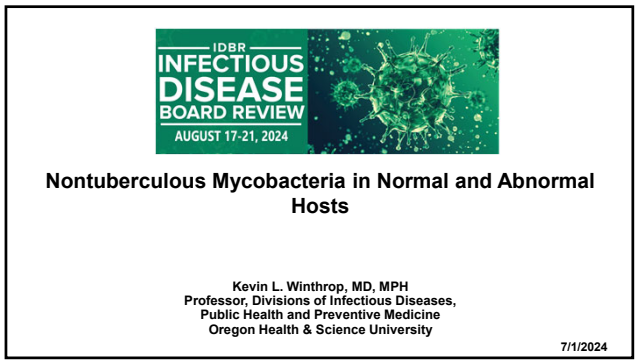
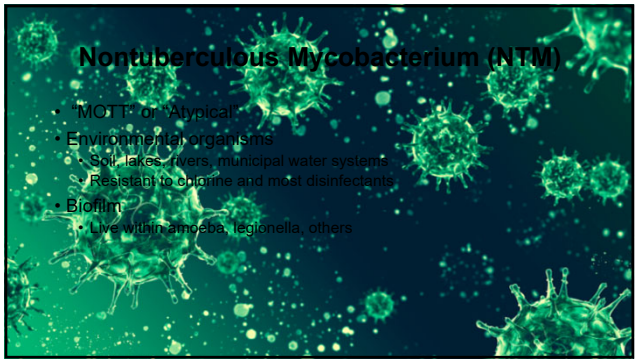
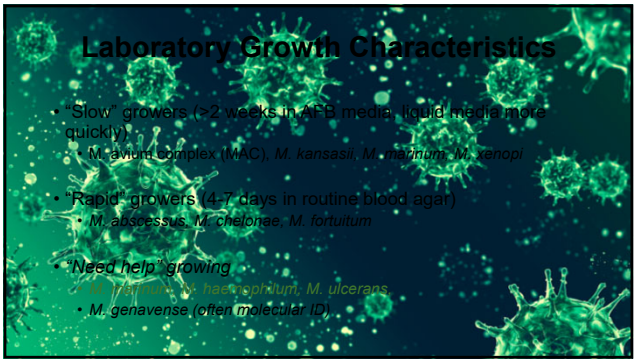
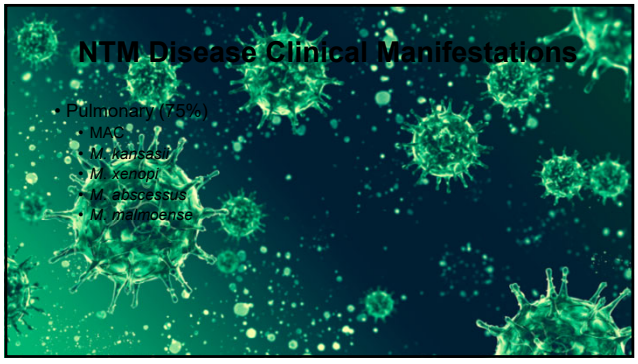
26 – Nontuberculous Mycobacteria in Normal and Abnormal Hosts

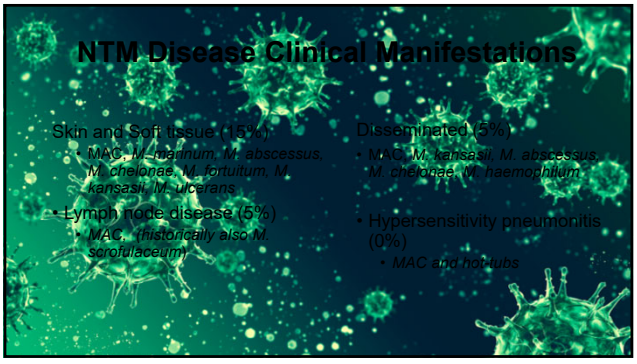
Speaker: Kevin Winthrop, MD











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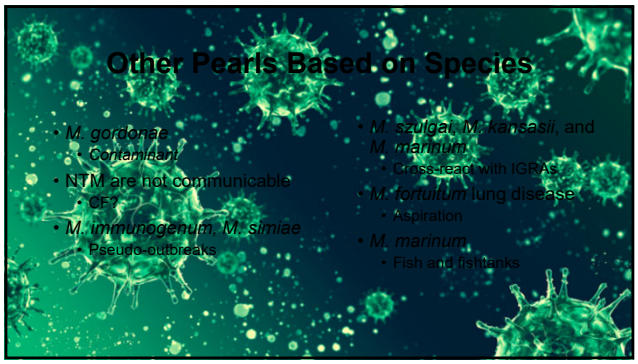

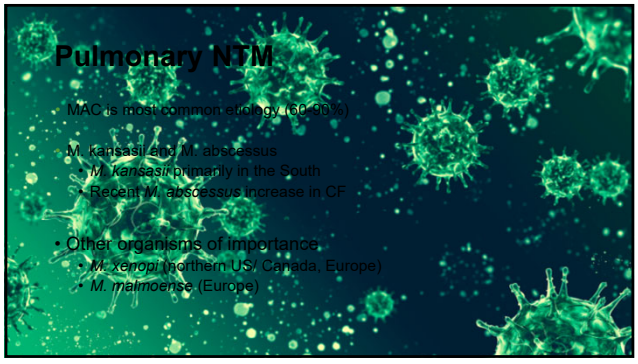

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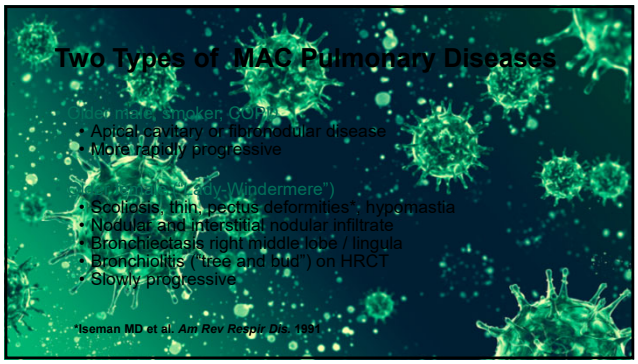

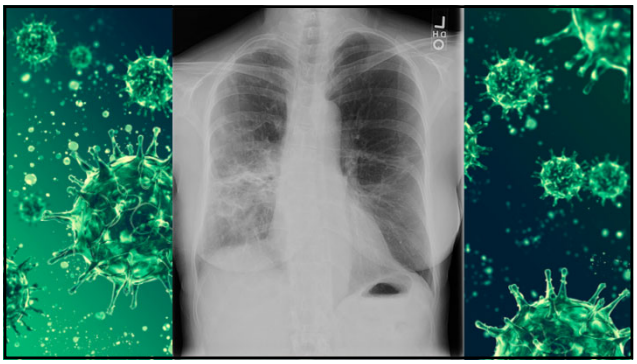

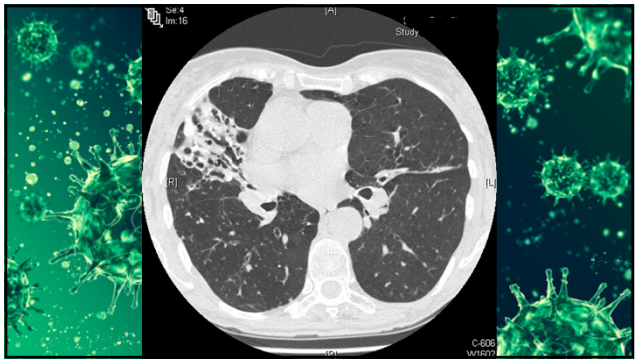

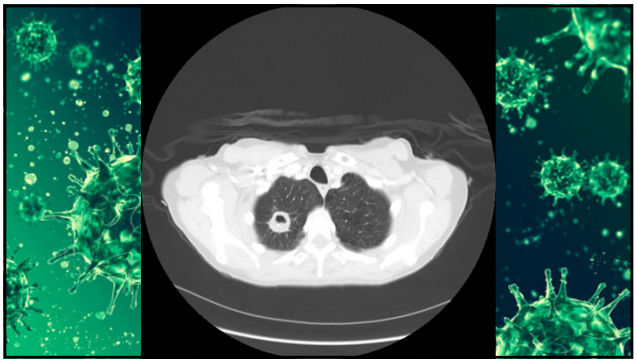

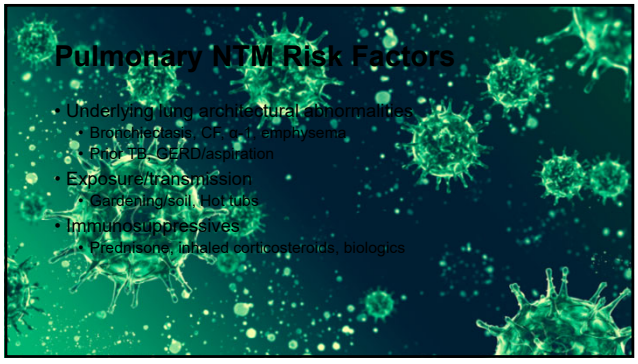

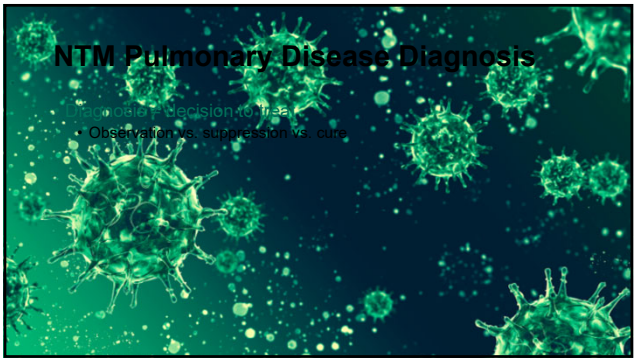

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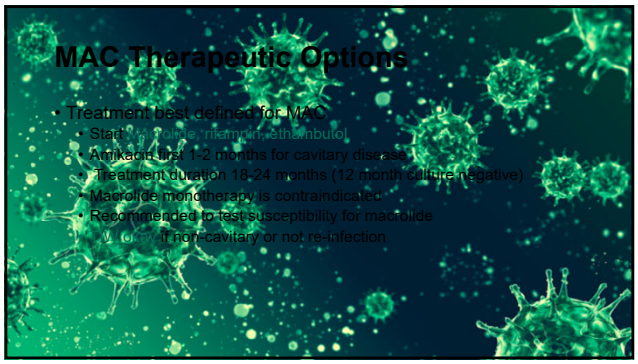

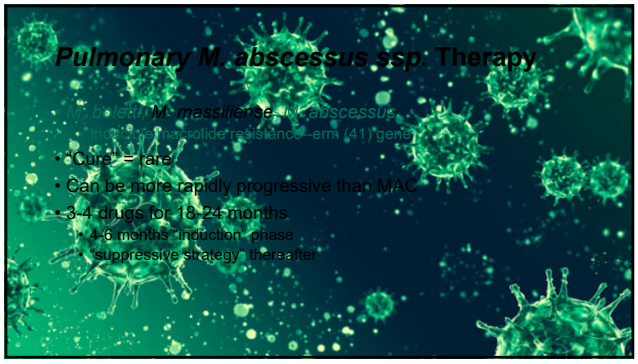

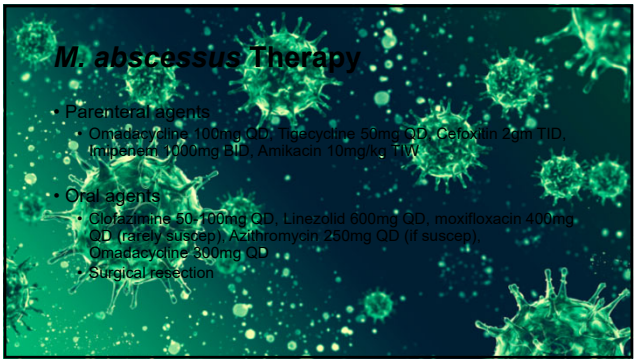

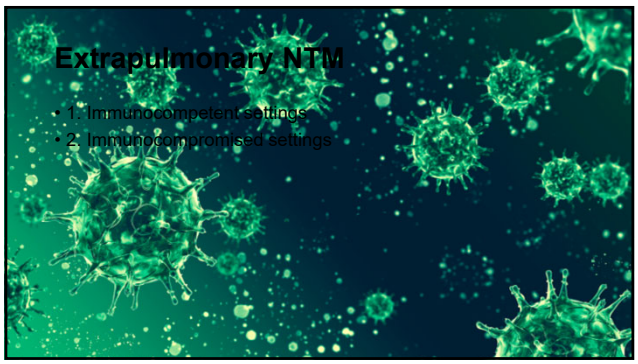

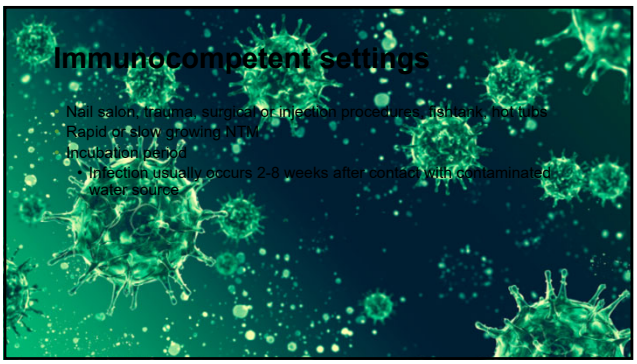

26 – Nontuberculous Mycobacteria in Normal and Abnormal Hosts

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Children under 5 years NTM > TB

- Usually MAC
- Males > females, age 1-2 years old
- Surgical resection alone is best therapy
- Adjunctive ABX rarely needed

Post- plastic surgery

- Usually Rapid Grower: *M. chelonae*
- Remove foreign bodies
- Therapy as per in-vitro susceptibility
- Length 4-6 months

M. marinum---fish tank granuloma

Treatment: multiple drugs

- Macrolides, sulfonamides, doxycycline, rifampin, ethambutol
- Treat with 2 agents x 3-4 months
- Surgical debridement if necessary

Nail Salon Furunculosis

- Outbreaks and sporadic
- Rapid Growers most common (*M. fortuitum*)
- Oral antibiotics
  - 4 months fluoroquinolone and/or doxycycline
  - Can be self-limited

Tattoo-associated

- *M. chelonae*
- Tattoo-ink outbreaks
- 2-3 months oral therapy
  - Based on *in-vitro* susceptibility
  - 1-2 agents
  - Macrolides almost always

Question # 2

PREVIEW QUESTION

20 y.o. male complains of fever, night sweats and weight loss. Has generalized lymphadenopathy.

HIV antibody positive; CD4 20 cells/ul

Node biopsy: non-caseating granuloma; AFB seen.

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Question # 2

PREVIEW QUESTION

Based on the most likely diagnosis, which of the following do you recommend:

A. Start MAC therapy
B. Start HAART plus MAC prophylaxis
C. Start MAC therapy and HAART
D. Start HAART only

Question # 2

PREVIEW QUESTION

Based on the most likely diagnosis, which of the following do you recommend:

A. Start MAC therapy
B. Start HAART plus MAC prophylaxis
C. **Start MAC therapy and HAART ***
D. Start HAART only

NTM in HIV

- Disseminated MAC
- GI route of infection
- Less frequent in HAART era
- Related issues
  - Clofazimine – increases mortality?
  - Rifabutin dose adjustment with PI
  - Immune reconstitution inflammatory syndrome (IRIS)

TABLE 7. REGIMENS FOR TREATMENT AND PREVENTION OF DISSEMINATED *MYCOBACTERIUM AVIUM* IN HIV-INFECTED PATIENTS

Preferred (A, I)*	Alternative (B, I)*
Treatment	
Clarithromycin 500 mg orally twice daily + Ethambutol 15 mg/kg orally daily ± Rifabutin† 300 mg orally daily	Azithromycin 500 mg daily + Ethambutol 15 mg/kg daily ± Rifabutin† 300–450 mg orally daily
Prevention‡	
Azithromycin 1,200 mg orally weekly	Clarithromycin 500 mg orally twice daily or Rifabutin† 300 mg orally daily

* For evidence quality, see Table 1.
† Rifabutin dose may need to be modified based on drug–drug interactions (see text).
‡ Preventive therapy indicated for persons with < 50 CD4+ cells/μL; may stop if > 100 cells/μL.

Griffith D et al. AJRCCM 2007

Immunosuppression other than HIV

- Most frequently disseminated
  - Local inoculation versus GI route
- Risk factors and conditions
- ESRD, prednisone, biologic immunosuppressives
- Cancer, transplant, leukemia (hairy cell)
- Auto-antibody and cytokine/receptor deficiency states
  - INF-gamma, IL-12,23 pathway, STAT-1
- Disease split between RGM and slow growers
  - RGM more common here than in pulmonary disease

M. chelonae in cancer patient

M. chelonae and *M. fortuitum* treatment

- *M. chelonae*
  - Macrolides, flouroquinolone, linezolid
  - IV drugs include aminoglycosides, imipenem, cefoxitin, tigecycline
- *M. fortuitum*
  - Macrolides, flouroquinolone, bactrim, doxy (50%)
  - IV drugs include aminoglycosides, imipenem, cefoxitin, tigecycline

Length of treatment for disseminated infection
3 drugs (including 1 IV) X 4-6 months
Depends on immunosuppression reversal

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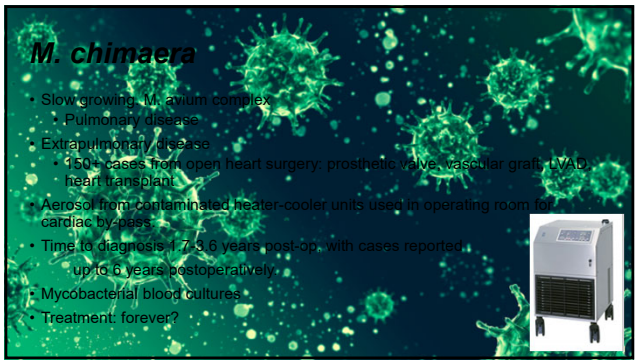

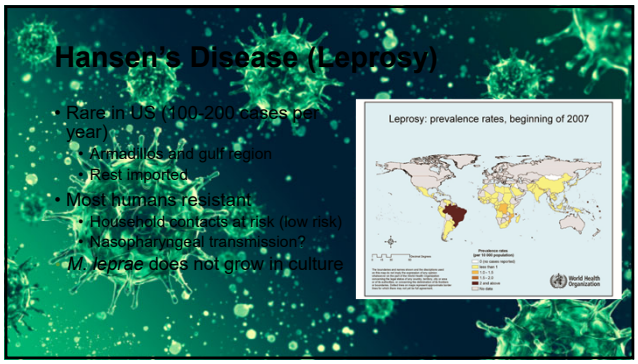

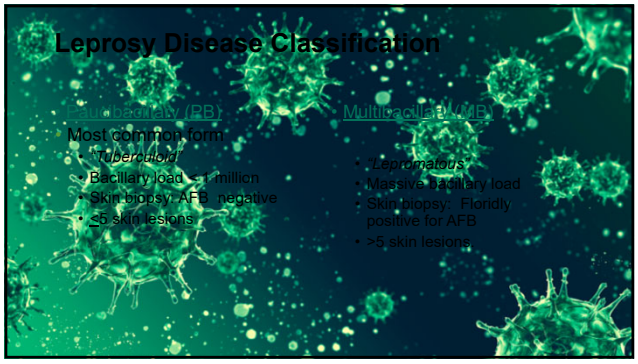

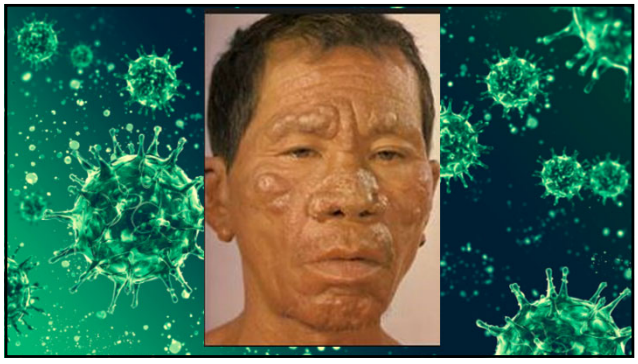

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