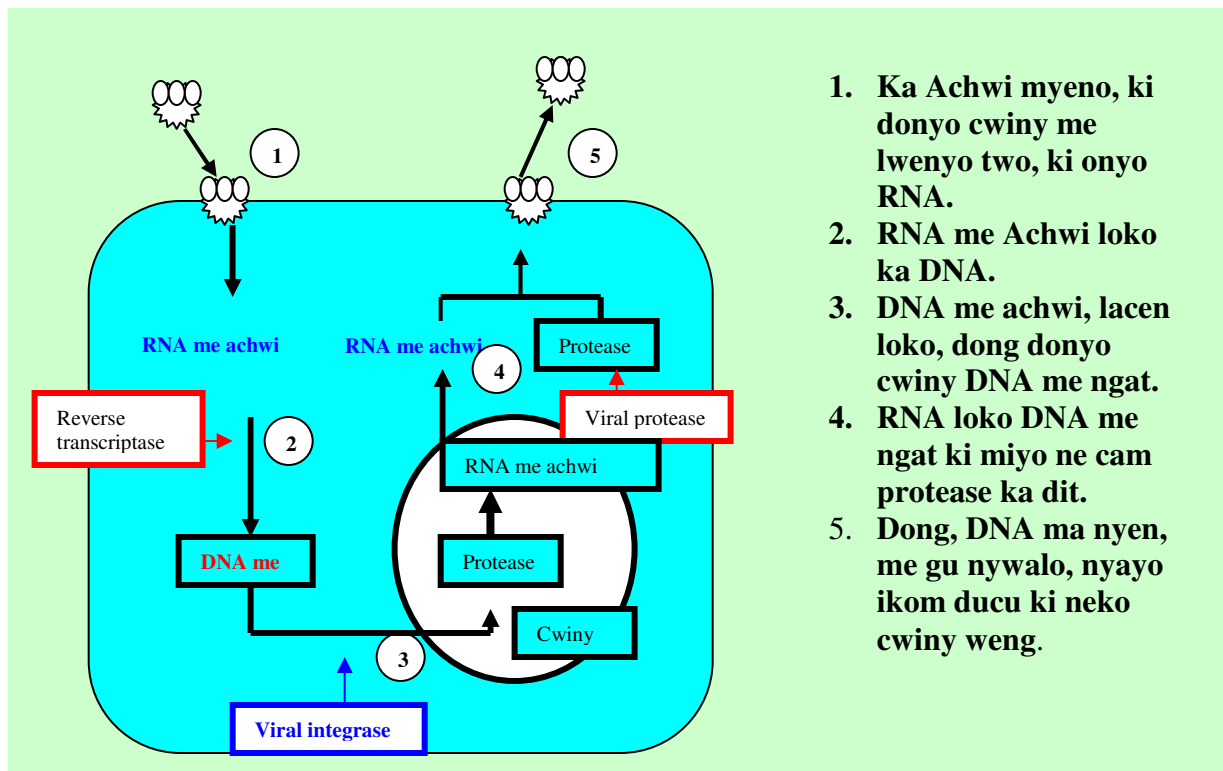


## Yat (Antiretroviral Treatment) me HIV

Yat me sida udoko ber adada. Two eni ucako con i1980, Jo mu bedo two peg u bedo kwed yat, nyo am kom ninig ka bedo kwed two eni. Kadi fud tye cango me sida, tin tye pwony me twero ka gengo achwi ka nyayo ka kelo to cok, ki kamiyo lutwo kwo bor.

Yat me tye tin, pe twero ka cango two pat me achwi kelo nyo sida. Yat twero ka gengo chwi , waka dactari twero ka neon ne ku, ento yat pe twero ka neko sida ducu ikom. Kit ma, dano me two fud mito yat antiretroviral.

Yat Antiretroviral me gi lwongo antiviral bene, me sida tye yat me gengo achwi ka nyayo ki ka nywalo. Achwi gi lwonge retrovirus, pien kome utime igin mo me gilwongo RNA; kom me dano utime igin mo me gilwongo DNA. Cel eni nyutu uyot kwo me sida:



1. Ka Achwi myeno, ki donyo cwiny me lwenyo two, ki onyo RNA.
2. RNA me Achwi loko ka DNA.
3. DNA me achwi, lacen loko, dong donyo cwiny DNA me ngat.
4. RNA loko DNA me ngat ki miyo ne cam protease ka dit.
5. Dong, DNA ma nyen, me gu nywalo, nyayo ikom ducu ki neko cwiny weng.

### Yat Antiretroviral me sida.

Yat Antiviral tye iwangayo 3:

#### (1) Reverse transcriptase (RT) inhibitors

RT inhibitors eni donyo iyo me sida me gilwongo reverse transcription. Kany, achwi loko kome ka RNA bot DNA me tye gin mo can ki achwi loko kome. Gin mo me

gilwong enzyme konyo achwi ka lok ka reverse transcriptase. Itye RT inhibitors ariyo madit:

- Nucleoside ki nucleotide RT inhibitors (NRTI) –  
Gin eni gi timo tic acel ka doko RNA ka DNA ento pe gi tye pek. Icaa me itero ka doko RNA ka DNA me achwi, yat tiy kwed gi me loko achwi me kelo ka gengo achwi ka loko ducu ki ka nyayo.

Imwaka 1987, Retrovir, nyo AZT ubedo yat mukwonge me gi ye. Mit ka ngeyo ni AZT kakwonge ubedo yat me cancer, kadi gu kwero ni pe gengo cancer nyo kelo neno can. Tin itye gang pwony (FDA) 13 me yee yat NRTI me sida. Yat eni weng tiy iyo acel.

<b>Cel 1. Gang pwony (FDA) me ye yat Nucleoside/nucleotide RT inhibitors (NRTI)</b>		
<b>Nying me yat</b>	<b>Nying mwunu</b>	<b>Lupwony</b>
◦ <b><u>Retrovir</u></b>	azidothymidine (AZT); zidovudine (ZDV)	<b>GlaxoSmithKline</b>
◦ <b><u>Videx</u></b>	didanosine (ddI)	<b>Bristol Myers-Squibb</b>
◦ <b><u>Videx EC</u></b>	enteric coated didanosine (ddI EC)	<b>Bristol Myers-Squibb</b>
◦ <b><u>Hivid</u></b>	zalcitabine; dideoxycytidine (ddC)	<b>Hoffmann-La Roche</b>
◦ <b><u>Zerit</u></b>	stavudine (d4T)	<b>Bristol Myers-Squibb</b>
◦ <b><u>Epivir</u></b>	lamivudine (3TC)	<b>GlaxoSmithKline</b>
◦ <b><u>Combivir</u></b>	lamivudine + zidovudine	<b>GlaxoSmithKline</b>
◦ <b><u>Ziagen</u></b>	abacavir sulfate, ABC	<b>GlaxoSmithKline</b>
◦ <b><u>Trizivir</u></b>	abacavir + zidovudine + lamivudine	<b>GlaxoSmithKline</b>
◦ <b><u>Viread</u></b>	tenofovir disoproxil fumarate (TDF)	<b>Gilead</b>
◦ <b><u>Emtriva</u></b>	emtricitabine (FTC)	<b>Gilead Sciences</b>
◦ <b><u>Epzicom</u></b>	abacavir + lamivudine	<b>GlaxoSmithKline</b>
◦ <b><u>Truvada</u></b>	tenofovir disoproxil fumarate + emtricitabine	<b>Gilead Sciences, Inc.</b>

- Yat me pe tye nucleoside RT inhibitors (NNRTI) –  
Yat eni myeno kwed gin me loko RNA ka DNA ki gengo achwi ka loko kome.  
Gu ye ka tiy kwed Viramune, i1996, mu bedo NNRTI mukwoqe. Itye gang pwony (FDA) 3 me ye yat NNRTI.

<b>Cel 2. Gang pwony FDA me ye yat me pe tye nucleoside RT inhibitors (NNRTI)</b>		
<b>Nying me Yat</b>	<b>Nying mwunu</b>	<b>Lupwony</b>
◦ <b><u>Rescriptor</u></b>	delavirdine, DLV	<b>Pfizer</b>
◦ <b><u>Sustiva</u></b>	efavirenz, EFV	<b>Bristol Myers-Squibb</b>
◦ <b><u>Viramune</u></b>	nevirapine, NVP	<b>Boehringer Ingelheim</b>

(2) **Protease inhibitors (PI)**

Teng tiy kwed reverse transcriptase, sida bene tic kwed gin me gilwongo protease, eni enzyme mukene, ka yubo dul me achwi. Gin me gilwongo Protein inhibitors gengo itic pa protease. Protease inhibitor mukwongo, Invirase, gu ye i1995. Itye gang pwony (FDA) 11 me ye yat protease inhibitors ka gengo sida.

<b>Cel 3. Gang pwony FDA me ye yat Protease Inhibitors</b>		
<b>Nying me yat</b>	<b>Nying mwunu</b>	<b>Lupwony</b>
◦ <b><u>Agenerase</u></b>	amprenavir, APV	<b>GlaxoSmithKline</b>
◦ <b><u>Aptivus</u></b>	tipranavir, TPV	<b>Boehringer Ingelheim</b>
◦ <b><u>Crixivan</u></b>	indinavir, IDV,	<b>Merck</b>
◦ <b><u>Fortovase</u></b>	saquinavir (no longer marketed)	<b>Hoffmann-La Roche</b>
◦ <b><u>Invirase</u></b>	saquinavir mesylate, SQV	<b>Hoffmann-La Roche</b>
◦ <b><u>Kaletra</u></b>	lopinavir and ritonavir, LPV/RTV	<b>Abbott Laboratories</b>
◦ <b><u>Lexiva</u></b>	Fosamprenavir Calcium, FOS-APV	<b>GlaxoSmithKline</b>
◦ <b><u>Norvir</u></b>	ritonavir, RTV	<b>Abbott Laboratories</b>
◦ <b><u>Prezista</u></b>	darunavir	<b>Tibotec, Inc.</b>
◦ <b><u>Reyataz</u></b>	atazanavir sulfate, ATV	<b>Bristol-Myers Squibb</b>
◦ <b><u>Viracept</u></b>	nelfinavir mesylate, NFV	<b>Agouron Pharmaceuticals</b>

### (3) **Fusion Inhibitors**

Sida mako cwiny dano dye donyo cwiny ikom dano. Gin me gi lwongo viral protein, GP41, dit k konyo achwi donyo icwiny dano. Yat Fusion inhibitors tic dye ka myeno kwed GP41 ka gengo achwi ka donyo cwiny ki ka neko cwiny. Fuzeon, FDA me gi ye i2003, fud tye fusion inhibitor mukene.

<b>Cel 4. Gang pwony FDA me ye yat Fusion Inhibitors</b>		
<b>Nying me yat</b>	<b>Nying mwunu</b>	<b>Lupwony</b>
◦ <b><u>Fuzeon</u></b>	enfuvirtide, T-20	<b>Hoffmann-La Roche &amp; Trimeris</b>

### **Antiretroviral me tic gi bor malo (HAART)**

Cwer cwiny ka ngeyo ni, antiretroviral tic gi tidi. Awene sida loko kome (nyayo/ nywalo) jwi pe time maber kit ma, lutino ne pat kikome me twero ka gengo yat ka tic aber.

Pi yat antiretroviral ka ti aber ka kare abor, gu nong ni konyo mato yat pat .kany, pi mato yat pat, achwi ka gengo yat ka tic bene dwoko piny.

Kop Highly Active Antiretroviral Therapy kit ma ka ngat umato yat antiretroviral adek nyo pol. Yat mito imat antiretroviral pat ariyo. Ka gutic kwede aber, yat unyuto ni gengo sida ka nyayo ki gengo wo mapat me sida kelo.

Dit wa ngey ni kadi yat HAART ukonyo ka gengo achwi/sida, u nongo ni ito kwo ka mwaka dye 2-4. Ento eni pe te lok ni two pu gengo ducu, ki sida fud twero ka nyayo ka ngat bot ngat. Ka mato yat ARV nyo HAART icaa calo dactari uwajo, ping jwi aber, yo ber ka gengo nyayo pa sida.

### **Gin ma a iye me yat ARV**

Dano pol me mato yat Antiretroviral gamo gin ma a iye pat, ma yot calo wii ka remo, olo, nyo can me twero ka kelo to calo acuny ka to. Yat m ARV caa weng bedo kwed tam me nyuto ni ngat me mato yat twero ka gamo gin ma a iye can ki icaa mo uromo neko ka pe tiye kwede aber. Gin ma a iye bino pat me cung ikom dano weng, calo nining kom ngat twero ka tic kwed yat. Ka mato yat dwong bene kelo gin ma a iy pol.

### **Yat a nyen**

Yat Antiretroviral ma nyen tye ka bap rwom pat me kwo pa achwi:

#### **A. Entry inhibitor**

ARV eni twero ka gengo achwi ka donyo cwiny bap ikom, me tye, Kwan CD4. Achwi ka donyo icwiny, itye gin me konyo ne ka donyo me gi lwongo co-receptors. Co-receptor mo CCR5 tye dit ika yoto woo me sida. Awene sida neon eni co-receptor CCR5, myeno kwede. Lacen ka myeno dong donyo icwiny.

Itye pwony kom yat ma nyen pol me gi timo ka gengo myeno kit sida ki CCR5, calo:

<b>Yat Pwony</b>	<b>Luwpony</b>
◦ <b>PRO140</b>	<b>Progenics</b>
◦ <b>Vicriviroc</b>	<b>Schering Plough</b>
◦ <b>Aplaviroc</b>	<b>GlaxoSmithKline</b>
◦ <b>Maraviroc</b>	<b>Pfizer</b>

Awene CCR5 tye co-receptor dit ka yoto wot pa sida icwiny, kadi co-receptors mukene tye. Tye yat lupwony me gi tye ka tiye kwed ka gengo sida ka neko yat weng mukene me tye ikom, calo CXCR4:

<b>Yat Pwony</b>	<b>Lupwony</b>
◦ <b>AMD-070</b>	<b>Genzyme Corporation</b>
◦ <b>TNX-355</b>	<b>Tanox Biosystem</b>
◦ <b>BMS-488043</b>	<b>Bristol-Myers Squibb</b>

## **B. Integrase inhibitor**

Yat eni, bap enzyme me sida me gi lwongo integrase. Ikwo pa sida lacen enzyme uloko achwi ka RNA ka DNA, dong NDA eni ma nyen donyo DNA ma ber me tye cwiny ngat, me tye, Kwan CD4. Enzyme integrase konyo RNA ka loko. Cwiny mu two dong nywalo sida ma nyen pien tin umyeno kwed cwiny ngat. Ka ngat mato yat integrase, gin integrase gengo sida ka lokke iDNA, ki ka nywalo.

Loc fud ye Yat integrase inhibitors, kadi itye ariyo me gu fud pwony:

<b>Yat Pwony</b>	<b>Lupwony</b>
◦ <b>MK-0518</b>	<b>Merck</b>
◦ <b>GS-9137</b>	<b>Gilead</b>

## **C. Maturation inhibitor**

Rwom cen me kwo sida tye ka cek, kwene achwi dwoko dit, ni yo nyayo. Maturation inhibitors lwenyo ka gengo achwi ka dii, ka gwokke kome, nyo ka loko icwiny ngat. Ka gamo tam eni yo, ber ka gengo achwi ka nywalo.

Tin fud tye gang pwony FDA weng me ye ka tic kwed maturation inhibitors. Ki fud tye maturation inhibitors me gi tye ka twero:

<b>Yat Pwony</b>	<b>Lupwony</b>
◦ <b>PA-457</b>	<b>Panacos</b>

PA-457 nyo Bevirimat gu miyo nyinge ka lupwony Panacos. Bevirimat gengo achwi dye gengo cam ne me kwero ne ka dite. Eni timo achwi ka two kip e twero ka nywalo nyo woto ikom ducu.