470 LONG-TERM EFFECTS OF IMMEDIATE VERSUS DEFERRED cART IN PRIMARY HIV INFECTION

Kees Brinkman, Sebastian Tawil, Guido van den Berk, Rosa Regez, Daoud Ait Moha, Willem Blok
dept internal medicin, OLVG Amsterdam, the Netherlands – **k.brinkman@olvg.nl**

Background

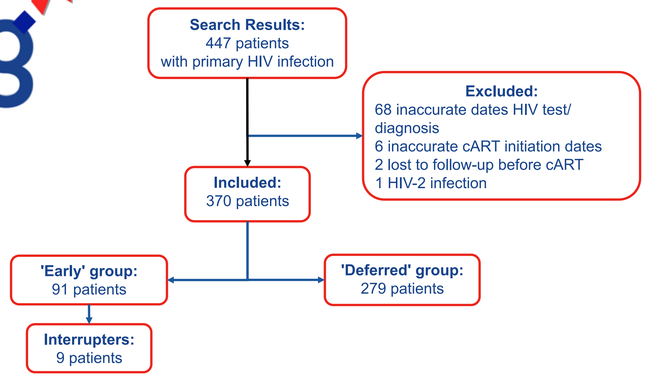
In primary HIV infection (PHI) immediate (but transient) cART suggests an immunological benefit over deferred cART; clinical benefits have not been reported. There are no studies on continuous cART in this setting.

Aim

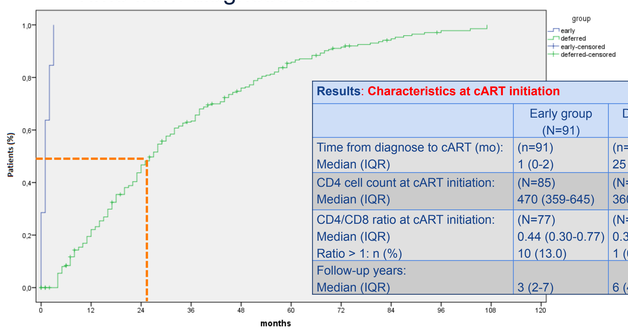
To study the long-term effects of immediate (continuous) cART on immune recovery, mortality and clinical events in comparison with deferred cART in persons with PHI.

Methods

From 1996 all individuals in the OLVG with a documented hiv seroconversion within 1 year (=PHI) were identified and divided in two groups: immediate cART (initiated < 3 mo. after Dx) versus deferred cART (initiated > 3 mo. after Dx). Differences between groups were analysed for the following outcomes: immune recovery at 2, 5, and 10 years after diagnosis (CD4 counts and CD4-CD8 ratios), mortality, AIDS-related events, cardiovascular events and malignancies. Statistical analysis: Fishers Exact, Mann Whitney U test; Kaplan-Meier curves and the log rank test to compare survival curves between groups.

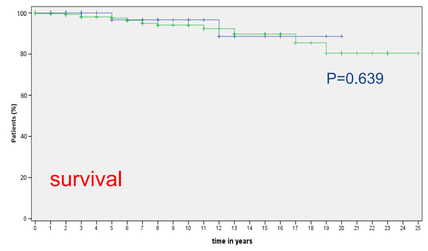


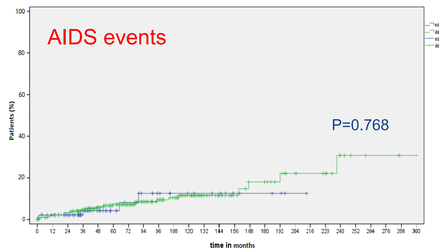
Time from diagnose to cART

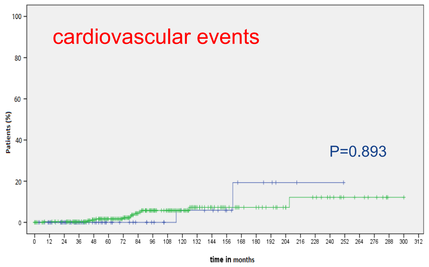


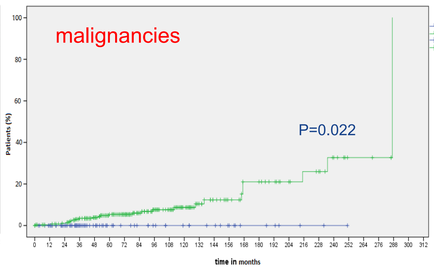
Results: Characteristics at cART initiation	Early group (N=91)	Deferred group (N=279)	p-value
Time from diagnose to cART (mo): Median (IQR)	(n=91) 1 (0-2)	(n=253) 25 (13.50-44.00)	<0.001
CD4 cell count at cART initiation: Median (IQR)	(N=85) 470 (359-645)	(N=244) 360 (280-500)	<0.001
CD4/CD8 ratio at cART initiation: Median (IQR) Ratio > 1: n (%)	(N=77) 0.44 (0.30-0.77) 10 (13.0)	(N=223) 0.36 (0.24-0.51) 1 (0.4)	<0.001 <0.001
Follow-up years: Median (IQR)	3 (2-7)	6 (4-10)	<0.001

Results: Immune recovery	Early group (N=91)	Deferred group (N=279)	p-value
2 years after diagnosis			
CD4 cell counts (cells/mm³) Median (IQR)	(N=66) 610.00 (500-870)	(N=247) 491.00 (380-670)	<0.001
CD4/CD8 ratio: median (IQR) Median (IQR) Ratio > 1: n (%)	(N=62) 0.8050 (0.6575-1.3350) 20 (32.3)	(N=232) 0.5000 (0.3700-0.7200) 24 (10.3)	<0.001 <0.001
5 years after diagnosis			
CD4 cell counts (cells/mm³) Median (IQR)	(N=27) 560.00 (400-760)	(N=182) 590.00 (430-760)	0.572
CD4/CD8 ratio: median (IQR) Median (IQR) Ratio > 1: n (%)	(N=25) 0.7100 (0.6150-0.9850) 6 (24.0)	(N=175) 0.6100 (0.4400-0.8500) 30 (17.1)	0.084 0.408
10 years after diagnosis			
CD4 cell counts (cells/mm³) Median (IQR)	(N=11) 550.00 (350-670)	(N=71) 580.00 (470-810)	0.264
CD4/CD8 ratio: median (IQR) Median (IQR) Ratio > 1: n (%)	(N=11) 0.7400 (0.4800-1.2500) 3 (27.3)	(N=66) 0.6550 (0.4575-0.8925) 7 (10.6)	0.329 0.149









clinical outcomes	Early (N=91)	Deferred (N=279)	p-value
Deaths: n (%)	**2 (2.2)**	**15 (5.4)**	**0.261[a]**
AIDS-related	0	5 (1.8)	0.510[a]
Non-AIDS-related	1 (1.1)	7 (2.5)	
Unknown cause	1 (1.1)	3 (1.1)	
Primary AIDS-events: n (%)	**5 (5.5)**	**27 (9.7)**	**0.218[c]**
Candidiasis, esophageal	3 (3.3)	6 (2.2)	
Kaposi's sarcoma		7 (2.5)	
PJP	1 (1.1)	3 (1.1)	
Hodgkin's lymphoma		3 (1.1)	
Tuberculosis		3 (1.1)	
Pneumonia, recurrent		3 (1.1)	
Non-Hodgkin's lymphoma		1 (0.4)	
Cryptococcosis, extrapulmonary	1 (1.1)		
Cryptosporidiosis		1 (0.4)	
Primary CVD events: n (%)	**2 (2.2)**	**12 (4.3)**	**0.532[a]**
Invasive procedure	1 (1.1)	4 (1.4)	
Arrhythmia		4 (1.4)	
Angina pectoris		3 (1.1)	
Myocardial infarction	1 (1.1)		
Cerebrovascular accident		1 (0.4)	

	Early (N=91)	Deferred (N=279)	p-value
Primary malignancies: n (%)	**0**	**25(9)**	**0.003[c]**
Kaposi's sarcoma		8(2,9)	
Non-Hodgkin's lymphoma		1(0,4)	
Hodgkin's lymphoma		3(1,1)	
Basal cell carcinoma		6(2.2)	
Hepatocellular carcinoma		1(0,4)	
Large-cell lung carcinoma		1(0,4)	
Non-seminoma test. cancer		1(0,4)	
Pancreatic adenocarcinoma		1(0,4)	
Prostate carcinoma		1(0,4)	
Pulmonary adenocarcinoma		1(0,4)	
Adenocarcinoma of UP		1(0,4)	

[a]Fisher's exact test;
[c]Chi-square test;

Conclusion

in this observational study immediate cART provided no benefits over deferred cART in primary HIV infection for immune recovery, mortality, AIDS-related events, and cardiovascular events. However, immediate cART significantly reduced the risk of AIDS-defining and non-AIDS-defining malignancies in this setting.