

Pediatric HIV cure research in Canada



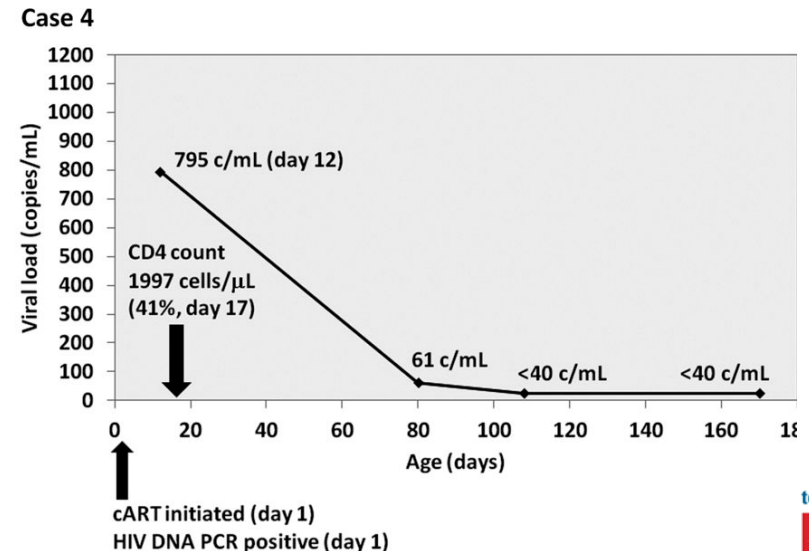
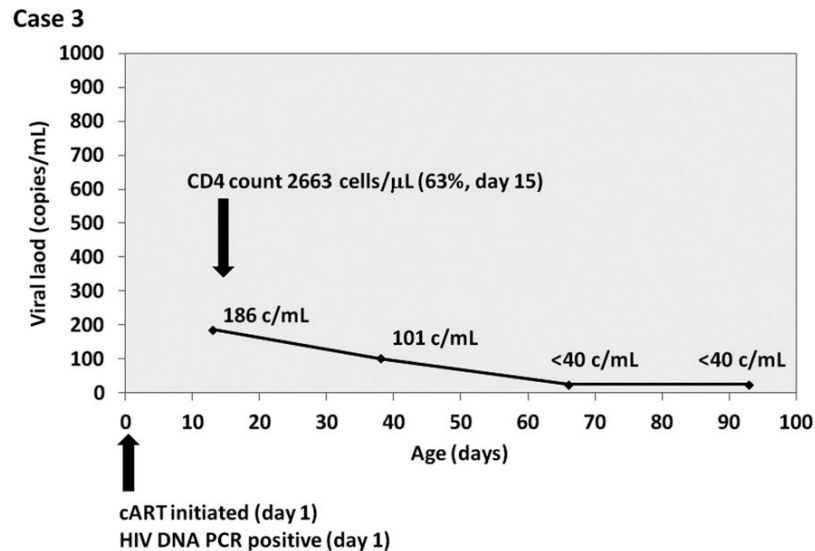
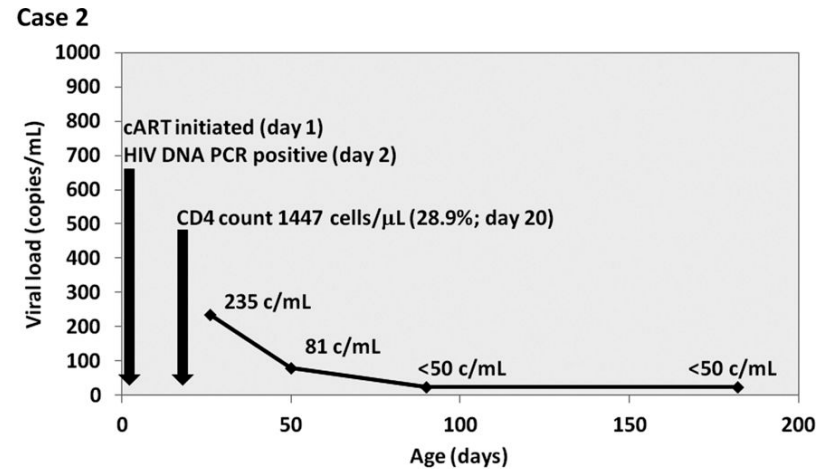
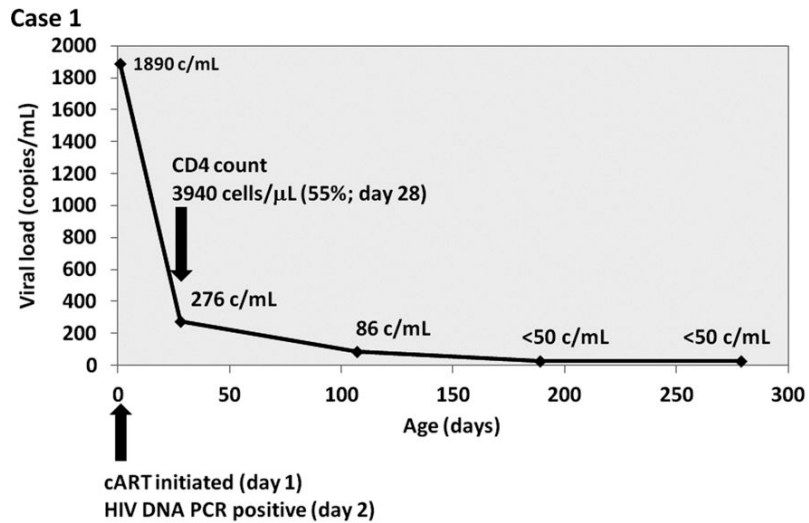
Hugo Soudeyns, Fatima Kakkar, CHU Sainte-Justine;
Jason Brophy, Lindy Samson, Children's Hospital of Eastern
Ontario; Ari Bitnun, Stanley Read, Hospital for Sick Children;
Michael Hawkes, University of Alberta [EPIC⁴ Steering Committee].



- *« Early Pediatric Initiation-Canada Child Cure Cohort Study »*
- *Funded by CIHR and partners IAS and CANFAR 12/2013*
- *« CTN 281 »*



« Canadian Study »



Research questions

- ***PROJECT 1.*** Does early initiation of combination antiretroviral therapy influence the size of the HIV-1 reservoir in children who were infected via mother-to-child transmission?
 - ✓ Ultrasensitive viral load
 - ✓ Quantitative co-culture assays
 - ✓ Reservoir in specific CD4⁺ T cell subsets



Research questions

- ***PROJECT 2.*** Does early initiation of combination antiretroviral therapy influence the evolution of HIV disease and the development of the immune system in children who were infected via mother-to-child transmission?
 - ✓ Biomarkers of chronic inflammation
 - ✓ HIV-specific T cell responses
 - ✓ Non-conventional T cell responses
 - ✓ Responses to childhood immunizations

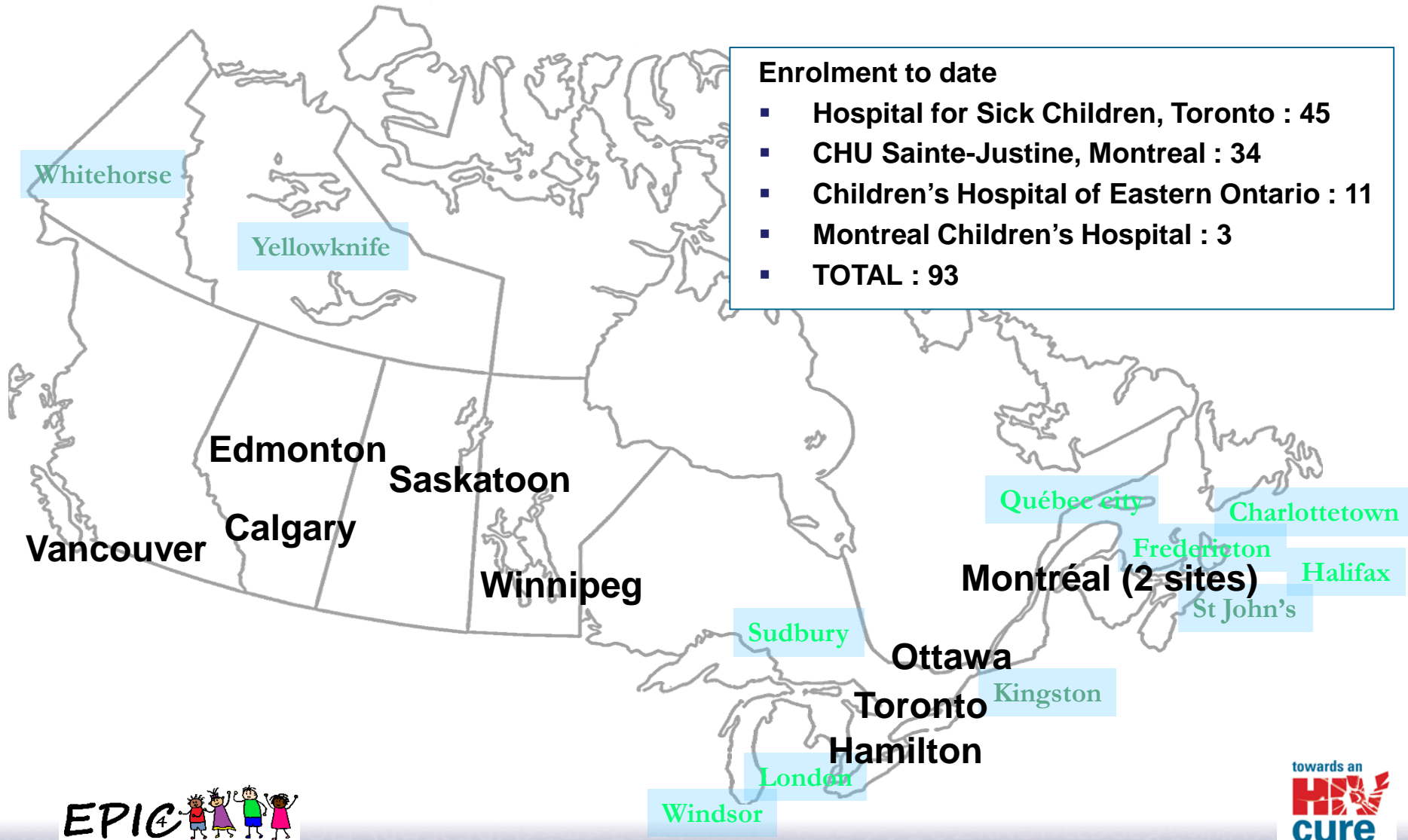


Study subjects

- ***A. Initiated on cART before 72h of life and exhibited sustained control of HIV-1 replication.***
- ***B. Initiated on cART after 72h of life and exhibited sustained control of HIV-1 replication.***
- ***C. Initiated on treatment at any time, with good virologic control but occasional viral « blips ».***
- ***D. Treatment naive.***
- ***E. Treated but did not exhibit sustained control of HIV-1 replication.***



Participating centers



Enrolment to date

- Hospital for Sick Children, Toronto : 45
- CHU Sainte-Justine, Montreal : 34
- Children's Hospital of Eastern Ontario : 11
- Montreal Children's Hospital : 3
- TOTAL : 93



Impacts/Future developments

- *Should there be more international collaborative efforts on pediatric HIV cure since numbers are low?*
- *As a group, can we make this happen?*
- *Any conflicting issues between the adult and child cure research agendas? Could the adult and pediatric fields in fact better synergize with one another? What can the pediatric field learn from adult cure research and vice-versa (biologic and/or developmental issues for example)?*



Collaborators

Clinical Investigators

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