

Outcomes of children, stratified by immune status, receiving anti-retroviral therapy in Médecins Sans Frontières supported projects in resource-limited settings.

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Background : paediatric HIV treatment

- 2005: 2.3 million children living with HIV, and 300,000 needing ART.
- Few children in RLS currently on ART
 - Limited experience
 - Lack of affordable simple diagnostic testing
 - Lack of affordable, adapted paediatric ARV formulations
 - Lack of paediatric FDC
 - Lack of standard paediatric dosing regimens



MSF HIV/AIDS TREATMENT PROGRAMMES



Background : MSF programs

- HIV/AIDS programs 65
- Countries 32
- Patients on ART (March 2006) 57,344
- Children < 15 years on ART 4096 (7%)
- Collaboration with public health services
- Urban, semi-urban and rural settings

Objectives

- To assess treatment outcomes in children given ART under routine MSF program conditions according to baseline immunological status.

Definitions

- Profound immunosuppression
⇒ $CD4 < 5\%$
- Severe immunosuppression
⇒ $CD4 \geq 5\% + < 15\%$
- Mild-moderate immunosuppression
⇒ $CD4 \geq 15\%$

Methods

- Multi-centric analysis of data collected using a standardized data collection software (FUCHIA)
- Study period : Dec 2001 - March 2006
- Eligibility criteria
 - Project ≥ 30 children
 - Age 18-59 months
 - ART and available baseline CD4 data

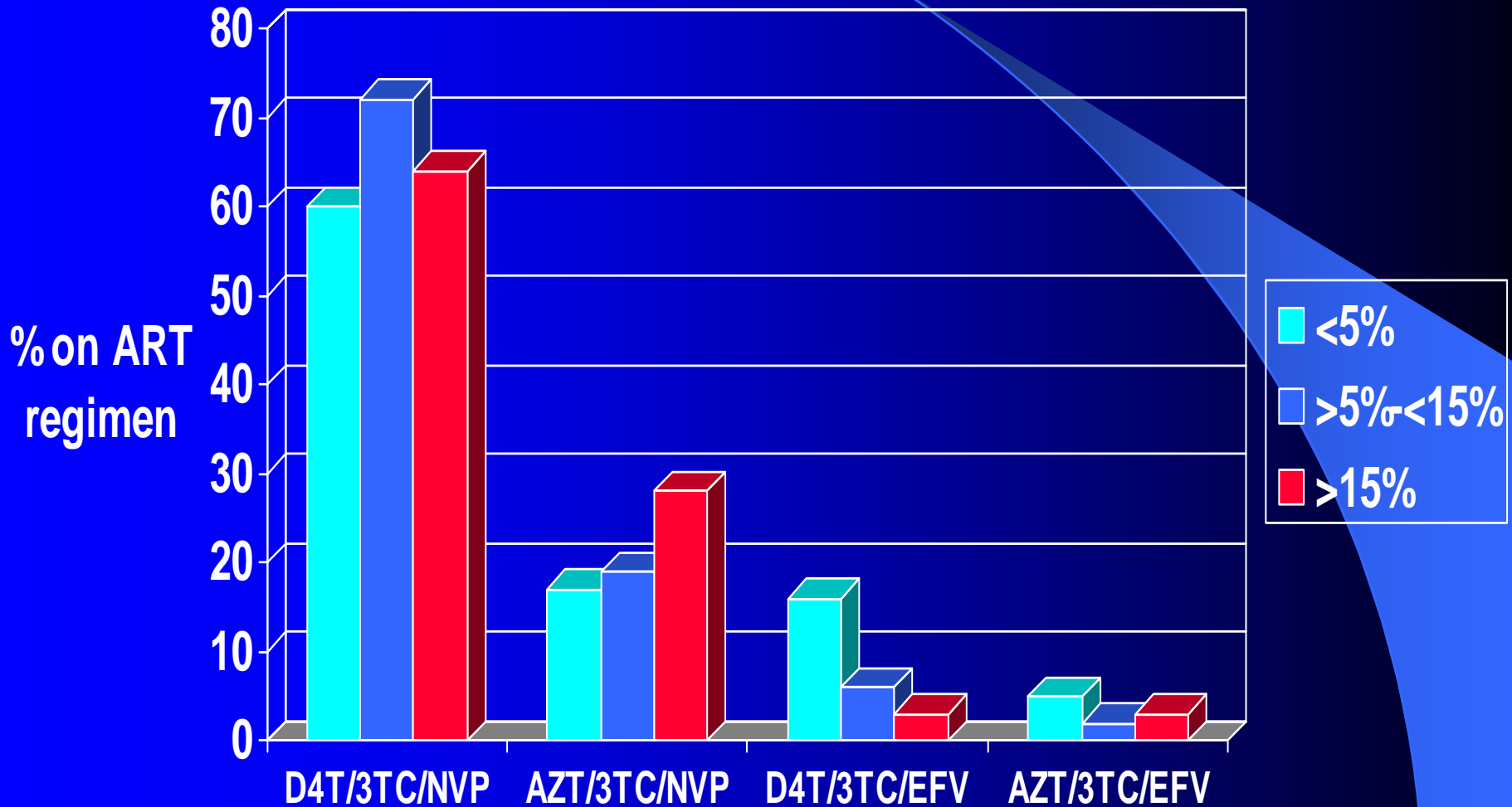
Study cohort

- Children in MSF cohort 16,077
- Children started on ART 4654 (29%)
- Study population
 - Age 18-59 months on ART 1458
 - Exclusion:
 - Project <30 children 121
 - No CD4% at baseline 581
 - **Total included in the analysis: 756**
- 23 projects in 12 countries : 8 in Africa, 2 in Asia and 2 in Central America

Baseline characteristics by CD4% group

Characteristics	Baseline CD4%		
	<5% N=101	≥5%-<15% N= 468	≥15% N= 187
Female	37 (37%)	215 (46%)	92 (49%)
Median age yrs {IQR}	3.6 {2.9-4.3}	3.1 {2.3-4.1}	3.1 {2.3-4.1}
Median weight kg {IQR}	11 {9.5-13.1}	11 {9.8-13}	11 {9.5-14}
CDC stage B	36 (36%)	142 (30%)	73 (42%)
CDC stage C	42 (42%)	178 (38%)	65 (37%)
ARV naive	100 (99%)	461 (99%)	176 (94%)

ART regimens



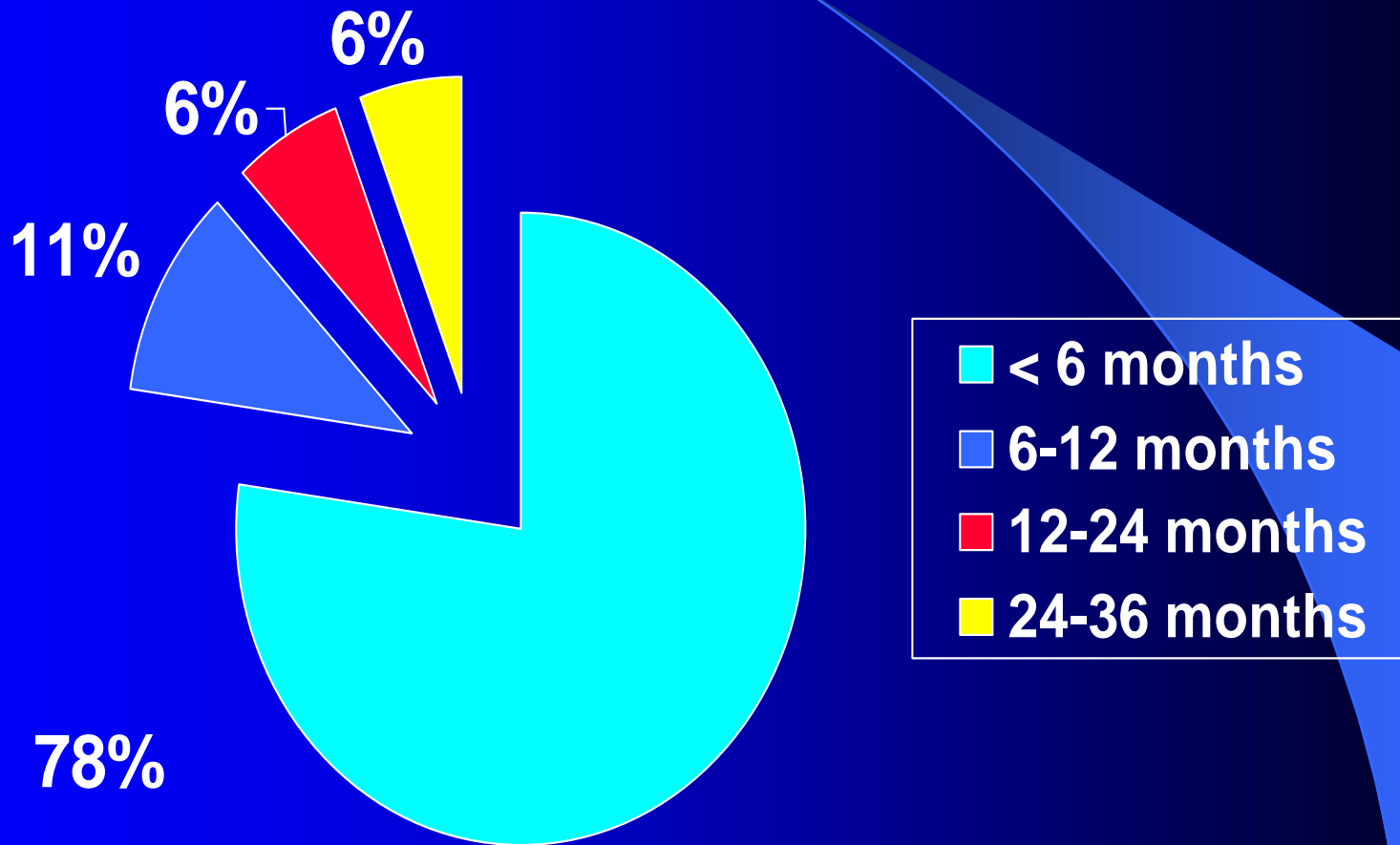
Duration of follow-up on ART by CD4% group

	CD4% <5% N=101	CD4% ≥5%- <15% N=468	≥15% N=187
Median (IQR) months	13.3 (4.9-19.3)	10.3 (4.0-17.9)	8.4 (3.1-18.4)
≥12 months	54 (53%)	207 (44%)	78 (42%)

Outcomes by CD4% group

	<5% N=101	CD4% ≥5%- <15% N=468	≥15% N=187
Alive on ART	81 (80%)	392 (84%)	157 (84%)
Dead	12 (12%)	18 (4%)	6 (3%)
Lost to follow-up	2 (2%)	35 (8%)	11 (6%)
ART stopped	3 (3%)	7 (2%)	3 (2%)
Transferred out	3 (3%)	12 (3%)	9 (5%)
Unknown	0 (0%)	4 (1%)	1 (1%)

Deaths by time on ART (n=36)

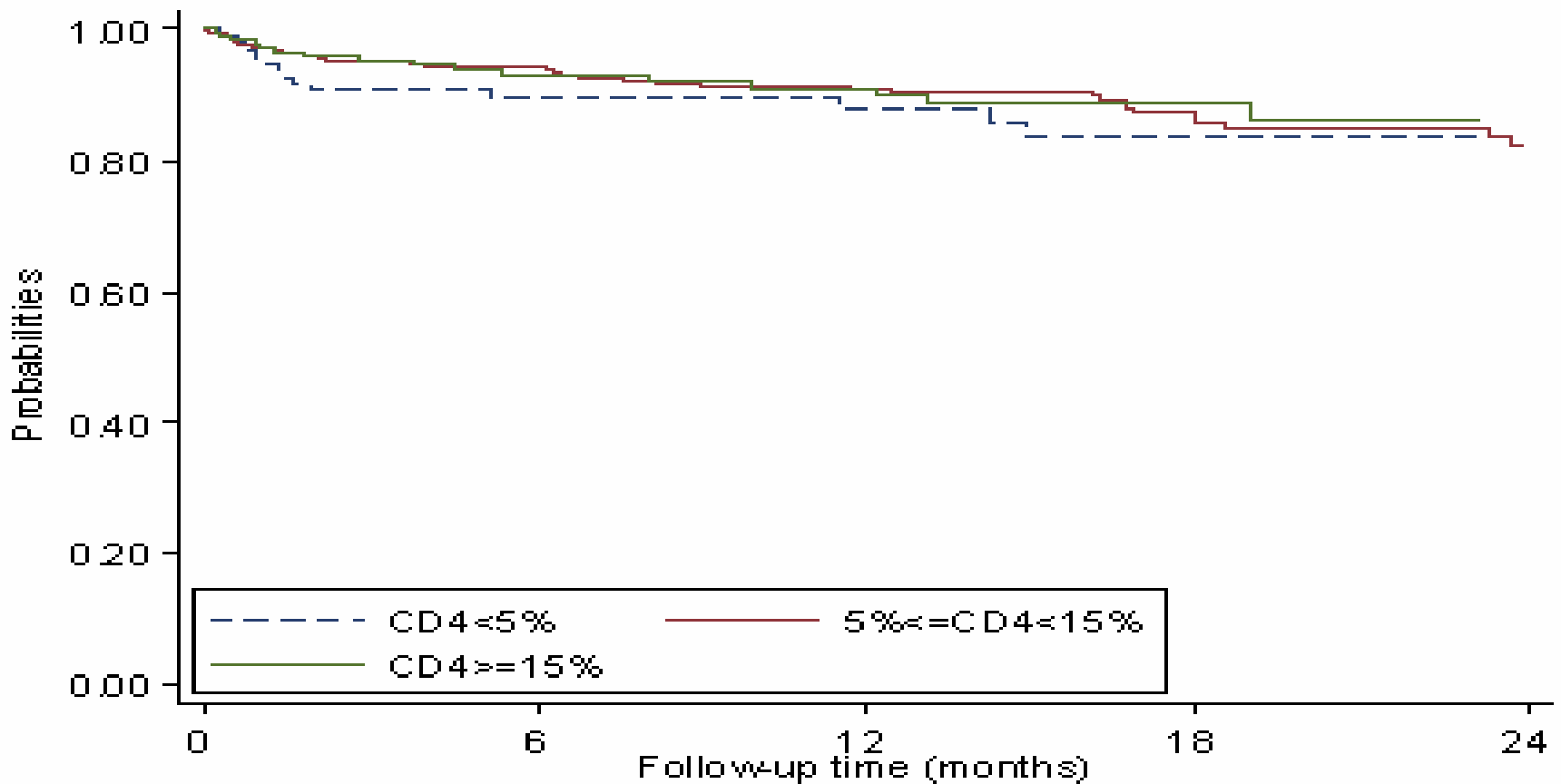


Median time on ART at death: 1.5 months (IQR 0.6 – 5.3)

Survival by baseline CD4% group (end point : deaths + LFU)

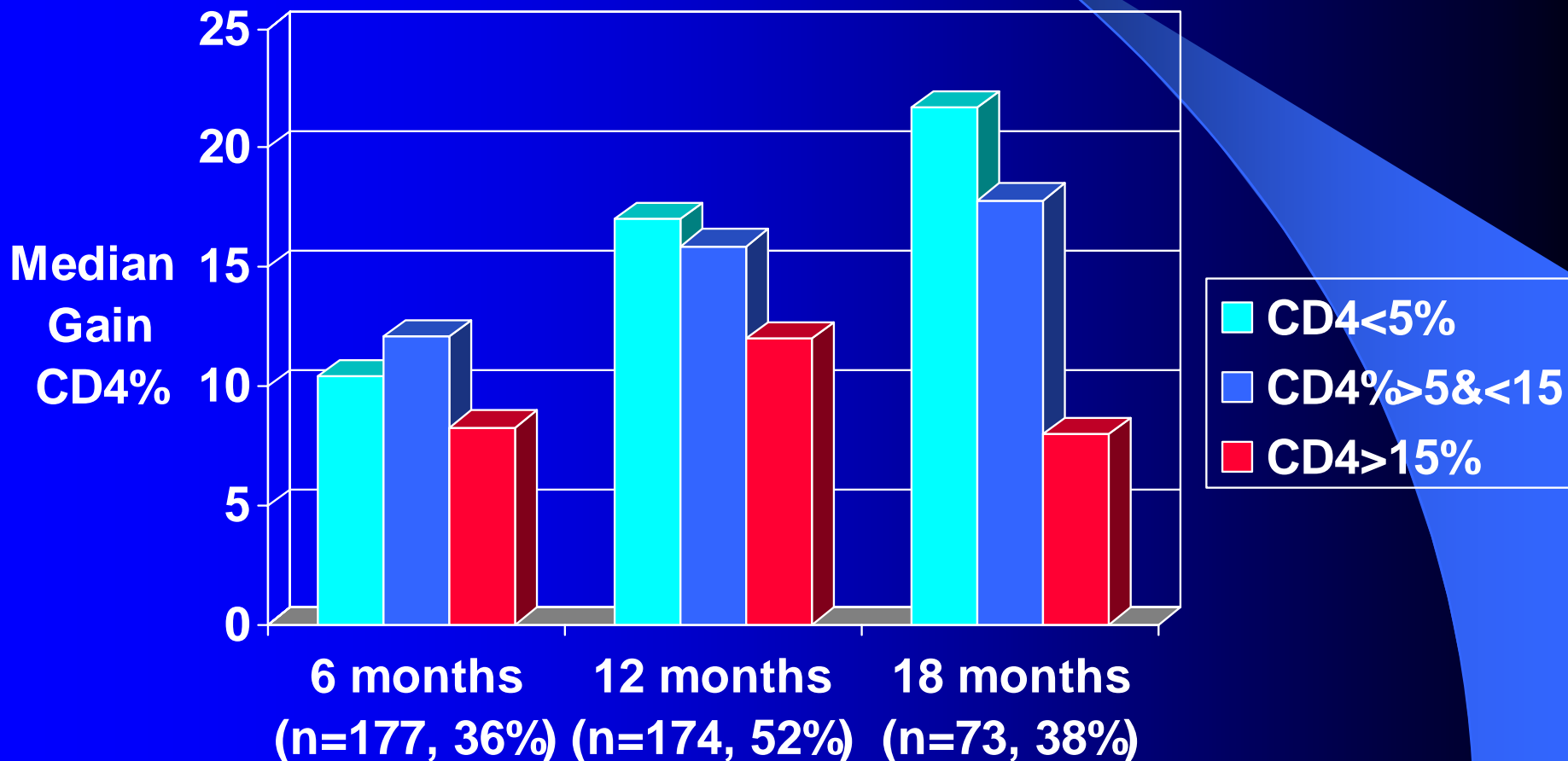
Time	<5% n=101	CD4% ≥5%-<15% n=468	≥15% n=187
6 months (95% CI)	0.89 (0.89-0.94) n=70	0.94 (0.92-0.96) n=315	0.93 (0.88-0.96) n=110
12 months (95% CI)	0.88 (0.79-0.93) n=54	0.91 (0.88-0.94) n=207	0.91 (0.85-0.95) n=78
24 months (95% CI)	0.84 (0.73-0.91) n=12	0.82 (0.75-0.87) n=54	0.86 (0.77-0.92) n=15

Probability of survival (end point: death + LFU) by baseline CD4% group at ART initiation

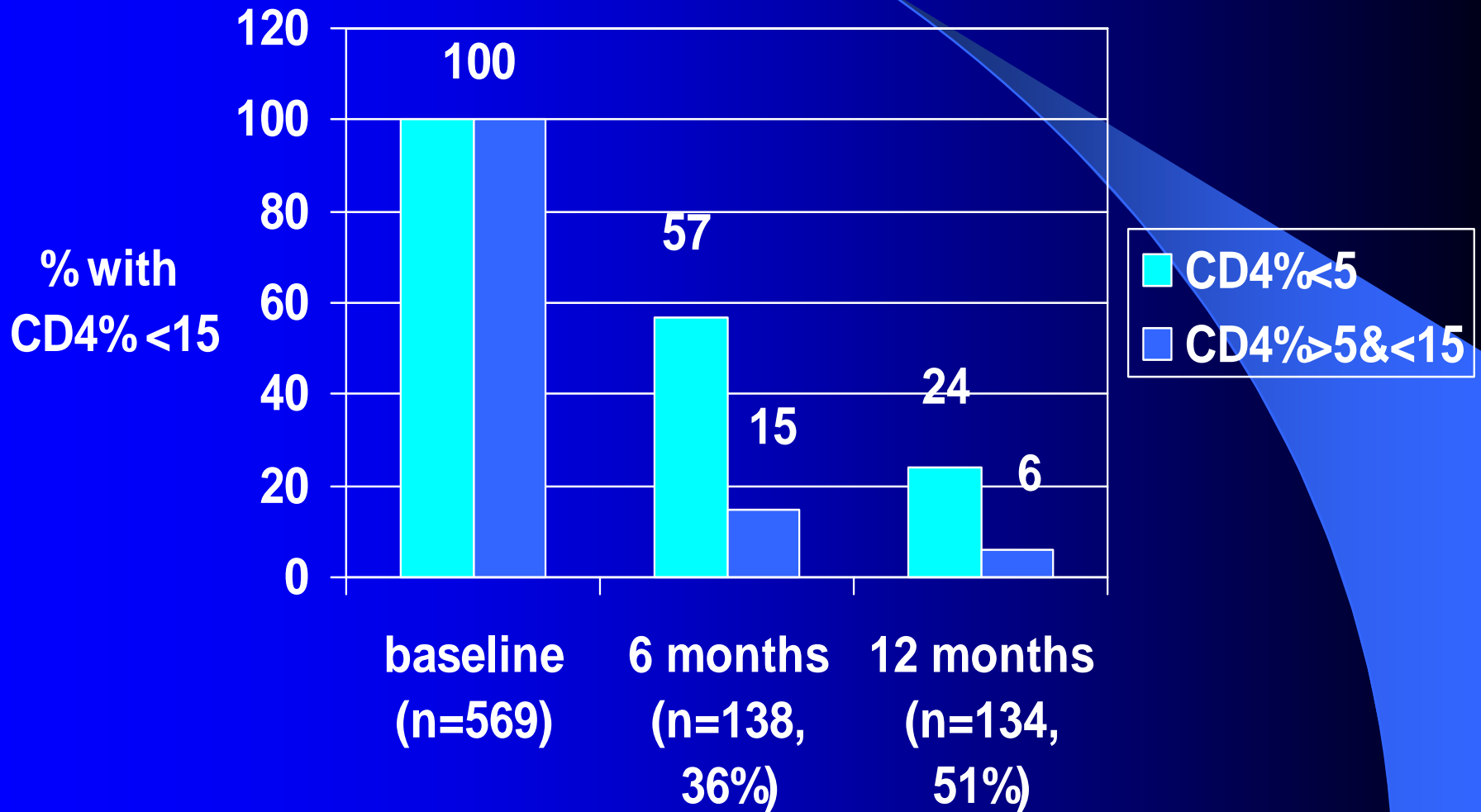


Log rank test $p=0.6$

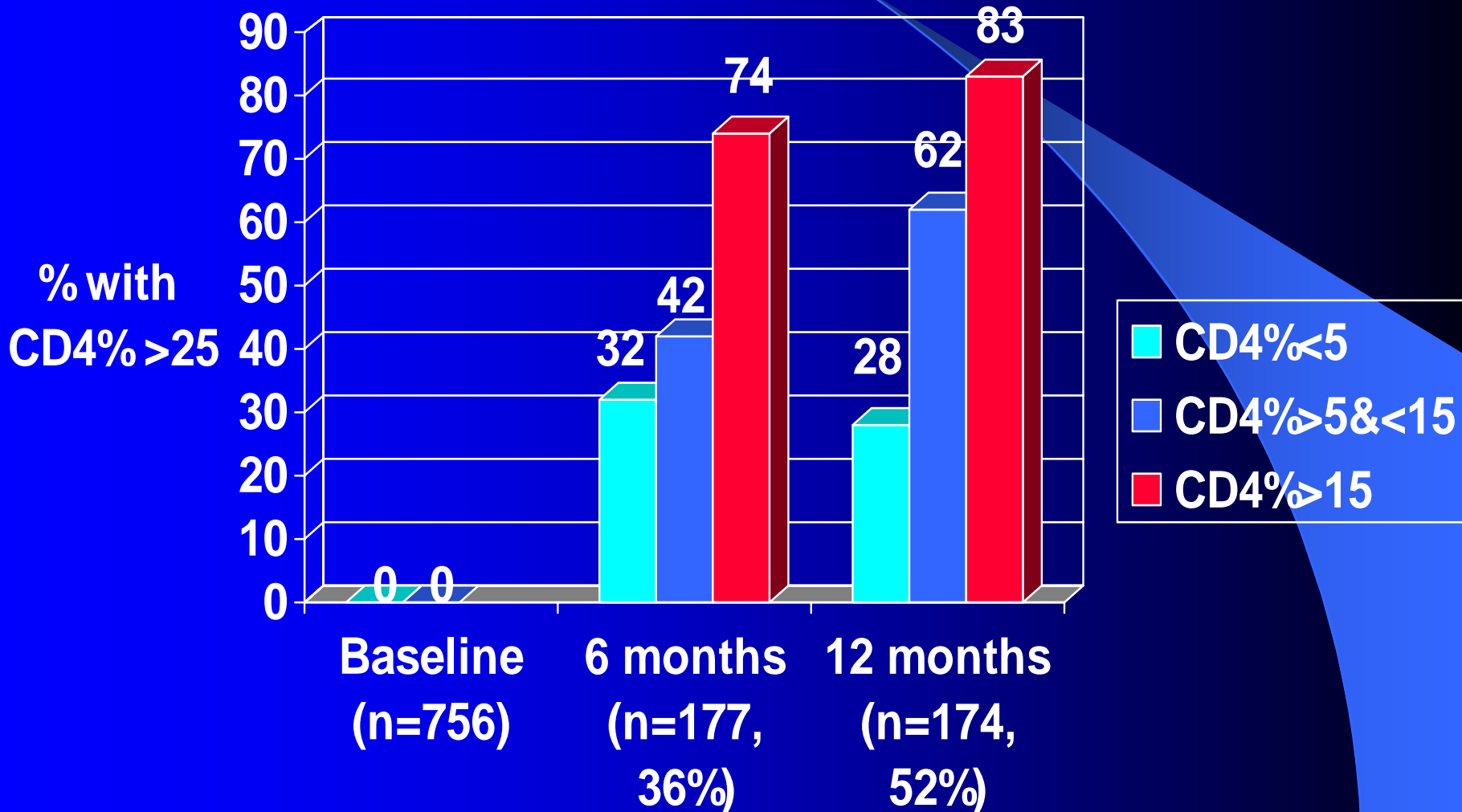
Median CD4% gain after ART initiation by study group



Proportion CD4% <15 after ART by study group



Proportion CD4% >25 after ART by study group



Limitations

- Surveillance multicentric data
- Relatively short follow-up
- Limited information on immunological outcomes
- No virological outcomes

Conclusions

- Very satisfactory treatment outcomes for children with profound and severe immunosuppression in resource limited settings
- Extent immunosuppression at baseline for ART does not appear to impact on short-term treatment outcomes



Acknowledgments

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