

2010 Update Curaçao

**HIV Treatment and Resistance to Anti-Retroviral Drugs in
Curaçao**

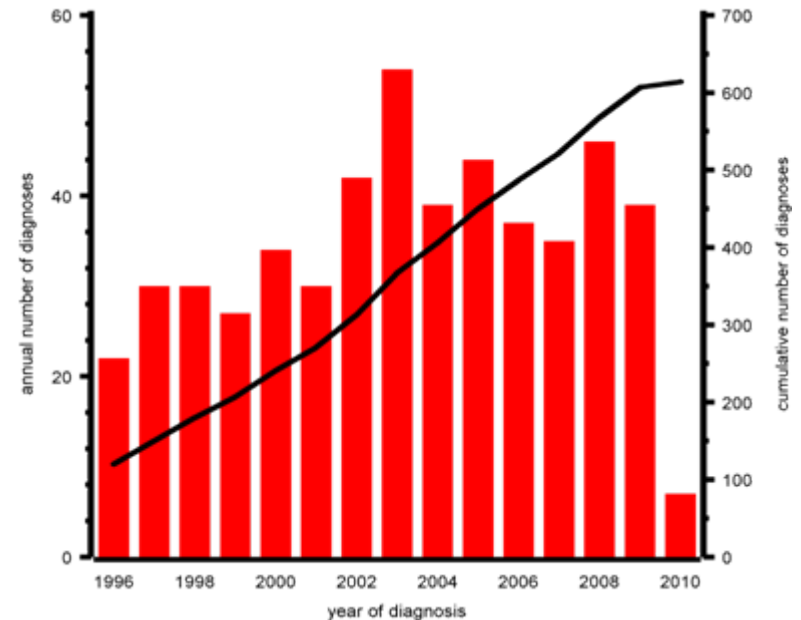
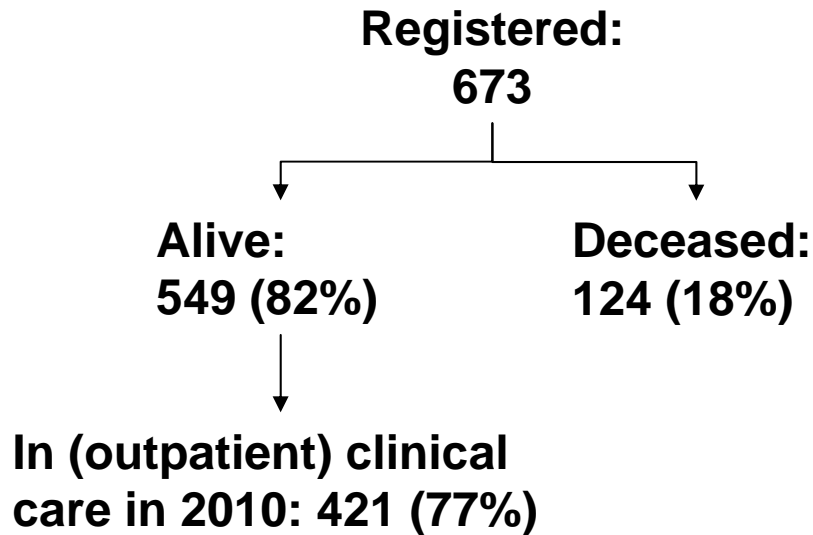
28 april 2011

Frank de Wolf

2010 Update Curaçao

- **Population registered and monitored**
- **Late presentation and start of treatment**
- **cART and treatment outcome**
- **Mortality and survival**
- **Therapy failure and drug resistance**

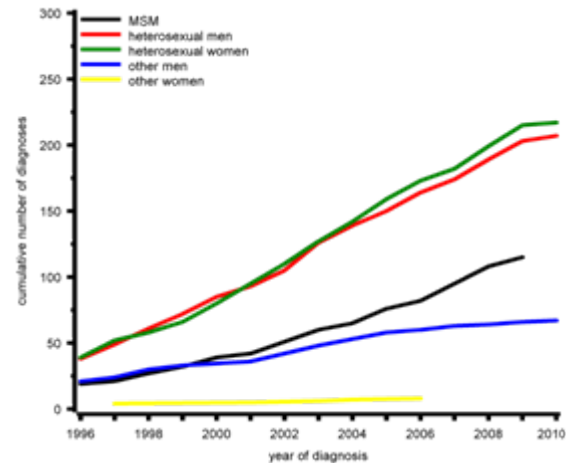
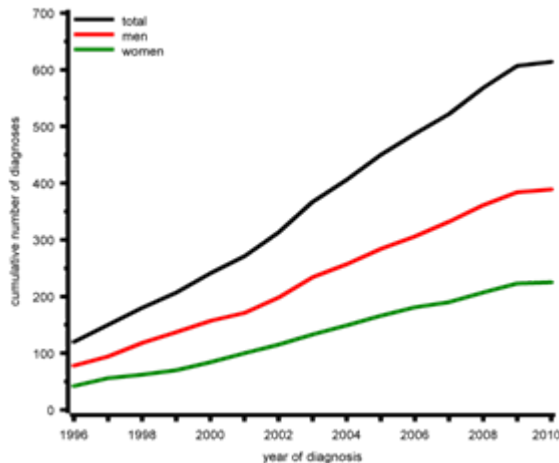
2010 Update: Population monitored



- 98 (15%) of registered patients were diagnosed in or before 1995; 34 (35%) died before June 2010
- 516 patients were diagnosed between 1996 and 2010
- From 59 patients the date of diagnosis is unknown

2010 Update: Gender & Transmission Risk Group

	Alive & in f'up, N=421		Alive & LTF N=128		Dead N=124		Total N=673	
	N	%	N	%	N	%	N	%
gender, male	259	62	71	55	90	73	420	62
female	162	38	56	45	34	27	253	38
transmission								
MSM	94	22	9	7	14	11	117	17
heterosexual	285	68	89	70	78	63	452	67
other/unknown	42	10	30	23	32	26	104	15

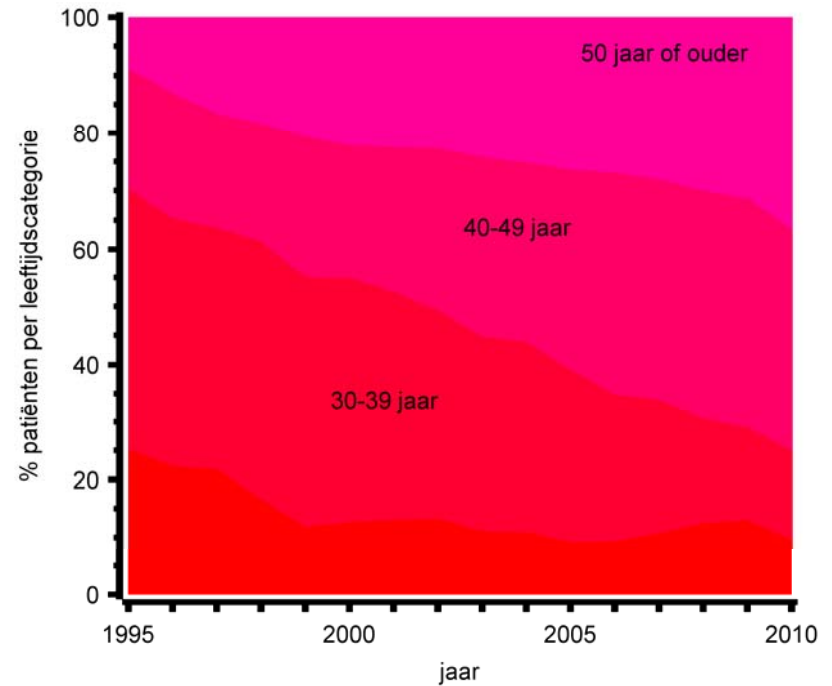
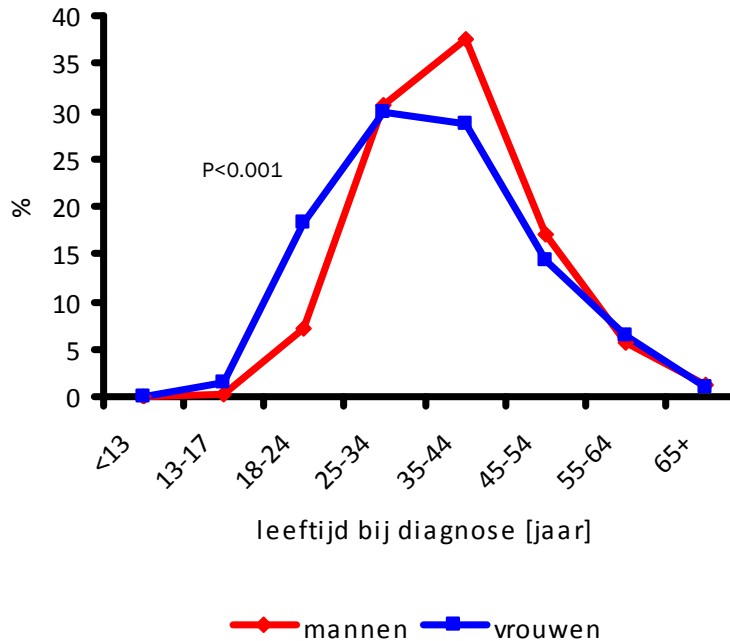


2010 Update: Country of Birth and of Infection

	Alive & in f'up, N=421		Alive & LTF N=128		Dead N=124		Total N=673	
	N	%	N	%	N	%	N	%
Country of birth								
Antilles	311	74	83	65	110	89	504	75
Haiti	38	9	29	23	7	6	74	11
Dom Rep	30	7	7	5	4	3	41	6
Country of infection							389	58
Antilles							341	88
Haiti or Dom Rep							18	5
Netherlands							16	4
HIV subtype							186	28
B							184	99

2010 Update: Age at year of diagnosis

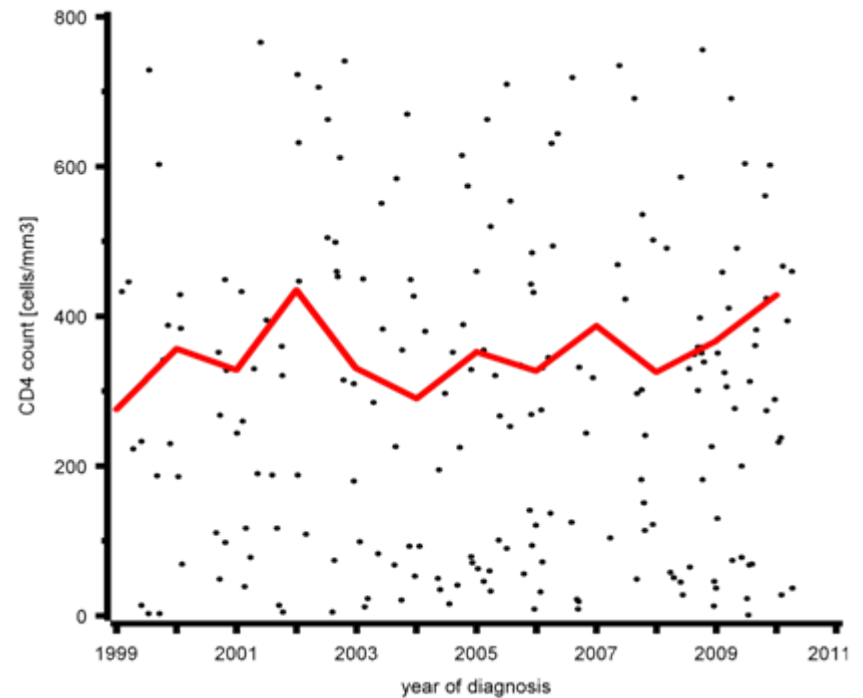
- Median age at diagnosis: 38 yrs



- 11 were 12 years or younger
- 12 were between 13 and 18 yrs

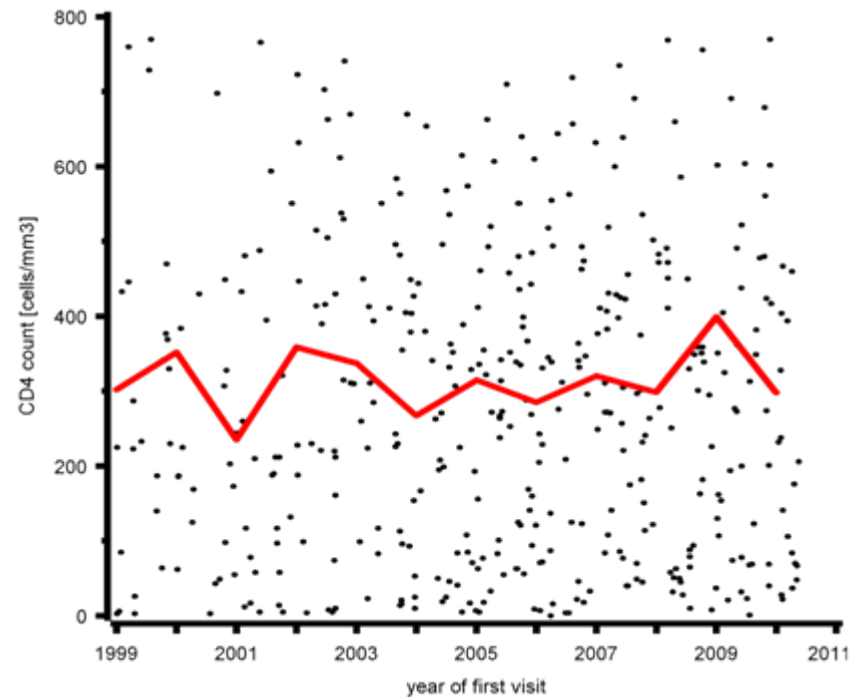
2010 Update: Late Presentation

- Median CD4 cell count at diagnosis: 321 (98-499) cells/mm³



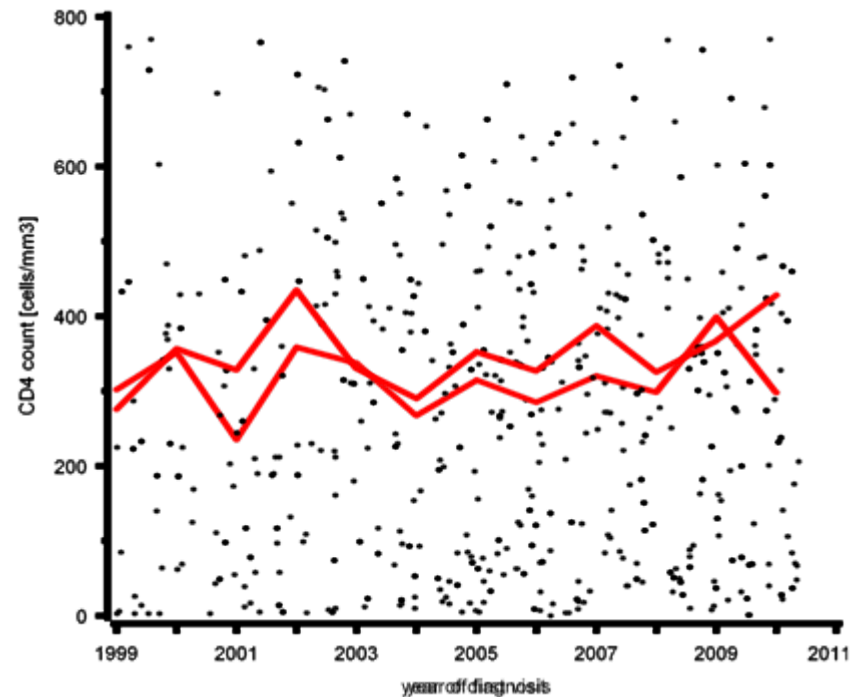
2010 Update: Late Presentation

- Median CD4 cell count at diagnosis: 321 (98-499) cells/mm³
- Median CD4 cell count at first visit: 273 (96-451) cells/mm³



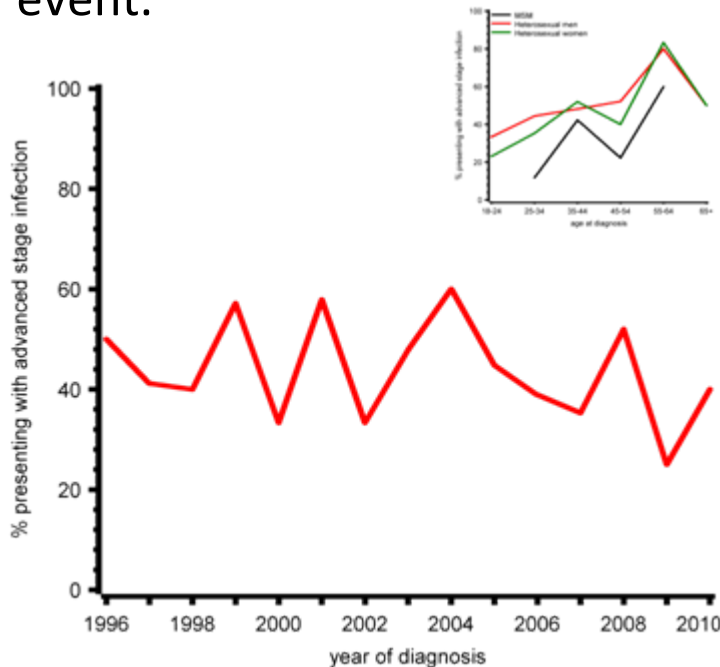
2010 Udate: Late Presentation

- Median CD4 cell count at diagnosis: 321 (98-499) cells/mm³
- Median CD4 cell count at first visit: 273 (96-451) cells/mm³
- Did not differ significantly from the count a diagnosis ($p=0.7$)
- Median time between diagnosis and first visit: 0.28 (0.12-2.02) year

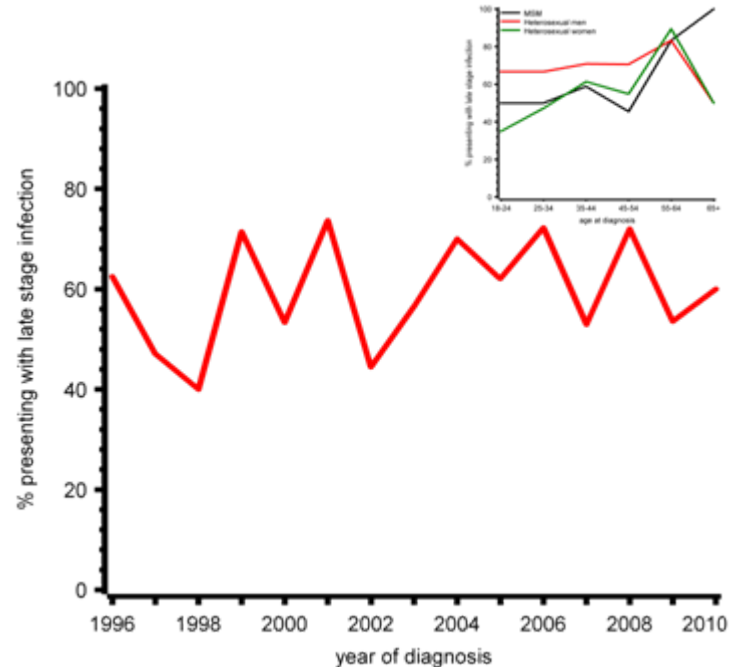


2010 Update: Stage of infection at diagnosis

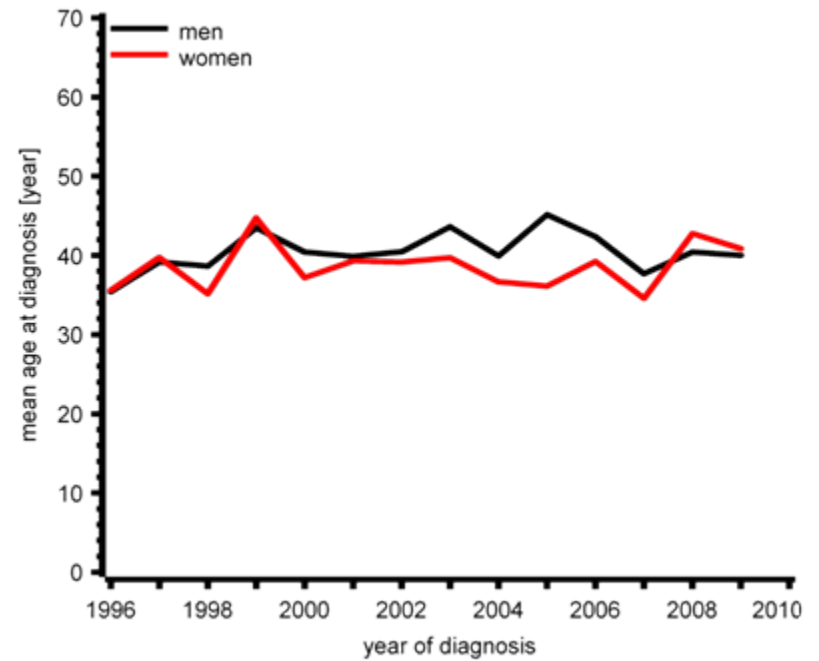
Presentation with advanced stage of disease: presenting for care with a CD4 count below 200 cells/ μ L or presenting with an AIDS defining event.



Late presentation presenting for care with a CD4 count below 350 cells/ μ L or presenting with an AIDS defining event.

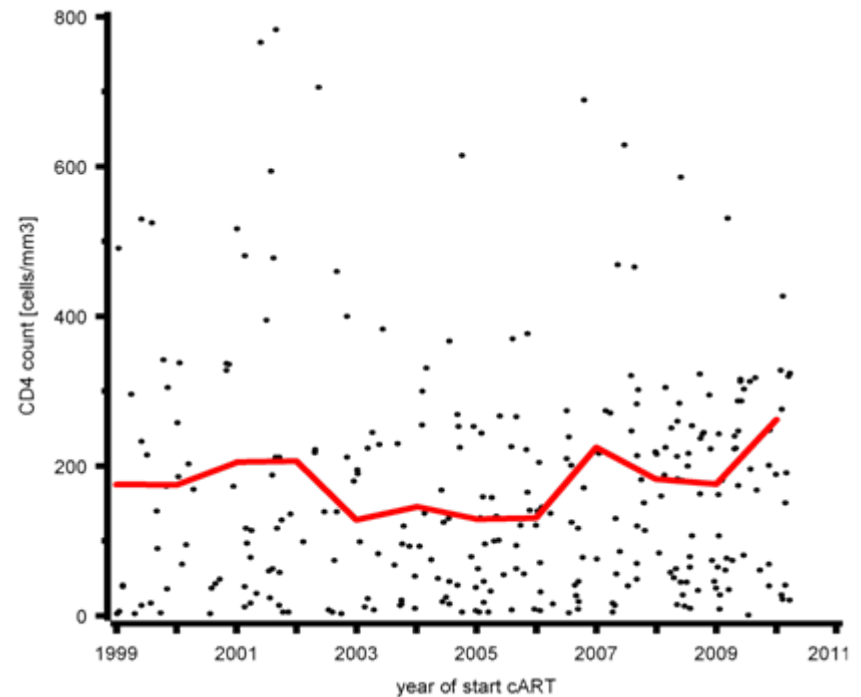


2010 Update: Age at diagnosis



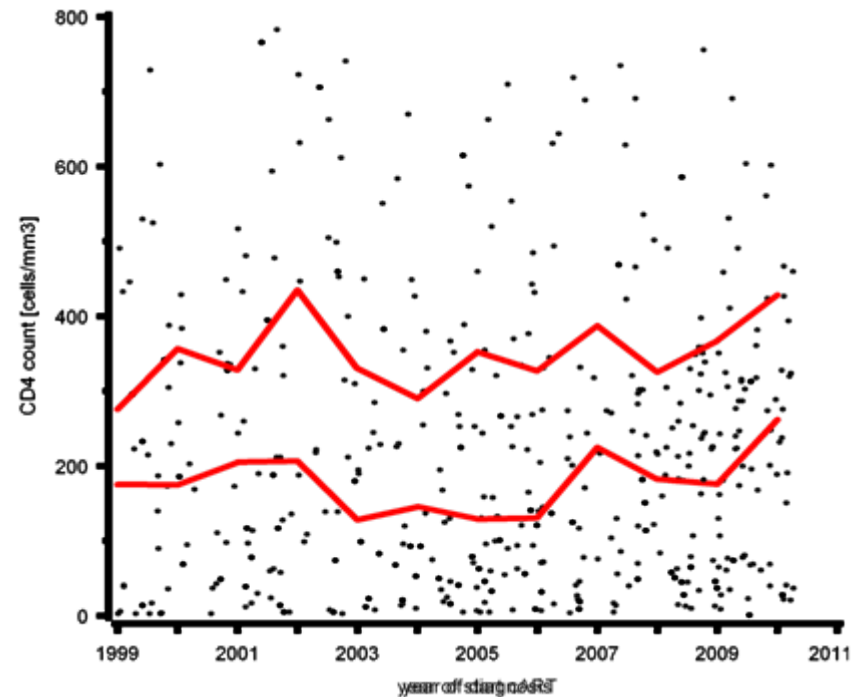
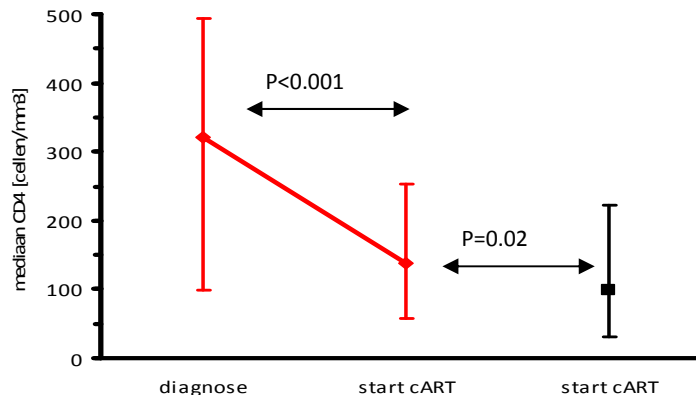
2010 Update: CD4 at Start of Treatment

- Median CD4 cell count at diagnosis: 321 (98-499) cells/mm³
- Median CD4 cell count at first visit: 273 (96-451) cells/mm³
- Did not differ significantly from the count a diagnosis (p=0.7)
- **Median CD4 cell count at start of cART: 132 cells/mm³**



Late Presentation and Start of Treatment

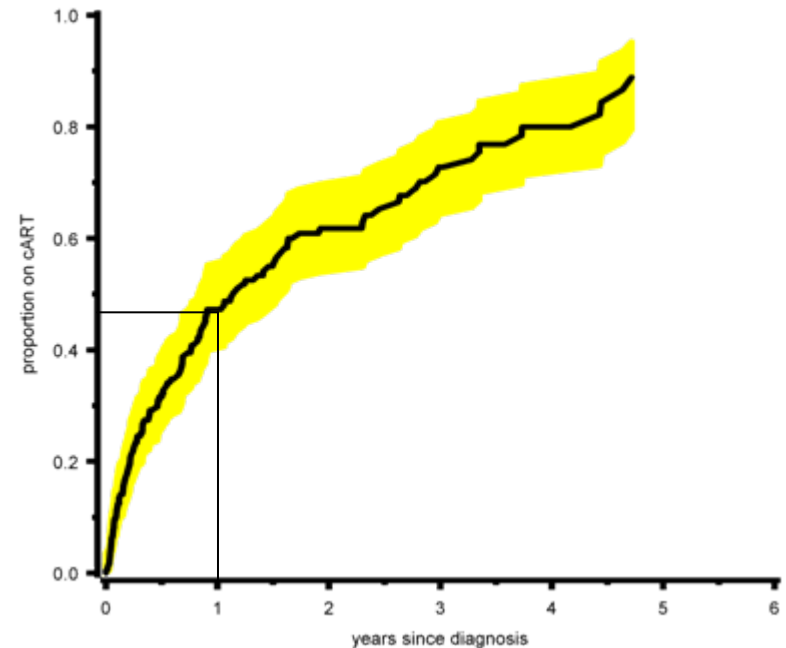
- Median CD4 cell count at diagnosis: 321 (98-499) cells/mm³
- Median CD4 cell count at first visit: 273 (96-451) cells/mm³
- Did not differ significantly from the count a diagnosis (p=0.7)
- **Median CD4 cell count at start of cART: 132 cells/mm³**



- **14% had experienced an AIDS defining disease by the time treatment was started**

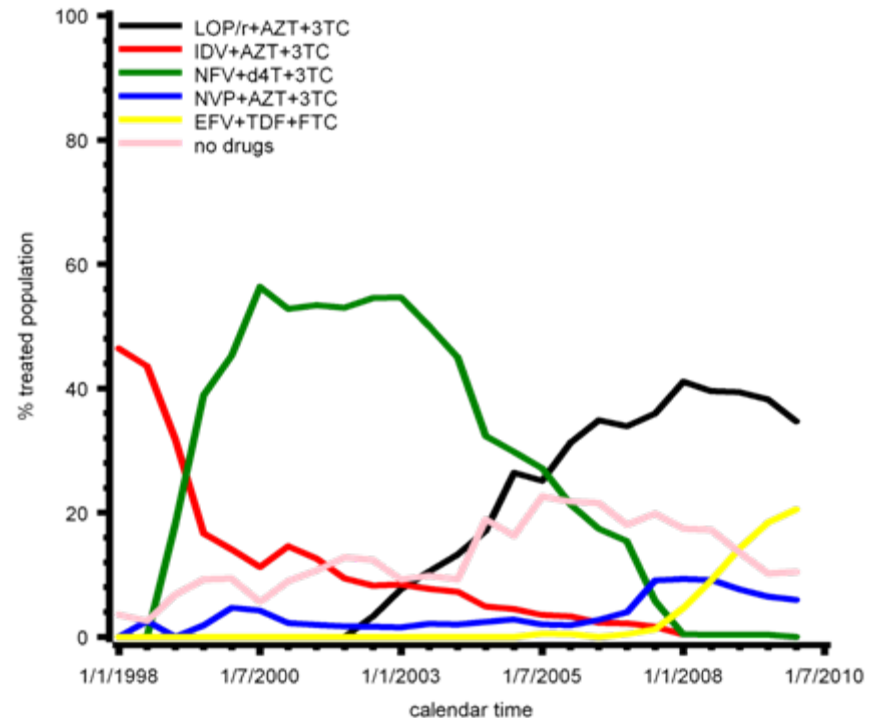
2010 Update: Time to Start cART

- Almost 50% of the patients started cART within a year from HIV diagnosis
- Between 2002 and 2010 on average 2 CD4 cell measurements were performed annually per patient
- HIV plasma RNA was measured 1,8 times per year per patient
- The frequency of clinical visits was on average 2,3 per year



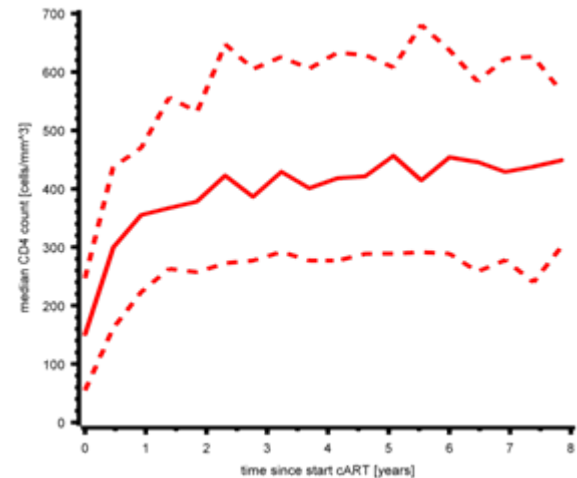
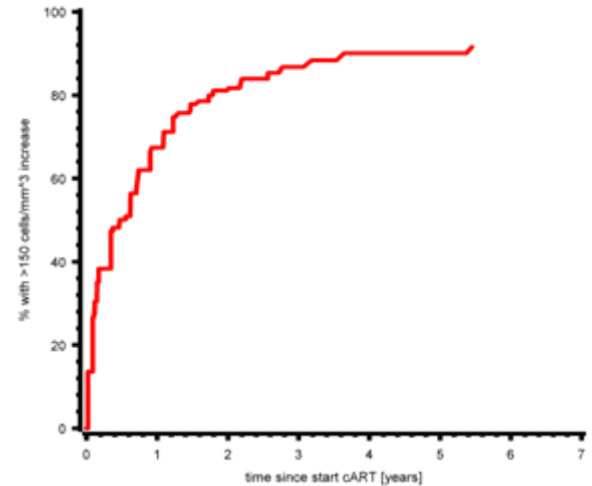
2010 Update: Drug Combinations Used Over Time

- 449 (67%) started cART
- 260 started between 2004 and 2010:
 - 68% with combivir plus LOP/r
 - 16% with truvada plus EFV
- 415 patients started cART naive



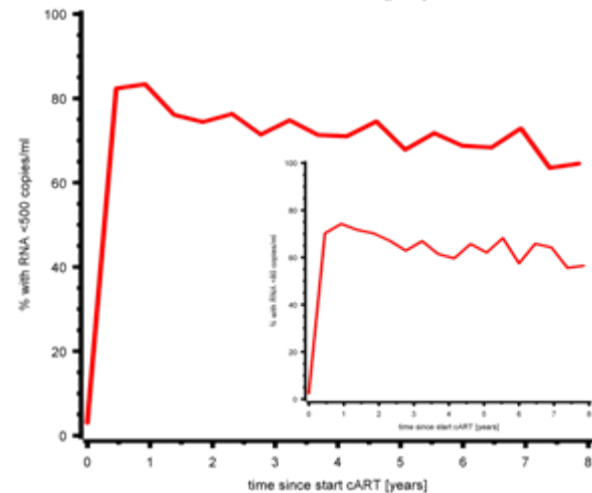
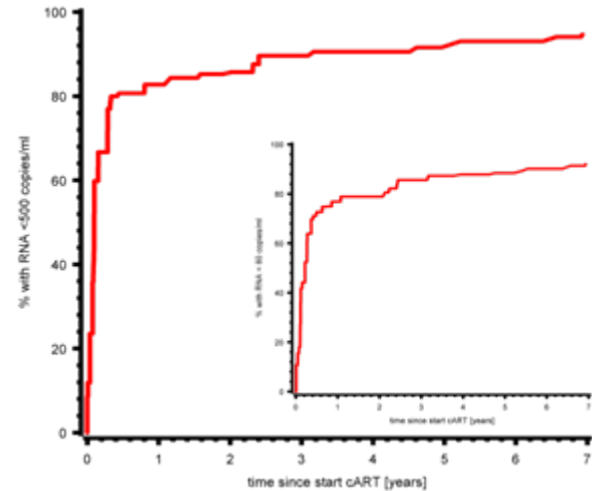
2010 Update: CD4 Cell Response to cART

- 51% had increasing CD4 cell counts by at least 150 cells/mm³ during the first 6 months of treatment
- After 2 years: 82%
- CD4 counts reached a plateau at approximately 400 cells/mm³ after 2 years of cART



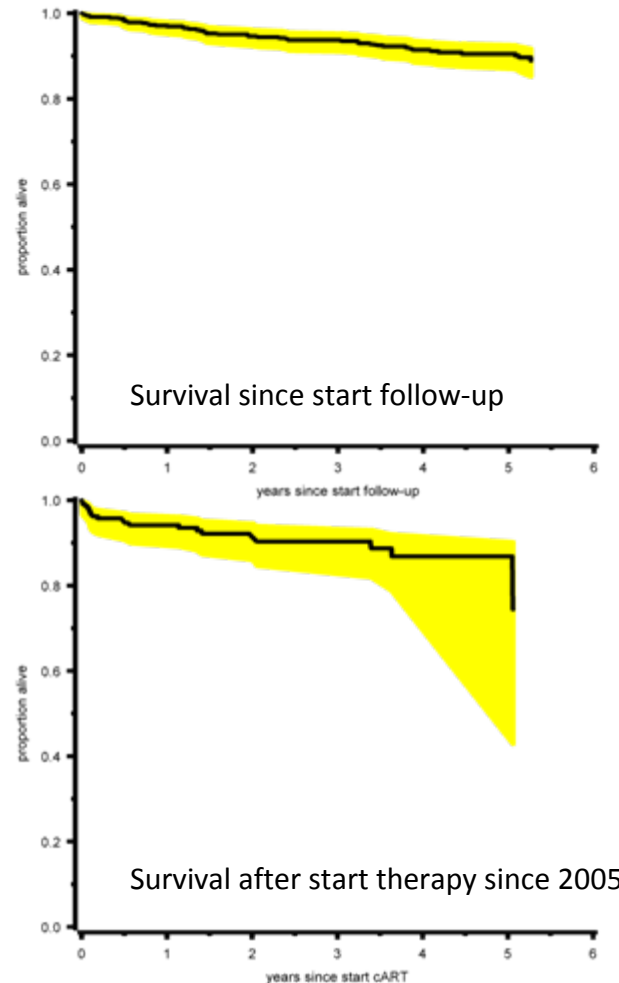
2010 Update: VL Response to cART

- 81% achieved a viral load level <500 copies/ml within 6 months of treatment; 74% <80copies/ml
- The proportion of patients with a viral load level <500 copies/ml decreased from 81% after 48 weeks to 70% after 5 years of treatment; 75% and 60% <80 copies/ml



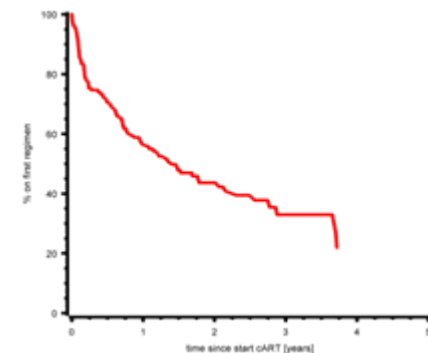
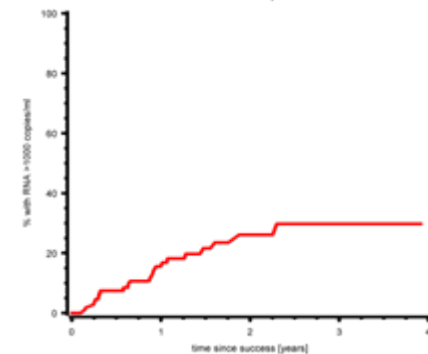
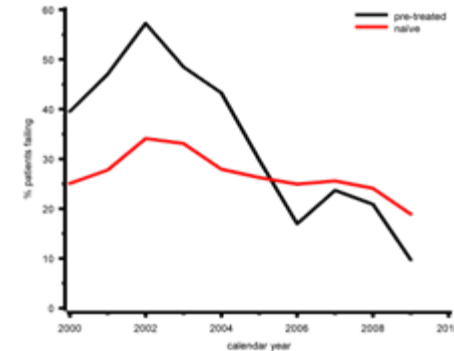
2010 Update: Survival Since Start of cART

- Of the 585 still alive as of 01/01/2005 or were diagnosed thereafter, 48 patients had died by June 2010
- The survival probability after 4 years was estimated to be 91%
- 226 patients started cART in or after 2005 and in this group 20 patients died
- The 4 year survival probability after start of cART in this group was estimated at 87%



2010 Update: cART failure

- Therapy failure occurred in 2002 in 57% of the pre-treated and 34% of the naive patients and declined over time to 10% and 18% in 2009
- 27% of the patients starting cART in 2006 or later failed their first regimen within 2 years of therapy success
- 50% of the patients experienced a cART regimen change within 1,5 years of starting their first regimen

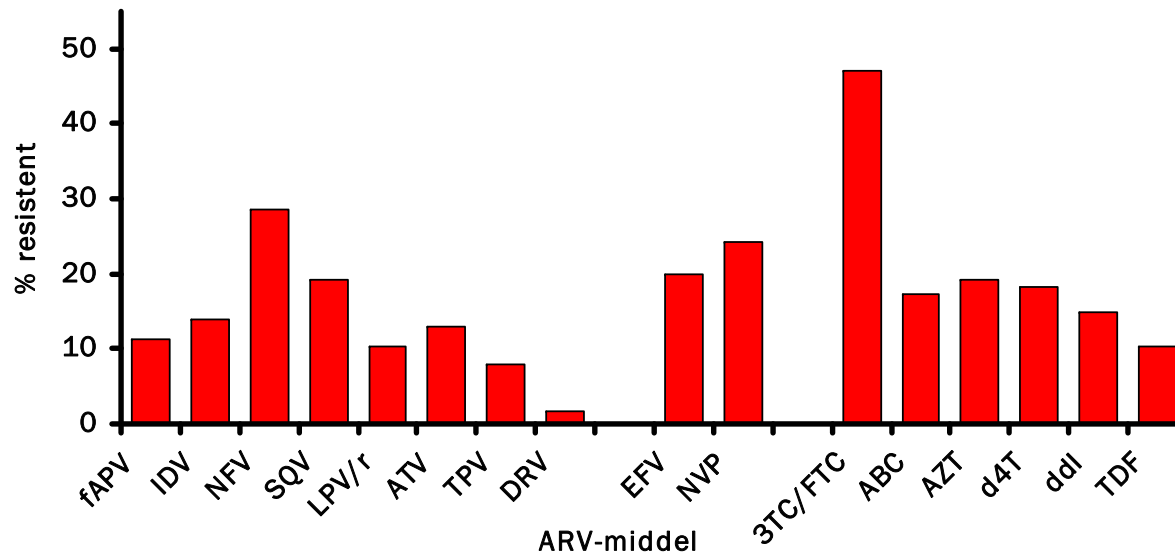


2010 Update: Resistance level and MDR

	alive		dead		total	
	N	%	N	%	N	%
N	549		124		673	
with a sequence	169	31	17	14	186	28
at least 1 RAMS	65	12	6	5	71	11
high-level resistance	% of those with RAMS					
PI	24	37	2	33	26	37
NNRT	26	40	2	33	28	39
3TC/FTC	52	80	4	67	56	79
other NRTI	11	17	0	0	11	15
classes	% of those with RAMS					
1	28	43	2	33	30	42
2	26	40	3	50	29	41
3	8	12	0	0	8	11

2010 Update: Resistance Profile cART Treated Patients

- In 66% high level resistance to at least one antiretroviral drug was found (Stanford algorithm)
- Resistance patterns are similar to those in the Netherlands, except for NNRTI (less than in NL)



2010 Update: Summary

- **The number of HIV cases registered in Curaçao has increased by 87 (15%) since 2009 to 673**
- **The majority are men, originated from and infected through heterosexual contact in the Netherlands Antilles**
- **Patients are diagnosed at older age and in a late stage of infection, with CD4 cell counts below 350 cells/mm³**
- **In addition, patients start cART late and half of the patients are on cART within a year after HIV diagnosis**
- **On average, the follow-up of patients allows for an outpatient clinic visit frequency of more than twice a year, including CD4 cell counts and measurement of viral load**

2010 Update: Summary

- **Sustained response to cART needs improvement:**
 - The CD4 cell response to cART is good, although a plateau is reached at 400 cells/mm³ two years after start of cART
 - The initial viral load response is good, however after 5 years of cART treatment the fraction of patients with a viral load <500 copies/ml is 70%
 - Survival after 4 years of cART commenced in 2005 is 87%
- **Major step: early diagnosis followed by early treatment**
- **cART virological failure rates have declined over time to levels below 20% in recent years**
- **Resistance associated mutations are found in almost one third of the failures tested and 11% of those with rams have high level triple class failure.**
- **Transmission of resistance seems to be limited**

Acknowledgements

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