

**Meet the Experts  
on  
Childhood Tuberculosis**

**Dr. Jennifer Furin  
Dr. Alexander Tuazon**

# Objectives

- **To** provide the basis for quadruple anti-TB therapy for TB disease in children
- **To** explain the significance of Xpert MTB/Rif test in the diagnosis of pulmonary and extrapulmonary TB in children
- **To** explain the role of interferon-gamma release assays (IGRAs) in the diagnosis of latent TB infection or TB disease

# Objectives

- **To explain the role of x-ray in assessing treatment response**
- **To explain the role of HIV testing in patients with presumptive and diagnosed TB**

# Overview of the Session

- Case Presentation & Discussion of Speakers
- Open Forum
- Summary of the Session
- Awarding Ceremonies

# Jennifer Furin, M.D.

- B.A., Case Western Reserve University, Cleveland, OH, USA, 1992
- Diplomat, American Board of Internal Medicine, Infectious Diseases, 2005
- Diplomat, American Board of Internal Medicine, 2003
- Fellow, Infectious Diseases, Case Western Reserve University, 2002-2004
- Internship and Residency, Internal Medicine, Brigham and Women's Hospital, Boston, MA, 1998-2001
- Fellow, Program in Infectious Disease and Social Change, Department of Social Medicine, Harvard Medical School, 1995
- M.D., Harvard Medical School, Boston, MA, USA, 1999
- Ph.D., University of California at Los Angeles, CA, Department of Anthropology, USA, 1995
- M.A., Case Western Reserve University, Department of Anthropology, 1992
  
- **Current Positions:**
- Consultant, World Health Organization: Field Implementation of Bedaquiline, 2014-present
- Elected Member, TB Transformative Science Group, AIDS Clinical Trials Group, 2013-present
- Consultant, Médecins sans Frontières, 2013-present
- Steering Committee Member, Sentinel Project on Pediatric Drug-Resistant Tuberculosis, 2011-present
- Co-Director, Project Simunye. Project Simunye is the US-based arm of the Luthando, 2011-present
- Technical Consultant, TB and HIV, World Health Organization, 2001-present
- Assistant Professor of Medicine and Anthropology, Case Western Reserve University, 2010-present
  
- **Publications:**
- 59 local and international publications

# Alexander Tuazon, M.D.

- Bachelor of Science (Pre-Med), University of the Philippines, 1975 (cum laude).
- Doctor of Medicine, University of the Philippines, 1979
- Medical Internship Training, University of the Philippines - Philippine General Hospital,
- Residency in Pediatrics, University of the Philippines - Philippine General Hospital, 1981-1983
- Fellow in Pediatric Respiratory Medicine, Royal Liverpool Children's Hospital Alder Hey, University of Liverpool, England, September 1986 to March 1987
- Monbusho Scholar in Pediatric Pulmonology, Department of Pediatrics, Kagawa Medical School, Kagawa, Japan, April 1988 to March 1989
- Fellow in Pediatric Respiratory, Children's Hospital, Health Sciences Centre, University of Manitoba, Winnipeg, Manitoba, Canada, April to September 1989
- Management Development Program, Asian Institute of Management, 2003
- Master in Distance Education, University of the Philippines Open University, 2013 (Chancellor's List).
  
- **Current Positions:**
- Professor, Department of Pediatrics, College of Medicine, University of the Philippines Manila
- Moises Abad Professorial Chair, University of the Philippines Manila, 2014.
- Head, Section of Pulmonology, Department of Pediatrics, University of the Philippines College of Medicine - Philippine General Hospital, 2013+
- Consultant (Past Training Officer), Department of Pediatrics, Cardinal Santos Medical Center
- Immediate Past President, Philippine College of Pharmaceutical Medicine
- Specialty Board Member (Founding Member and Past President), Philippine Academy of Pediatric Pulmonologists
- Vice President and Member, Board of Trustees, Philippine Pediatric Society
- Executive Committee and International Advisory Board Member, International Congress of Pediatric Pulmonology
- Corporate Vice President, Medical Affairs, United Laboratories, Inc.

# Case History

- 4 year old child
- brought for cough and fever x 3 weeks
- poor weight gain, loss of appetite x 2 months
- TST: 12 mm induration
- chest x-ray: hilar adenopathies
- Exposure: none
- Impression: Pulmonary TB
- Treatment: 2HRZ / 4HR

# Case History

## ***ON FOLLOW-UP AFTER 2 MONTHS***

- No improvement in symptoms  
(still with cough, fever, poor appetite)
- Xpert MTB/Rif: Rifampicin resistance NOT detected
- Drug regimen revised to 2HRZE / 4HR



# Case History

## ***ON FOLLOW-UP AFTER 6 MONTHS***

- chest x-ray:  
no change from the previous study
- cough and fever no longer noted  
with consistent and steady weight gain

# Issues/Concerns:

1. Is this really TB?
2. Was the previous treatment adequate?
3. Are there new tests to aid in TB diagnosis?
4. What are the things to check on follow-up patient visits?
5. Any comment on the non-improvement of x-ray findings

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# Summary

- Diagnosis starts with identification of Presumptive TB Cases
- Xpert MTB/Rif can be used for diagnosis among presumptive DRTB, PLHIV with signs and symptoms of TB, smear negative children, EPTB
- IGRAs should not replace the TST for the diagnosis of LTBI or for the work-up of children suspected of TB disease

# Summary

- In assessing response to treatment, good signs of clinical improvement are weight gain and/or resolution of symptoms more than improvement in the x-rays
- Anti-TB regimen of TB cases should be comprised of at least (4) first-line drugs
- All children with suspected TB should have HIV serotesting

**THANK YOU**