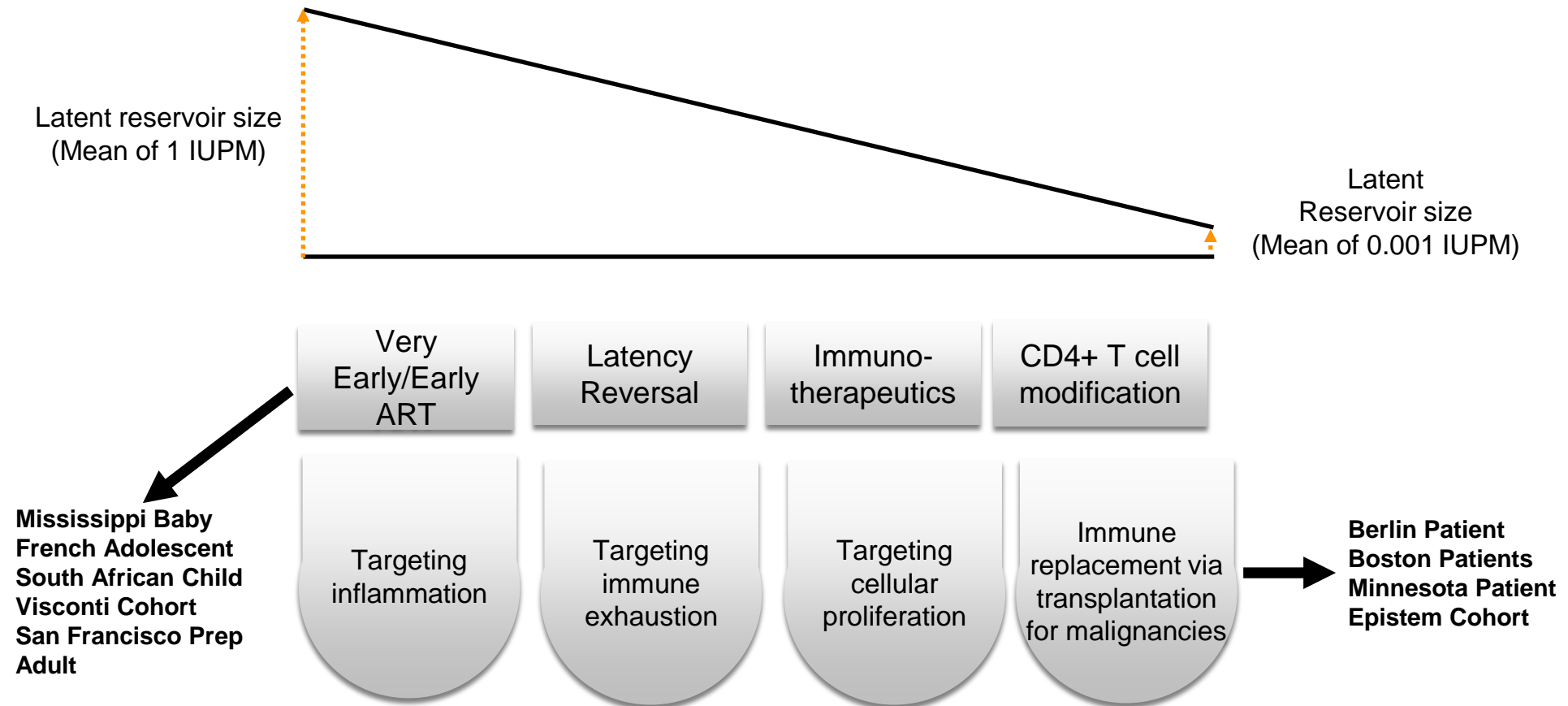


Landscape of HIV Cure Interventions and Trials in Pediatric Populations

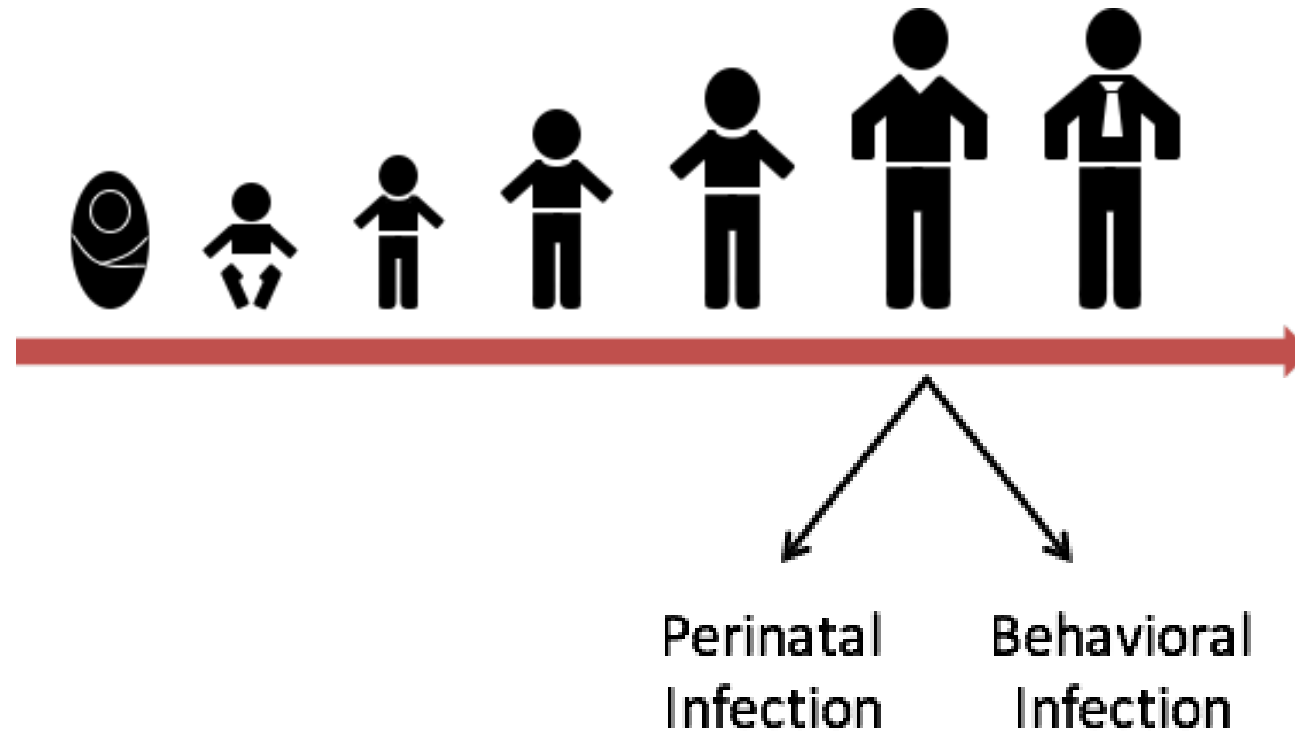
Deborah Persaud, MD
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Goals of HIV Remission and Cure Therapeutics



Pediatric HIV Infection Spans the Age Spectrum



Reservoir size is influenced by age of effective ART and duration of virologic control

Latent Reservoir Size by Duration of Virologic Suppression Following Early ART

Latent Reservoir Size in Youth with Delayed ART

Development of Pediatric HIV Cure Strategies: Key Considerations

Age of study participants (neonate to young adult)

Reservoir dynamics and diversity

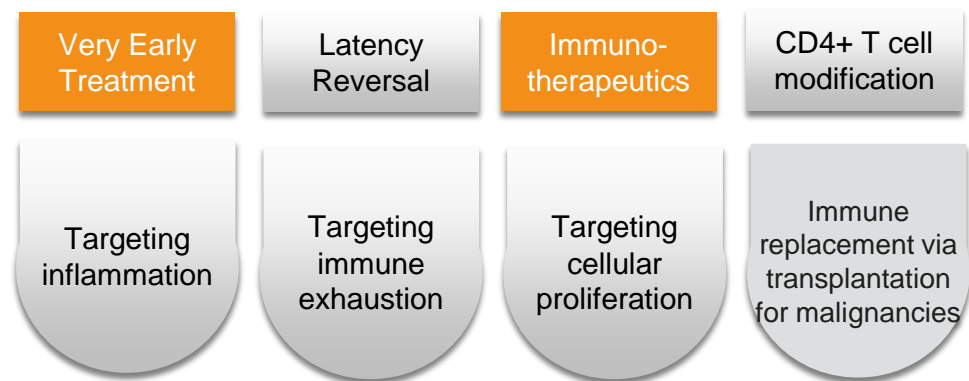
Biological plausibility

Safety, feasibility and scalability

Ethical framework

Potential to change HIV treatment paradigm

Landscape of HIV Cure Interventions for Pediatric Populations (2018)



Study	Country	Intervention	Age at ART	Sample size (N)	Status
IMPAACT P1115 (version 1.0)	Multi-country	AZT/3TC/NVP +LPV/r	<48 hours	440 mother-infant pairs (54-infected infants)	Closed to accrual
EIT	Botswana	AZT/3TC/NVP +LPV/r	< 7 days	20	Enrolling
LEOPARD	South Africa	AZT/3TC/NVP +LPV/r	<48 hours	60	Enrolling
Early Treatment	South Africa	AZT/3TC/NVP +LPV/r	<48 hours	100	Enrolling
Early treatment of Thai Infants	Thailand	AZT/3TC/NVP +LPV/r	<6 weeks	175	Enrolling
IMPAACT P1115 (Version 2.0)	Multi-country	AZT/3TC/NVP/Raltegravir +/- VRCO1	<48 hours	445 mother-infant pairs (45 infected infants)	IRB review
IMPAACT 2008	Multi-country	ART +/- VRCO1	72 hours-12 weeks	64	Open to enrollment

Clinical Trials for HIV Remission and Cure by Age*

Strategy	Agents	Adults	Neonates	Infants	Childhood	Pre-adolescent	Adolescent	Young Adult
Very Early/Early ART	ART							
Latency Reversing Agents	Vorinostat							
	Panobinostat							
	Romidepsin							
	Toll-Like Receptor 7							
	Toll-like Receptor 9							
	Disulfiram							
Broadly Neutralizing Antibodies	Alt-803 (IL-15) superagonist)							
	3BNC-117							
	VRC01							
	VRC01-LS							
	10-1074							
	PGT-121							
	3BNC-117LS							
Therapeutic Vaccines	VRC07-523LS							
	GTU-multi+LIPO-5							
	GTU-MultiHIV B-clade+ MVA HIV B							
	THV-01							
	Ad26.Mos4.HIV+ MVA-mosaic or Clade C GP140 +Mosaic gp 140							
	Ad26. Mos.HIV+ mva-mOSAIC							
	DNA-HTI+ MVA.HTI							
Gut Homing	HST-NEETS							
	anti- $\alpha_4 \beta_7$ integrin antibody							
Gene Therapies	Gene-modified stem cells							
Immune Checkpoint Inhibitors	anti-PD-1 antibodies							
m-TOR inhibitors	Sirolimus							
Combinations	Vorinostat + HXTCs							
	Romidepsin+3BNC117							
	ART+vorinostat+ ChAdV63.HIVconvsv& MVA.HIVconvsv							
	Disulfiram + Vorinostat							

*Modified from Jefferys R.
www.treatmentactiongroup.org

Landscape of HIV Cure Interventions for Pediatric Populations (2018)

Number	Study	Country	Intervention	Age at ART	Sample size (N)	Status
Very Early ART						
1	IMPAACT P1115 (version 1.0)	Multi-country	AZT/3TC/NVP +LPV/r	<48 hours	440 mother-infant pairs (54-infected infants)	Closed to accrual
2	EIT	Botswana	AZT/3TC/NVP +LPV/r	< 7 days	20	Enrolling
3	LEOPARD	South Africa	AZT/3TC/NVP +LPV/r	<48 hours	60	Enrolling
4	Early treatment of Thai Infants	Thailand	AZT/3TC/NVP +LPV/r	< 6 weeks	100	Enrolling
Combination (Early ART + bNab)						
5	IMPAACT P1115 (Version 2.0)	Multi-country	AZT/3TC/NVP/Raltegravir +/- VRCO1	<48 hours	445 mother-infant pairs (45 infected infants)	IRB review
6	IMPAACT 2008	Multi-country	ART +/- VRCO1	72 hours-12 weeks	64	Open to enrollment
9	UO1-2	Botswana	ART+ combination bNabs	early ART	?	in-development
Transplant						
7	IMPAACT P1107	USA	Cord blood transplant with CCR5-delta 32 cells	NA	20	Enrolling
Therapeutic Vaccines						
8	UO1-1	Europe, South Africa, Thailand	ART+ Therapeutic Vaccine	infancy and childhood	45	in-development
anti-$\alpha_4 \beta_7$ Integrin Antibody						
10	IMPAACT	South Africa	Vedulizumab	infancy	?	on-hold pending adult data



Acknowledgements

IMPAACT Leadership

Sharon Nachman and James McIntyre

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