

Effectiveness of protease inhibitor-based regimens  
in HIV-infected children failing non-nucleoside  
reverse transcriptase inhibitor-based regimens

**Natthaporn Wattanutchariya M.D.,  
Fellow, Pediatric Infectious Diseases**

**Division of Infectious Diseases,  
Department of Pediatrics,  
Faculty of Medicine,  
Chiang Mai University**

# BACKGROUND



- Antiretroviral therapy (ART) has been associated with improved morbidity and mortality among children with HIV infection
- **As children become more treatment experience, they will have greater problems with drug resistance, necessitating the use of second line ART**
- **The recommend 2<sup>nd</sup> line ART is boosted protease inhibitor-based regimens <sup>(1)</sup>**
- There are limited reports on the efficacy of **protease inhibitor (PI)-based regimens** among children in resource-limited setting

# Objectives



***Primary objectives*** : to assess the impact of PI-based regimens in children who failed 1<sup>st</sup>line ARV on

- **Virologic response**
- **Immunologic response**
- **Clinical response**

***Secondary objectives*** : to evaluate

- **Adverse events of PI-based regimens**
- **Risk factors in children who failed PI-based regimens**

# Definitions

<b>Virologic response</b>	<b>Virologic success :</b> <b>plasma HIV RNA &lt; 50 copies/ml</b> (at 24 and/or 48 weeks of treatment)
	<b>Virologic failure:</b> <b>plasma HIV RNA <u>never</u> less than 50 copies/ml</b> (at 24 and/or 48 weeks of treatment)
<b>Immunologic response</b>	<b>Change of CD4 cell count (at 0, 24 and 48 weeks of treatment)</b>
<b>Clinical Response</b>	<b>Physical growth</b> - measure weight, height at 0, 24 and 48 weeks and calculate for z- score W/A and z-score H/A

# Methods



**Study design** : retrospective cohort study

## Inclusion criteria

1. HIV-infected children age < 18 years when starting PI-based regimens
2. **Start NNRTI-based regimens as first-line therapy**
3. **Failing NNRTI-based regimen before switching to PI-based regimens**
4. **Has been on PI-based regimens for at least 48 weeks**