

Pathology of HIV Infection



Student's Name
Institution of Learning

Introduction

- **The importance of the awareness of key HIV trends**
- **The overall goal of gathering the data on HIV**
- **Impact of timely information on HIV incidence**

Issue Overview

- **The use of the back-calculation**
- **Deficiencies associated with the method**
- **The drawbacks of the cohort studies**
- **The advantages of the laborator methods.**

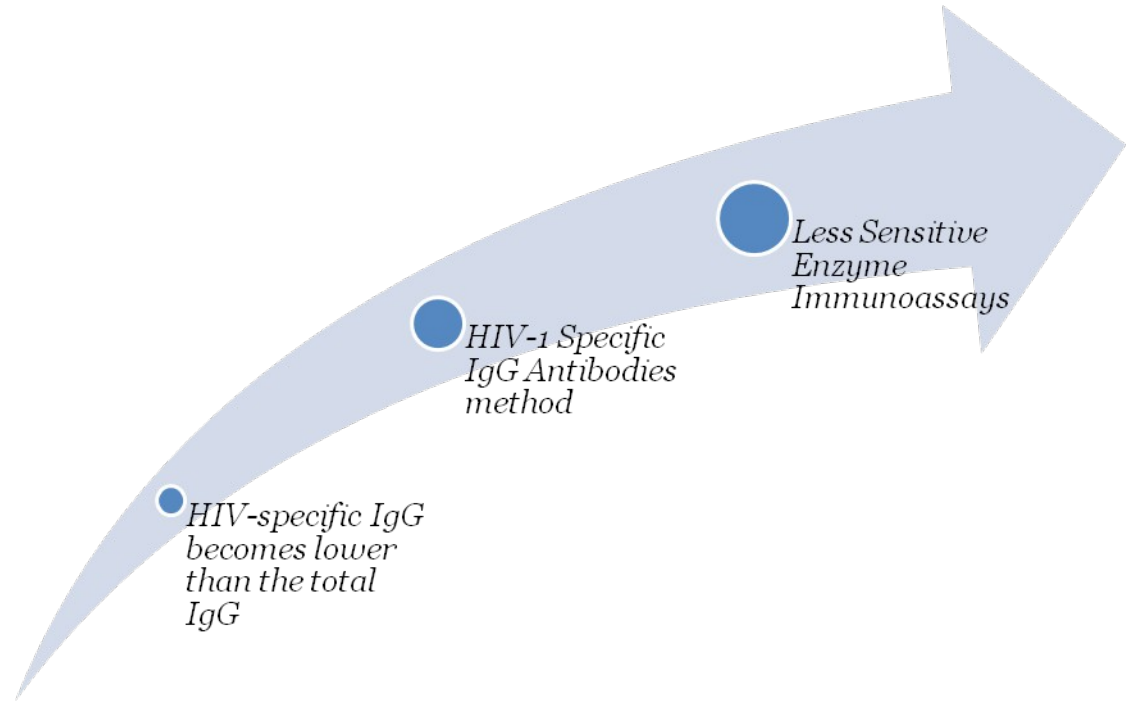


The Significance of Patterson- Lomba, Wu, and Pagano (2015) research:

- **Assessment of the certain biases that have been present in evaluating HIV classification**
- **Right skew distribution signifies the assays' worst performance due to inability to differentiate between recent and past chronic cases**
- **The investigators predicted that assay variability is lower with time**

Serological and Molecular-Based Methods

Serological tests of recent HIV infections are numerous:



Other Methods:

- ***Antibody Avidity Assays*** method (measures the strength of antibody-antigen binding)
- ***Inno-LIA HIV Adaptation*** (measures the increase in reaction between antibodies and antigens after seroconversion)
- **Molecular methods for testing recent HIV infections include high resolution melting assay, sequence ambiguities, hamming distances, Native Bayes classifiers, and sequence clustering-based diversity measure.**

Drug-Susceptibility Assays

- **The significance of the drug-susceptibility assays development**
- ***The aim of the *In vitro* method known as *cell-free drug susceptibility assay* (CFPSA)***



Research of Pradier et al. (2001)

- **Aim: to evaluate the impact of short-run adherence success of *highly active antiretroviral therapy* on virological and immunological assays.**
- **Conducted among HIV-infected drug users (IDUs)**
- **The study confirmed that adherence to protease inhibitor therapy is required for virological success.**

Discussion on HAART

- **Some physicians have argued that HAART should be withheld from disadvantaged patients.**
- **Haqqani and colleagues (2015) record that CD4+ T cells drive support recombination events in vivo have been detected in spleen as well as in bone marrow.**
- **Yet, Petit et al. (2015) note that CD4+ T cells are not found in blood of infected animals.**

Suggestions for Further Researches

- **There is still limited information on the precise actions of opioids in terms of intracellular antiviral innate immunity against HIV infections.**
- **The HIV restriction in miRNA enzymes plays a key role in intracellular immunity; thus, should be researched more in details.**

Suggestions for Further Researches cont.

- **The implications of the heroin treatment of HIV**
- **The conditions favorable for the use of heroin as cures against**



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**Thank you for your
attention!**