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# Acute HIV Infection

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# Outline

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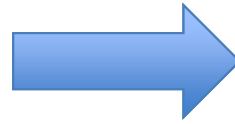
- Immunopathogenesis
- Clinical manifestation
- Diagnosis
- Consideration for treatment

*RV254 “Establish a cohort of acute HIV infected subjects in Thailand”*

# Why is acute HIV infection important?

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Understand early immunologic and virologic events



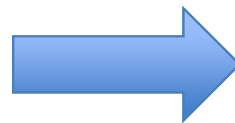
Design effective preventive HIV vaccine

Early treatment to preserve T cells and limit reservoir



Achieve functional cure = Drug free remission

Diagnose HIV at its height of transmission potential

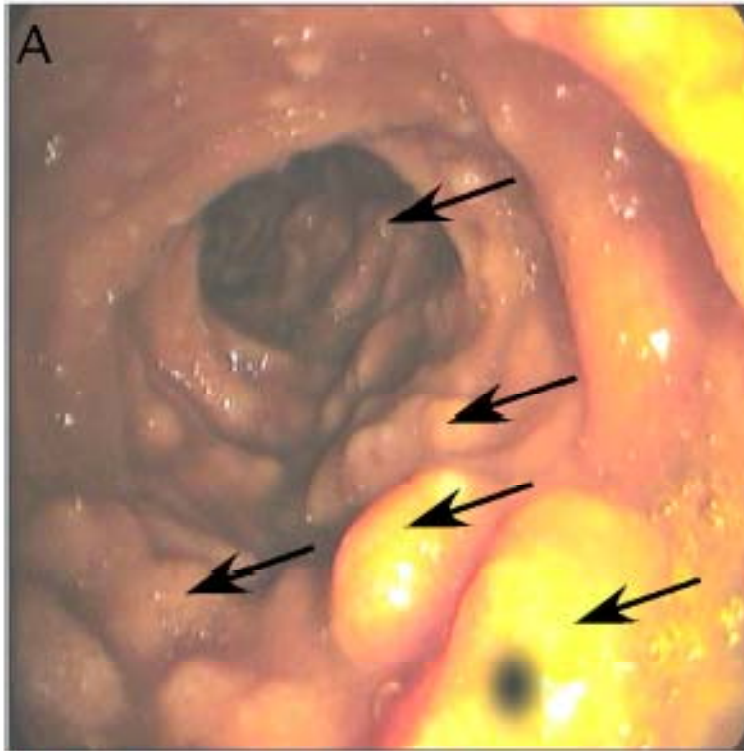


Limit HIV spread

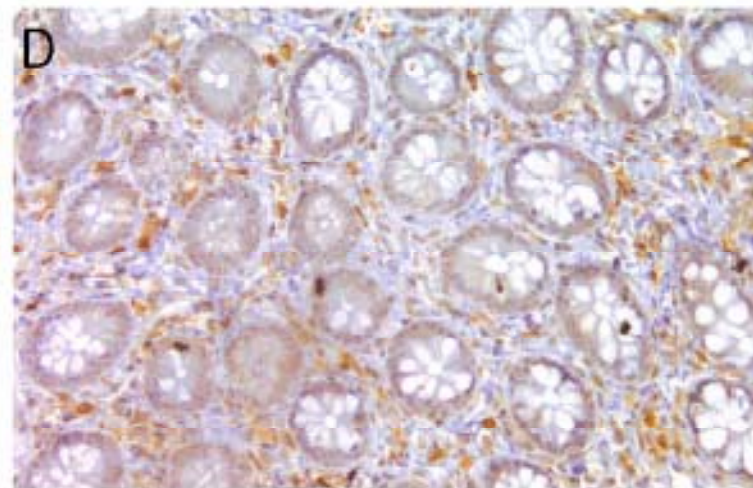
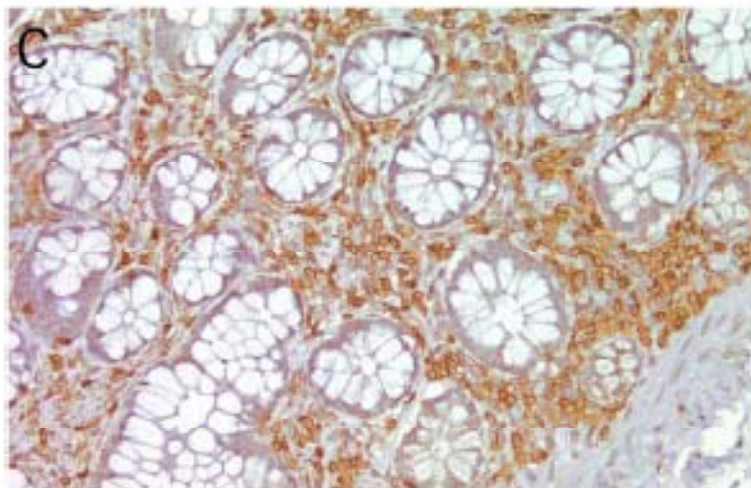
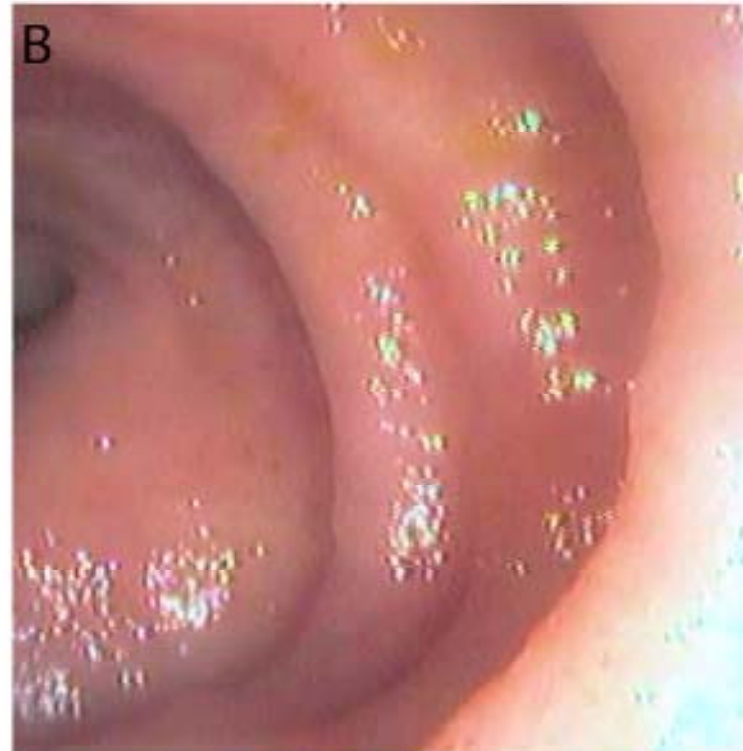
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# Immunopathogenesis of Acute HIV Infection

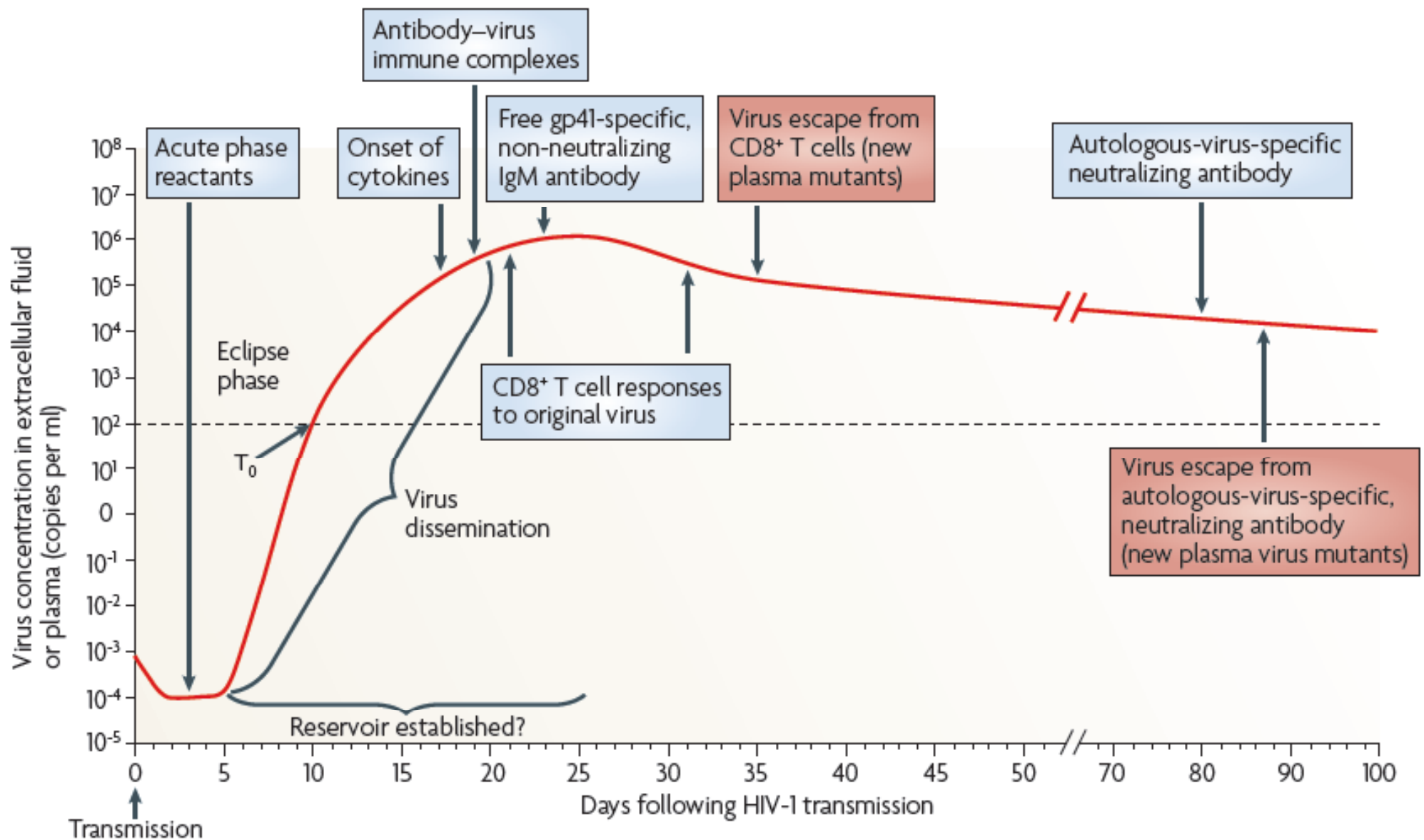
HIV-



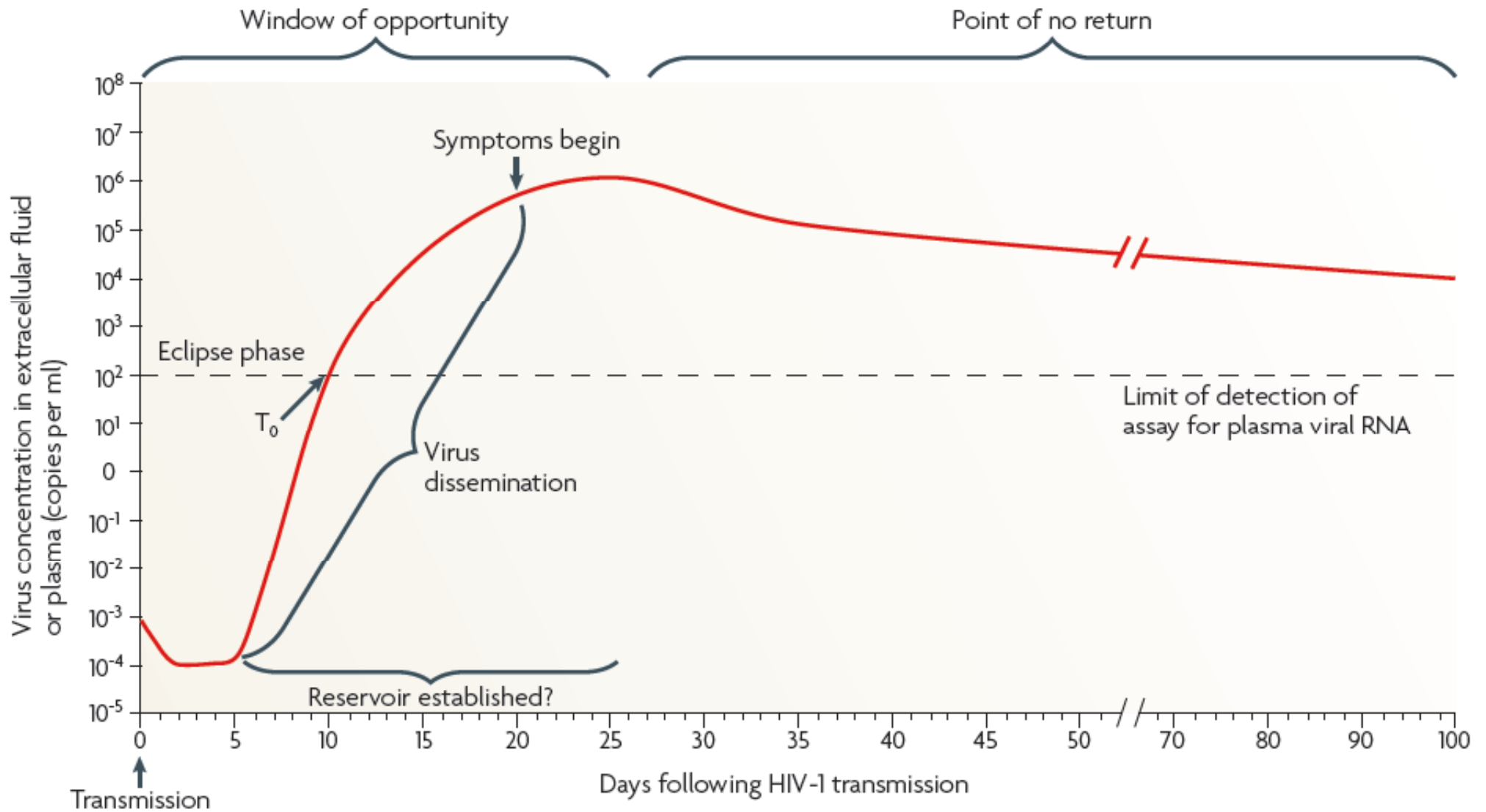
HIV+



# Innate and adaptive immunity after HIV transmission



# Window of Opportunity



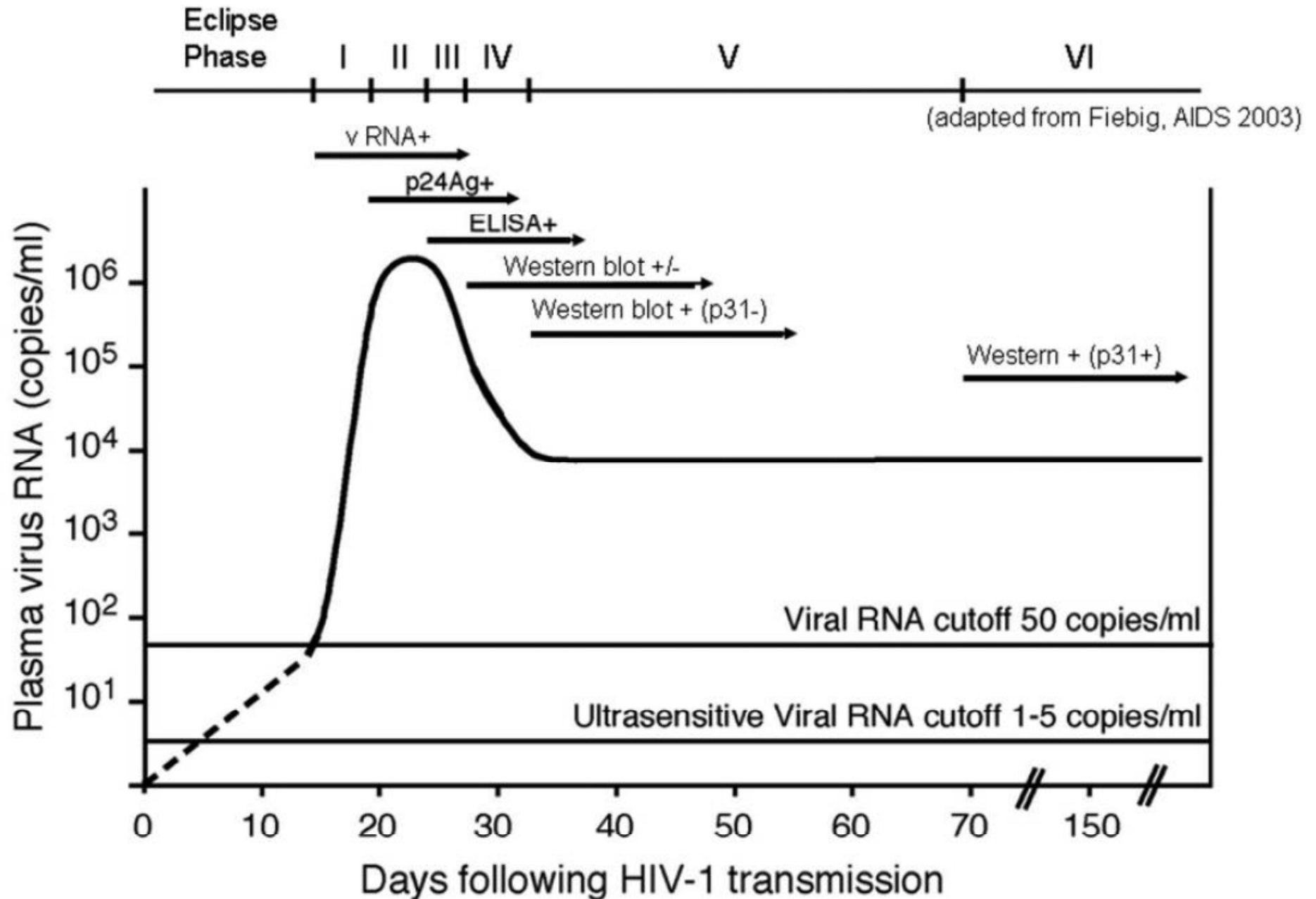
Usually mediated by a single virion

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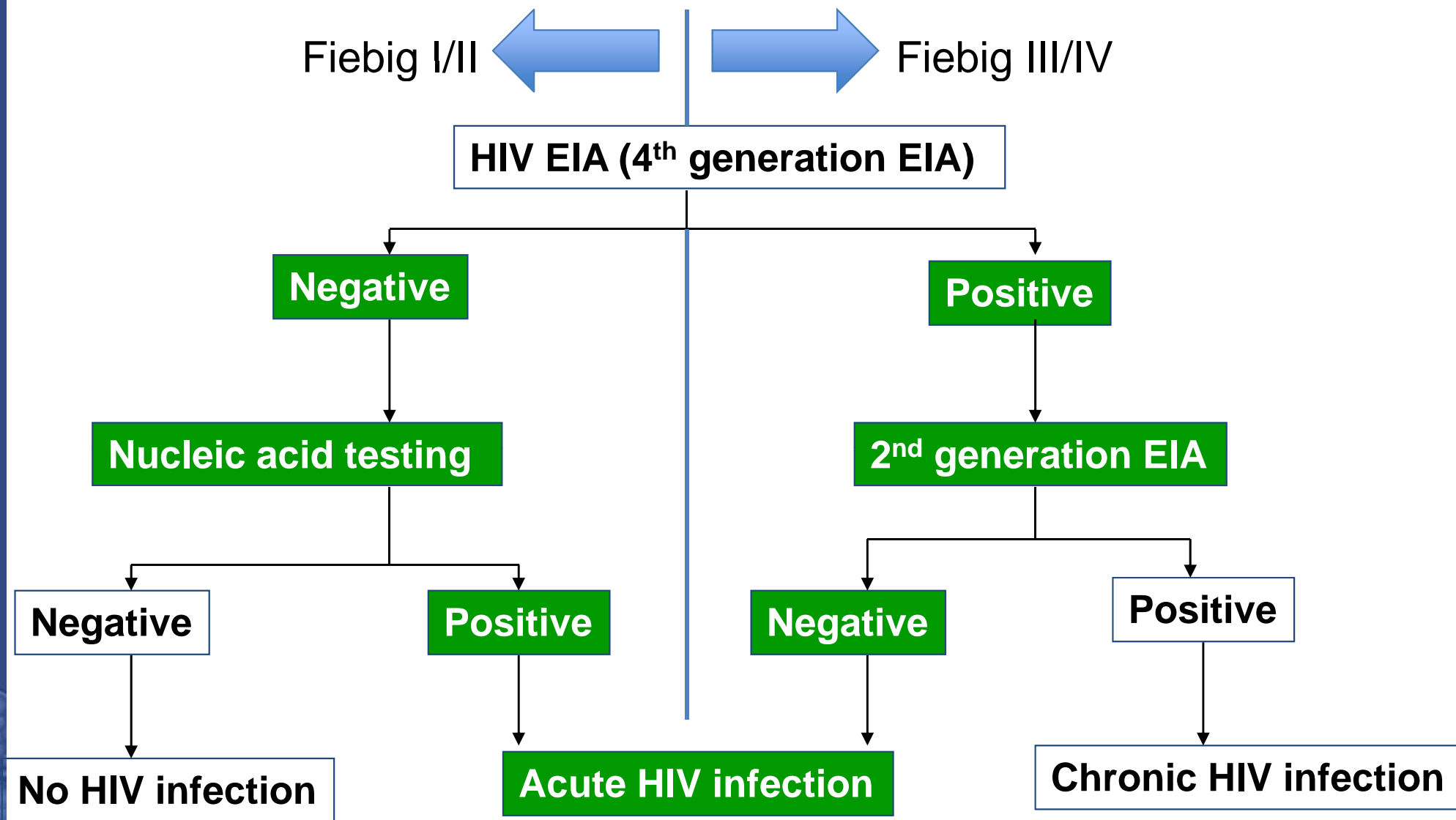
# Diagnosis of Acute HIV Infection



# Fiebig Laboratory Staging of Acute HIV Infection



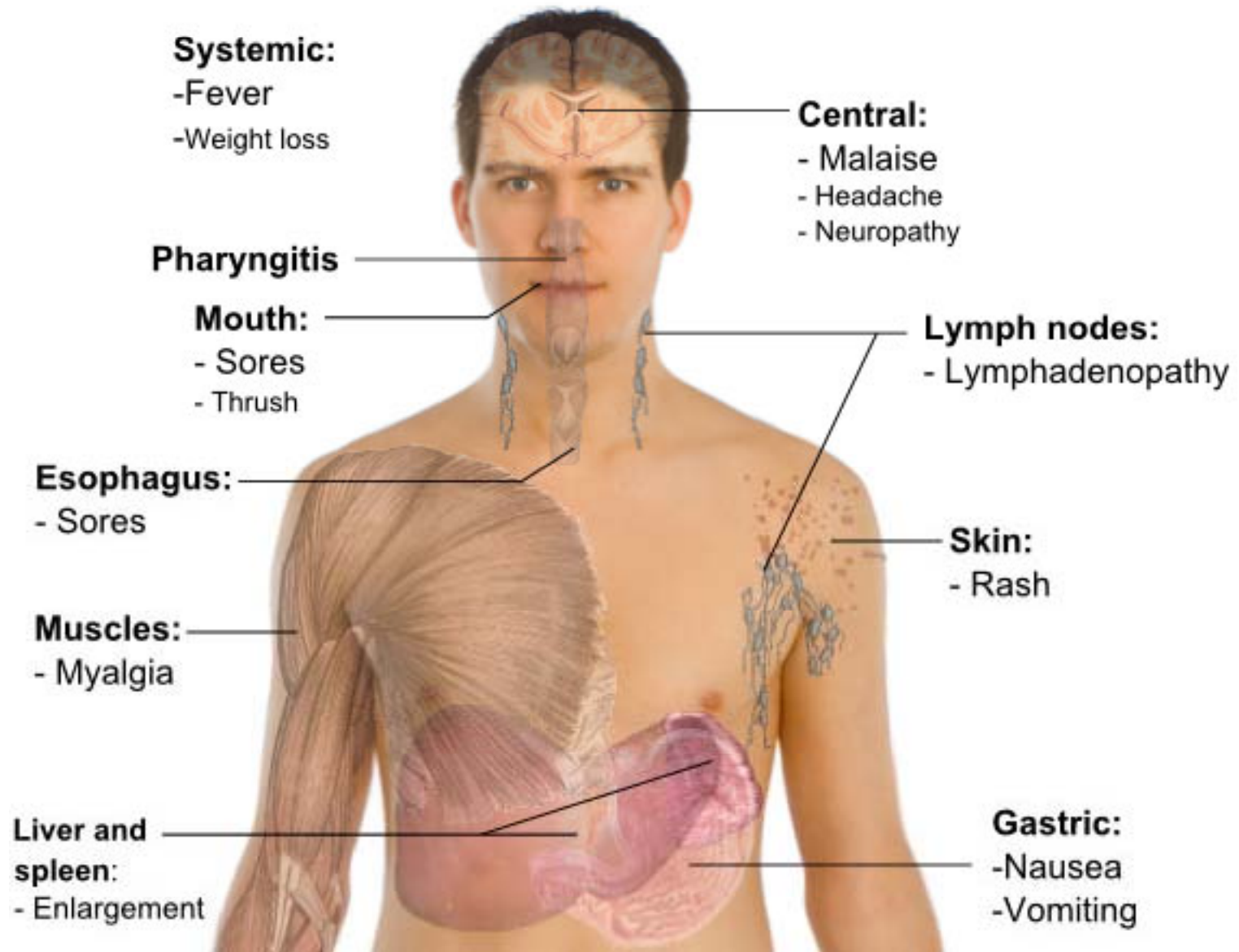
# Diagnosis of Acute HIV Infection



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# Clinical Manifestation of Acute HIV Infection

# Main symptoms of Acute HIV infection



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# Consideration for Treatment

# Consideration for Treatment

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## Pros

- Preservation of immune functions
- Improve surrogate markers of HIV disease
- Limit transmission

## Cons

- Toxicity
- Drug resistance
- Quality of life

## Unknowns

Will it alter clinical disease?  
Is this a life long treatment?  
Can patient interrupt treatment?

# Summary

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- The first 3 weeks of infection offers a window of opportunity to contain HIV through novel interventions
- CD4+ T cell depletion particularly in the gut occurs very early in HIV infection
- The majority of HIV-infected persons display symptoms of acute retroviral syndrome (fever, rash, sore throat) which is usually misdiagnosed
- Antiretroviral treatment is optional. Although it may limit immune destruction and viral reservoir, there is currently no clear clinical benefit to early treatment
- Knowledge of acute HIV infection is crucial to the design of effective prevention and treatment. Subjects should be encouraged to enroll in clinical trials

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