 - Transfusion sanguine en 1990
 - Petit poids jusqu'à l'âge de 35-37 ans: 45 kg puis traitement d'une infertilité, 65 kg à l'âge de 40 ans, 77 kg lors de la découverte de l'infection VIH
 - Endométriose avec atteinte colique: colectomie partielle
 - HTA, diabète de type II
 - Cardiopathie hypertensive
 - Ménopause en 2005
 - Zona en 2006
 - SAS non appareillé, ronchopathie physiologique
 - Tabac, alcool = 0

 - HLA B5701: négatif
 - Sérologie toxoplasmose: IgG +
 - Sérologie CMV: IgG+
 - Sérologie VHC négative, Ac HBs >1000 UI/mL
 - Sérologie syphilis: négative

Historique thérapeutique

- 05-10/10/05 : ténofovir, emtricitabine, lopinavir/r -> arrêt pour intolérance (77 kg)
- 11/06 – 05/07: ténofovir, emtricitabine, lopinavir/r -> arrêt dyslipidémie (80kg)
- 05/07 – 07/09: ténofovir, emtricitabine, atazanavir/r (100 kg)
 - Consultation de nutrition en 2008: (100 kg)
 - (dyslipidémie et intolérance des statines)
- 07/09 – 03/10: ténofovir, emtricitabine, atazanavir (105 kg)
- 03/10 - 12/11: ténofovir, emtricitabine, raltégravir (110 kg)
 - Octobre 2010: Sleeve gastrectomie (indication théorique à un Bypass mais ATCD chirurgicaux abdominaux -> Sleeve)
 - Hépatite cholestatique et cytolytique se majorant après introduction de Raltegravir

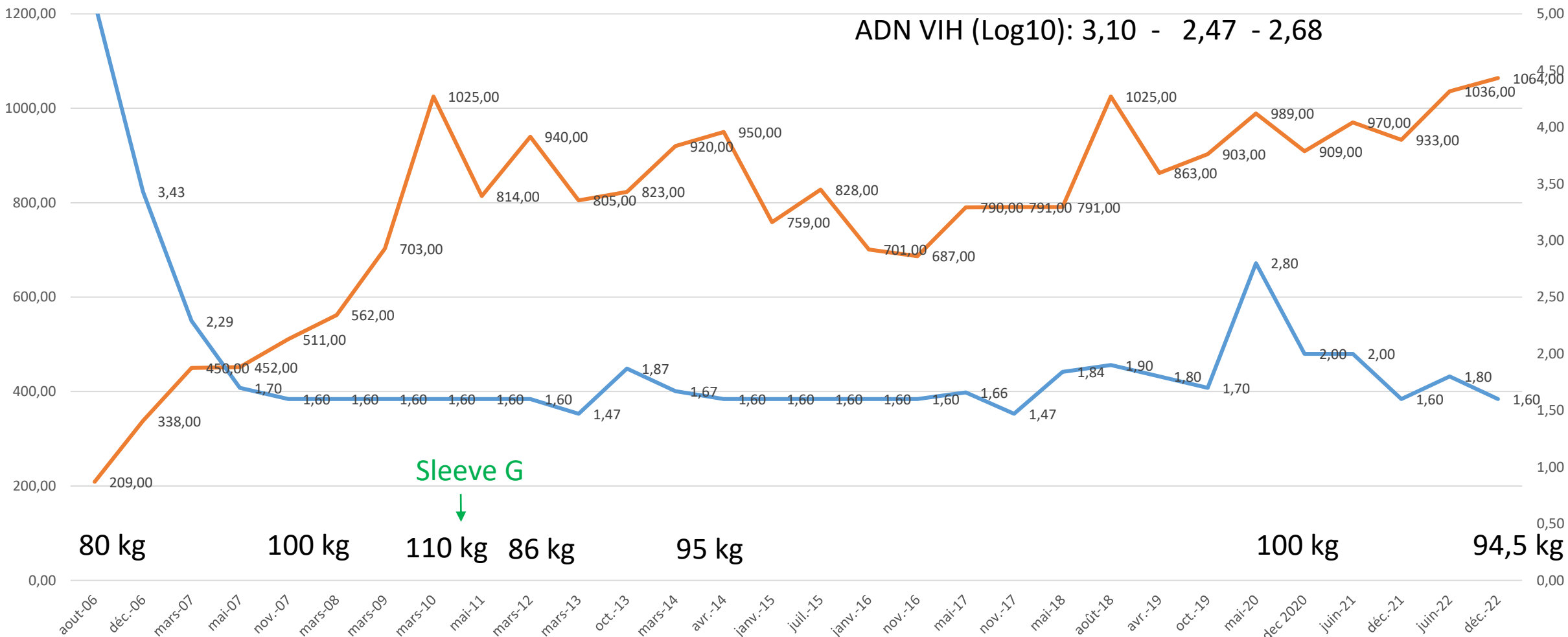
Historique thérapeutique

- 12/11 – 03/13: ténofovir, emtricitabine, atazanavir (86 kg)
- 03/13 – 03/14 : ténofovir , emtricitabine, rilpivirine (épargne IP) -> DFG à 48
- 03/14 – 04/20: abacavir, lamivudine, rilpivirine (95 kg)
 - Hépatite au paracétamol
- 04/20 – 01/21: TAF, emtricitabine, bictegravir -> prise de poids, dégradation de la fonction rénale
- 01/21 – 12/21: abacavir, lamivudine, rilpivirine
- 12/21 – 07/22: abacavir, lamivudine, rilpivirine, raltegravir
- 07/22 - : abacavir, lamivudine, rilpivirine

Autre traitement: Aténolol, Enalapril, Lercanidipine, Calcium, Colecalciferol, Ezetimibe, Pravastatine, Metformine

Evolution immuno-virologique

ADN VIH (Log10): 3,10 - 2,47 - 2,68



80 kg

100 kg

110 kg

86 kg

95 kg

100 kg

94,5 kg

Sleeve G



LCD4 (mm3) ARN VIH (Log10)

2006-07
TDF/MTC
Lopi/r

2007-09
TDF/MTC
Ataza/r

2009-10
TDF/MTC
Ataza

2010-11
TDF/MTC
Ralté

2011-13
TDF/MTC
Ataza

2011-13
TDF/MTC
Rilpi

2014-20
ABC/3TC
Rilpi

2020-21
TAF/MTC
Bictég

2021-22
ABC/3TC
Rilpi

Échec
d'intensifi-
cation
avec II

Absence de contrôle virologique

- Observance

- Concentration résiduelle de rilpivirine:

- 2021: 120 ng/mL (80+/-37 ng/mL)
 - 2018: 194 ng/mL
 - 2017: 261 ng/mL

- Concentration résiduelle de Bictegravir: 5129 ng/mL (2610 +/- 919 ng/mL)

- Concentration résiduelle de raltégravir:

- 2011: 251 mcg/L
 - 2010: 190 mcg/L

Absence de contrôle virologique

- Interactions médicamenteuses?

Report ID:
Date Produced: 17 January 2023

Antiretroviral Treatment	Co-medications
Abacavir (ABC) Lamivudine (3TC) Ralpivirine (RPV)	Atenolol Calcium supplements Colecalciferol (Vitamin D3) [alone] Enalapril Ezetimibe Lercanidipine Metformin Pravastatin

This report lists the summaries of potential interactions (i.e. "red", "amber" and "yellow" classifications) for the drugs in the table above.

Interactions with a "green" or "grey" classification (i.e. no clinically significant interaction or no clear data) have been checked and are listed at the end of this report, but summaries are not shown.

For full details of all interactions, see www.hiv-druginteractions.org.

Description of the interactions

Potential clinically significant interaction - likely to require additional monitoring, alteration of drug dosage or timing of administration (AMBER)

Rilpivirine (RPV) + Calcium supplements
Coadministration has not been studied. Calcium is eliminated through faeces, urine and sweat. Coadministration with calcium supplements containing calcium carbonate may decrease rilpivirine concentrations due to reduced absorption due to gastric pH increase. Calcium supplements containing calcium carbonate should be administered at least 2 h before or 4 h after rilpivirine.

Potential weak interaction - additional action/monitoring or dosage adjustment is unlikely to be required (YELLOW)

Lamivudine (3TC) + Atenolol
Coadministration has not been studied. Atenolol is mainly eliminated unchanged by the kidney, both by glomerular filtration and active secretion via the renal transporters OCT2 and MATE1. There is potential for competition with lamivudine for elimination via renal transport proteins, which may lead to increased concentrations of either drug.

No clinically significant interaction expected (GREEN)

Abacavir (ABC) + Pravastatin

Lamivudine (3TC) + Ezetimibe

Abacavir (ABC) + Enalapril

Lamivudine (3TC) + Enalapril

Abacavir (ABC) + Calcium supplements

Lamivudine (3TC) + Calcium supplements

Abacavir (ABC) + Lercanidipine

Juin 2021

No dossier	1063068022	Médecin	Dr Dargere MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	16/06/2021
ID Patient		Service demandeur		Charge virale	111 cp/mL
Type de prélèvement	Plasma			Sous-type	A1

Nucleoside Reverse Transcriptase Inhibitors (NRTI)

Drug	Mutations list	Range	Color	Interpretation
Epivir® / Emtriva® Lamivudine / Emtricitabine (3TC_FTC)		1	Green	S - Susceptible
Ziagen® Abacavir (ABC)		1	Green	S - Susceptible
Islatravir (ISL)		1	Green	S - Susceptible
Viread® Tenofovir Alafenamide (TDF_TAF)		1	Green	S - Susceptible
Retrovir® Zidovudine (ZDV)		1	Green	S - Susceptible

Non-Nucleoside Reverse transcriptase Inhibitors (NNRTI)

Drug	Mutations list	Range	Color	Interpretation
Doravirine (DOR)		1	Green	S - Susceptible
Sustiva®/Stocrin® Efavirenz (EFV)		1	Green	S - Susceptible
Intence® Etravirine TMC125 (ETR)		1	Green	S - Susceptible
Viramune® Nevirapine (NVP) *		1	Green	S - Susceptible
Rilpivirine (RPV)		1	Green	S - Susceptible

Protease Inhibitors (PI)

Drug	Mutations list	Range	Color	Interpretation
Reyataz® / Norvir® 300/100 Atazanavir / Ritonavir (ATV_RTV)		1	Green	S - Susceptible
Prezista® / Norvir® 600/100 BID Darunavir TMC114 / Ritonavir (DRV_RTV_BID)		1	Green	S - Susceptible
Prezista® / Norvir® 800/100 QD Darunavir TMC114 / Ritonavir (DRV_RTV_QD)		1	Green	S - Susceptible
A component of Kaletra® Lopinavir (LPVr)	20R	1	Green	S - Susceptible
Aplivus® / Norvir® 500/200 Tipranavir / Ritonavir (TPV_RTV) **	36I, 69K, 89M	3	Red	R - Resistance

Integrase Strand Transfer Inhibitors (INSTI)

Drug	Mutations list	Range	Color	Interpretation
Bictegravir (BIC)	74I	1	Green	S - Susceptible
Cabotegravir (CAB)	74I	1	Green	S - Susceptible
Dolutegravir BID (DTG_BID)	74I	1	Green	S - Susceptible
Dolutegravir QD (DTG_QD)	74I	1	Green	S - Susceptible
Elvitegravir (EVG)	74I	1	Green	S - Susceptible
Isentress® Raltegravir (RAL)	74I	1	Green	S - Susceptible

For provirus DNA, impact of stop codons and G->A mutations on ARV resistance is unknown.

(*) In presence of mutation 98S in RT for HIV-1 subtype C. Nevirapine (NVP) interpretation should be considered as resistant

No dossier	1063068022	Médecin	Dr Dargere MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	16/06/2021
ID Patient		Service demandeur		Charge virale	111 cp/mL
Type de prélèvement	Plasma			Sous-type	A1

Extra Parameters

IDNS Version	v3_11_0r4(r32389)	Algorithm version	2020.31/sg/b
Drug Resistance Algorithm	ANRS		
Algorithm fingerprint	c0ec0c728e8fd9a2e69dcecd340d2484		

Mutations PR	3I, 13V, 20R, 35D, 36I, 37D, 41K, 43R, 69K, 89M	Mutations RT	5V, 11S, 35T, 39N, 60I, 121H, 123S, 135T, 162C, 173A, 177E, 196E, 196G, 200A, 207A, 211R, 211S, 214F
Mutations IN	10E, 11E, 11D, 11A, 31I, 74I, 111K, 111T, 112V, 113V, 119T, 119S, 123S, 125A, 127K, 134D, 136Q, 136R, 201I, 222K, 222N, 232D, 234I, 283G, 286N		

2019

No dossier	9102006044	Médecin	Dargere MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	23/10/2019
ID Patient		Service demandeur		Charge virale	166 cp/10E6 cell
Type de prélèvement	Sang EDTA	Sous-type	A1		

Nucleoside Reverse Transcriptase Inhibitors (NRTI)

Drug	Mutations list	Range	Color	Interpretation
Epivir® / Emtriva® Lamivudine / Emtricitabine (3TC, FTC)		1	Green	S - Susceptible
Ziagen® Abacavir (ABC)		1	Green	S - Susceptible
Viread® Tenofovir Adefovir (TDF, TAF)		1	Green	S - Susceptible
Retrovir® Zidovudine (ZDV)		1	Green	S - Susceptible

Non-Nucleoside Reverse transcriptase Inhibitors (NNRTI)

Drug	Mutations list	Range	Color	Interpretation
Doravirine (DOR)		1	Green	S - Susceptible
Sustiva®/Stocrin® Efavirenz (EFV)		1	Green	S - Susceptible
Intensol® Etravirine TMC125 (ETR)		1	Green	S - Susceptible
Viramune® Nevirapine (NVP) **		1	Green	S - Susceptible
Rilpivirine (RPV)		1	Green	S - Susceptible

Protease Inhibitors (PI)

Drug	Mutations list	Range	Color	Interpretation
Rayata® / Norvir® 300/100 Atazanavir / Ritonavir (ATV, RTV)		1	Green	S - Susceptible
Prezista® / Norvir® 600/100 BID Darunavir TMC114 / Ritonavir (DRV, RTV, BID)		1	Green	S - Susceptible
Prezista® / Norvir® 800/100 QD Darunavir TMC114 / Ritonavir (DRV, RTV, QD)		1	Green	S - Susceptible
A component of Kaletra® Lopinavir (LPV)	20R	1	Green	S - Susceptible
Aplivis® / Norvir® 500/200 Tiplranavir / Ritonavir (TPV, RTV) **	36I, 69K, 89M	3	Red	R - Resistance

Integrase Strand Transfer Inhibitors (INSTI)

Drug	Mutations list	Range	Color	Interpretation
Bictegravir (BIC)		1	Green	S - Susceptible
Cabotegravir (CAB)		1	Green	S - Susceptible
Dolutegravir BID (DTG, BID)		1	Green	S - Susceptible
Dolutegravir QD (DTG, QD)		1	Green	S - Susceptible
Eviogravir (EVG)		1	Green	S - Susceptible
Isoness® Raltegravir (RAL)		1	Green	S - Susceptible

For previous DNA, impact of stop codons and G→A mutations on ARV resistance is unknown.

No dossier	9102006044	Médecin	Dargere MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	23/10/2019
ID Patient		Service demandeur		Charge virale	166 cp/10E6 cell
Type de prélèvement	Sang EDTA	Sous-type	A1		

Extra Parameters

IDNS Version	v3_g_0(r31580)	Algorithm version	2018.29/sg/b
Drug Resistance Algorithm	ANRS		
Algorithm fingerprint	a8552aaab15da9ec3319a73c9e1585e7		

Mutations PR	3I, 13V, 20R, 35D, 36I, 37D, 41K, 43R, 69K, 89M	Mutations RT	5V, 11S, 35T, 39N, 60I, 121H, 123S, 135T, 162C, 173A, 177E, 200A, 207A, 211S, 214F, 245Q, 248D, 250E, 251D, 277K, 291D, 292I, 293V, 294T, 326V, 335D
Mutations IN	111T, 112V, 113V, 123S, 125A, 127K, 134D, 136Q, 201I, 232D, 234I		

2018

No dossier	8081389935	Médecin	DARGERÉ MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	08/08/2018
ID Patient		Service demandeur		Charge virale	383 cp/10E6 cell
Type de prélèvement	Sang EDTA			Sous-type	A1

Nucleoside Reverse Transcriptase Inhibitors (NRTI)

Drug	Mutations list	Range	Color	Interpretation
Epivir® / Emtriva® Lamivudine / Emtricitabine (3TC_FTC)		1	Green	S - Susceptible
Ziagen® Abacavir (ABC)		1	Green	S - Susceptible
Viread® Tenofovir Alafenamide (TDF_TAF)		1	Green	S - Susceptible
Retrovir® Zidovudine (ZDV)		1	Green	S - Susceptible

Non-Nucleoside Reverse transcriptase Inhibitors (NNRTI)

Drug	Mutations list	Range	Color	Interpretation
Doravirine (DOR)		1	Green	S - Susceptible
Sustiva®, Stocrin® Efavirenz (EFV)		1	Green	S - Susceptible
Intelence® Etravirine TMC125 (ETR)	106I	1	Green	S - Susceptible
Viramune® Nevirapine (NVP) *		1	Green	S - Susceptible
Rilpivirine (RPV)		1	Green	S - Susceptible

Protease Inhibitors (PI)

Drug	Mutations list	Range	Color	Interpretation
Reyataz® / Norvir® 300/100 Atazanavir / Ritonavir (ATV_RTV)		1	Green	S - Susceptible
Prezista® / Norvir® 600/100 BID Darunavir TMC114 / Ritonavir (DRV_RTV_BID)		1	Green	S - Susceptible
Prezista® / Norvir® 800/100 QD Darunavir TMC114 / Ritonavir (DRV_RTV_QD)		1	Green	S - Susceptible
A component of Kaletra® Lopinavir (LPVr)	20R	1	Green	S - Susceptible
Aptivus® / Norvir® 500/200 Tipranavir / Ritonavir (TPV_RTV) **	36I, 69K, 89M	3	Red	R - Resistance

No dossier	8081389935	Médecin	DARGERÉ MALADIES INFECTIEUSES CHU CAEN	Date prélèvement	08/08/2018
ID Patient		Service demandeur		Charge virale	383 cp/10E6 cell
Type de prélèvement	Sang EDTA			Sous-type	A1

Extra Parameters

IDNS Version	v3_8_1r1(r31140)	Algorithm version	2018.28/sg/b
Drug Resistance Algorithm	ANRS		
Algorithm fingerprint	35341ac2f82bff446dcae49db46c7bf5		

Mutations PR	3I, 13V, 20R, 35D, 36I, 37D, 41K, 43R, 69K, 89M	Mutations RT	5V, 11S, 35T, 39N, 54K, 54N, 60I, 106I, 106V, 121H, 123S, 135T, 162C, 166K, 166N, 173A, 177E, 200A, 207A, 211R, 211S, 214F, 245Q, 248D, 250E, 251D, 277K, 291D, 292I, 293V, 294T, 326V, 335D
Mutations IN	<not determined>		