



June 18th, 2019

Announcements

- No TASP week of July 4th
- Cases and questions



UWWTASP
tele-antimicrobial stewardship program

June 18th, 2019

Agenda

- Didactic:

Antimicrobial Adverse Effects and Toxicities

- Case Discussions

A Case

- A 23 year old patient with a complicated meningitis is treated with ceftriaxone. Ten days into therapy, her hematocrit, previously WNL, dropped to 16. Although stable, she was felt exhausted and sleepy.
- 3 units of pRBC were given with minimal improvement in HCT.



A Question

What was happening to this patient?

- A. Autoimmune hemolytic anemia
- B. Pathogen mediated anemia
- C. Hemorrhage
- D. Iron deficiency
- E. Ceftriaxone-mediated hemolytic anemia



AAEs - Drugs

- Direct chemical impact on tissues
- Immune-mediated (antigen-antibody)
- Alteration of bacterial flora

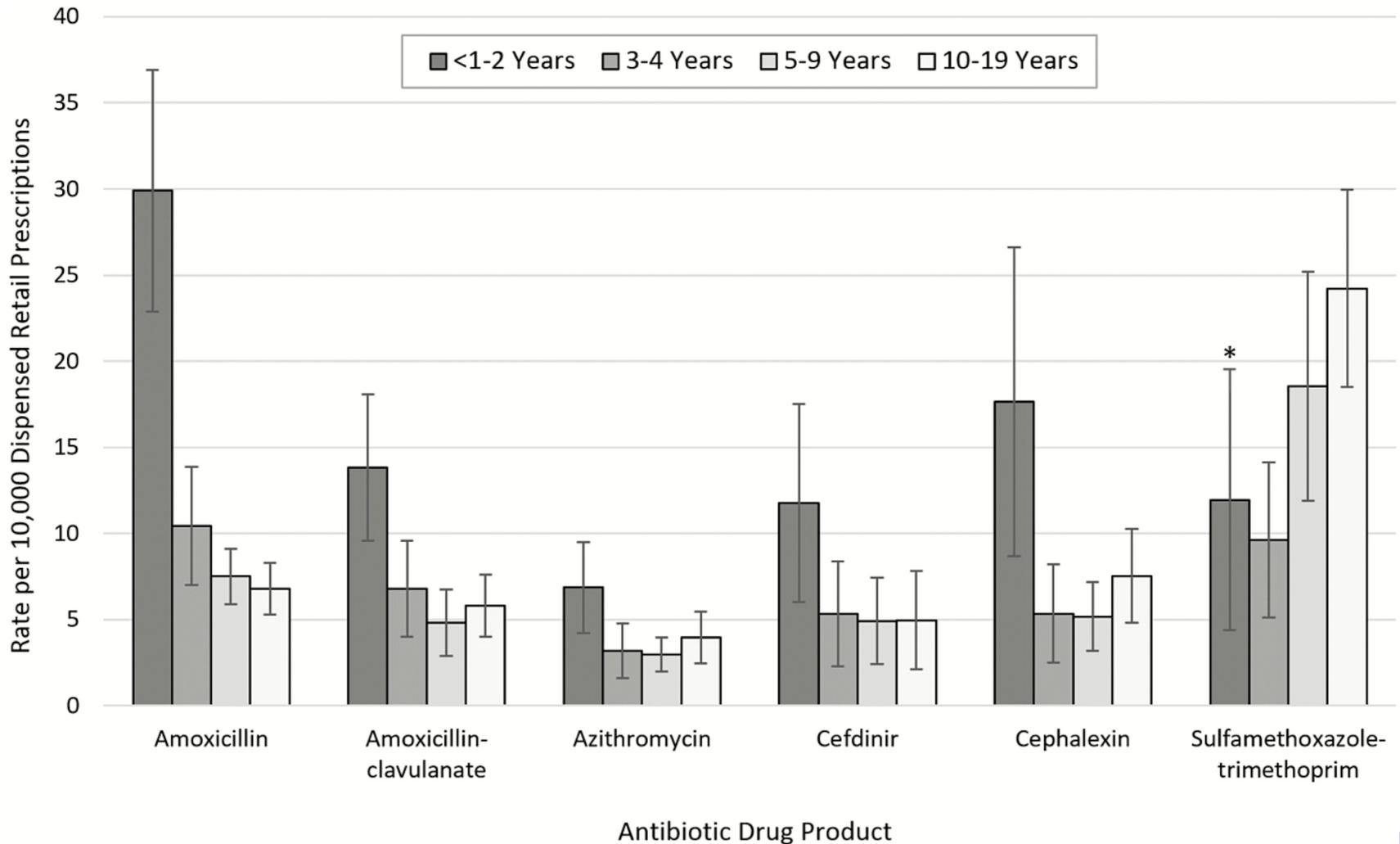


AAEs - Humans

- Age
- Genetics
- Malnutrition
- Volume status
- Severity of illness
- Organ function (liver, kidneys, vasculature)



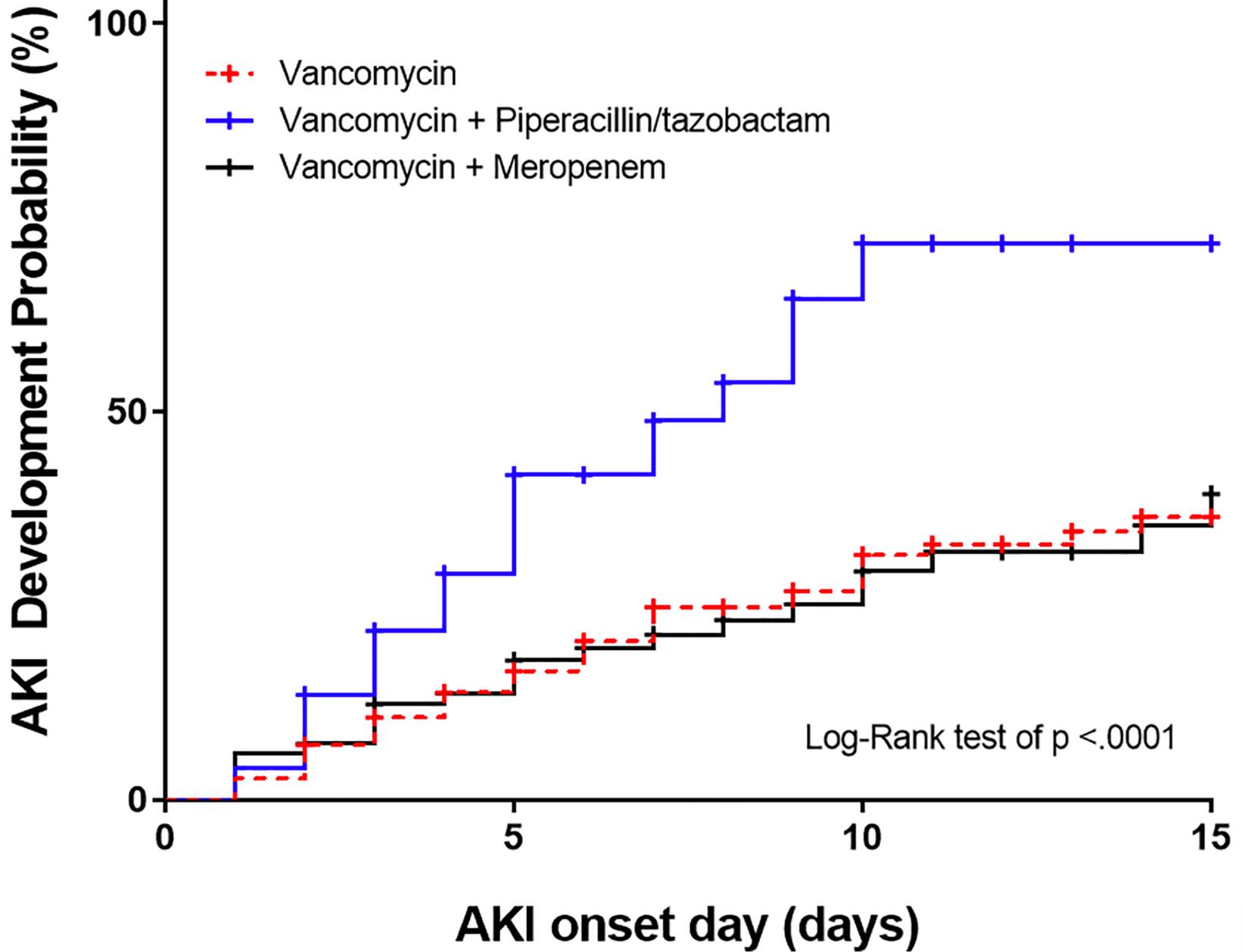
AAEs and ED Visits - Pediatrics



AAEs and ED Visits - Adults

- U.S. adults >20 years of age = 145,490 ED visits per year between 2011-2015
- Antibiotics linked to ~14% of all ED visits for adverse drug effects
- Most visits for people <50y and ~72% were females
- Mostly “allergic” reactions
- Most common drugs: PO sulfonamides, penicillins, and fluoroquinolones

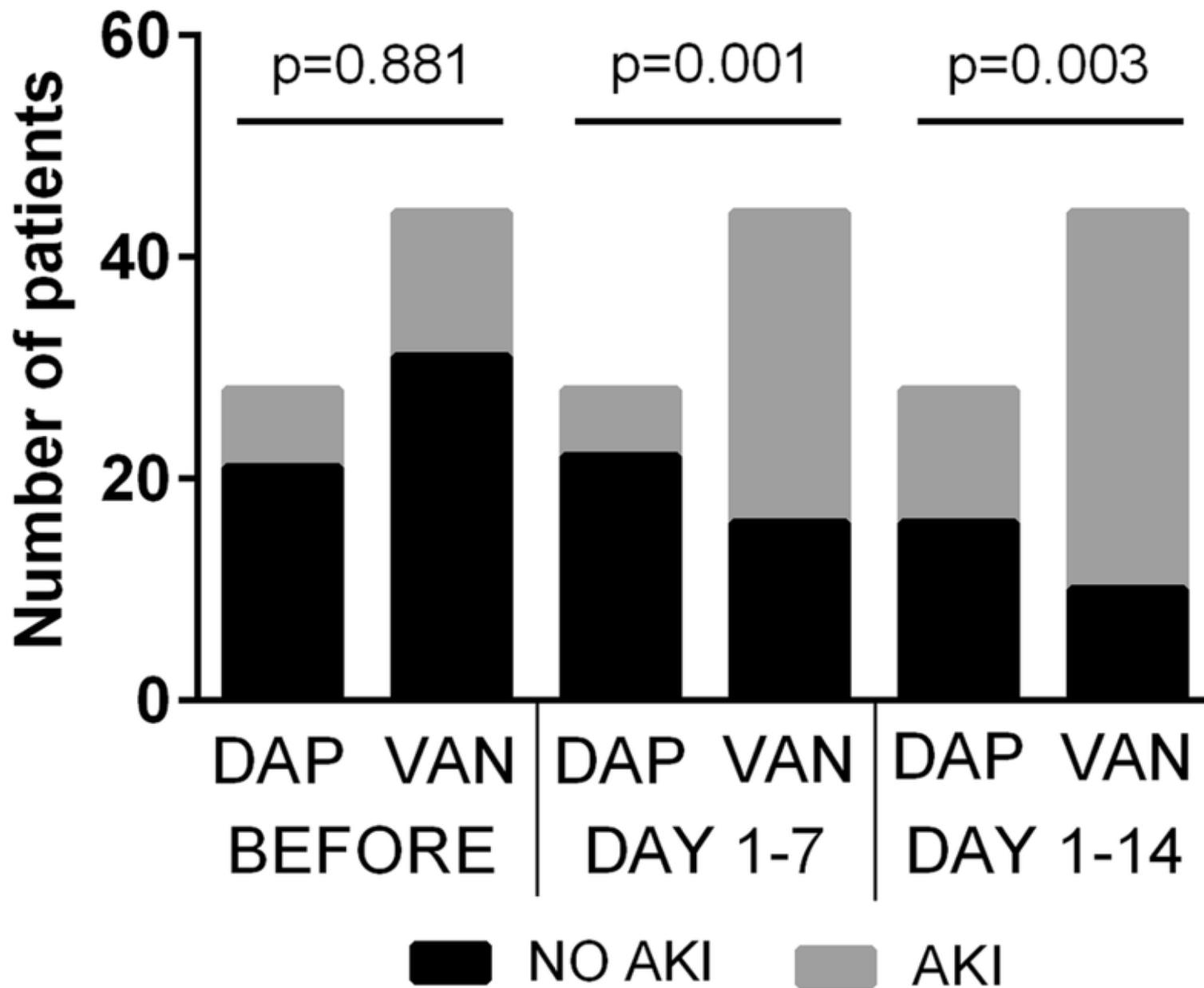




Vancomycin

- Histamine-mediated flushing
- Nephrotoxicity
- Ototoxicity
- Linear IgA bullous dermatosis





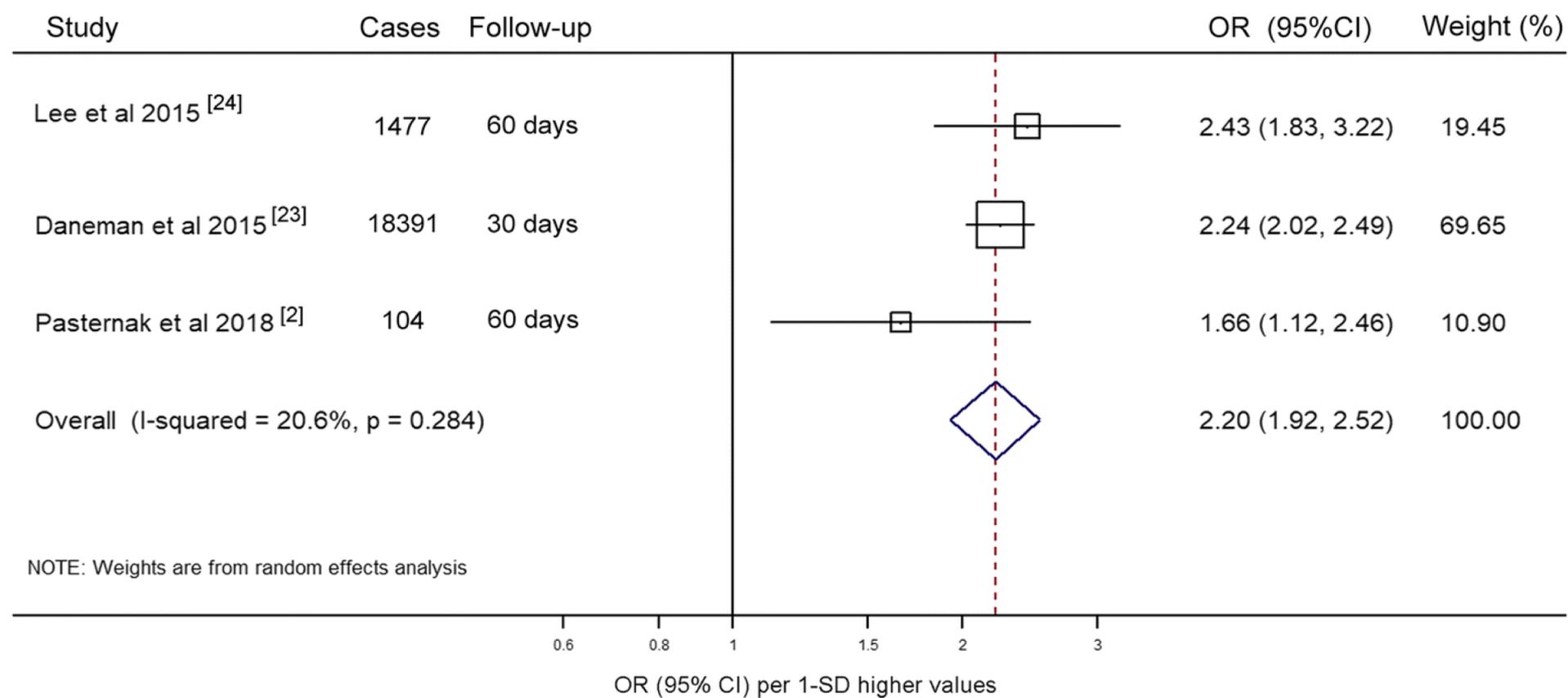


Kang, Annals of Derm, 2008



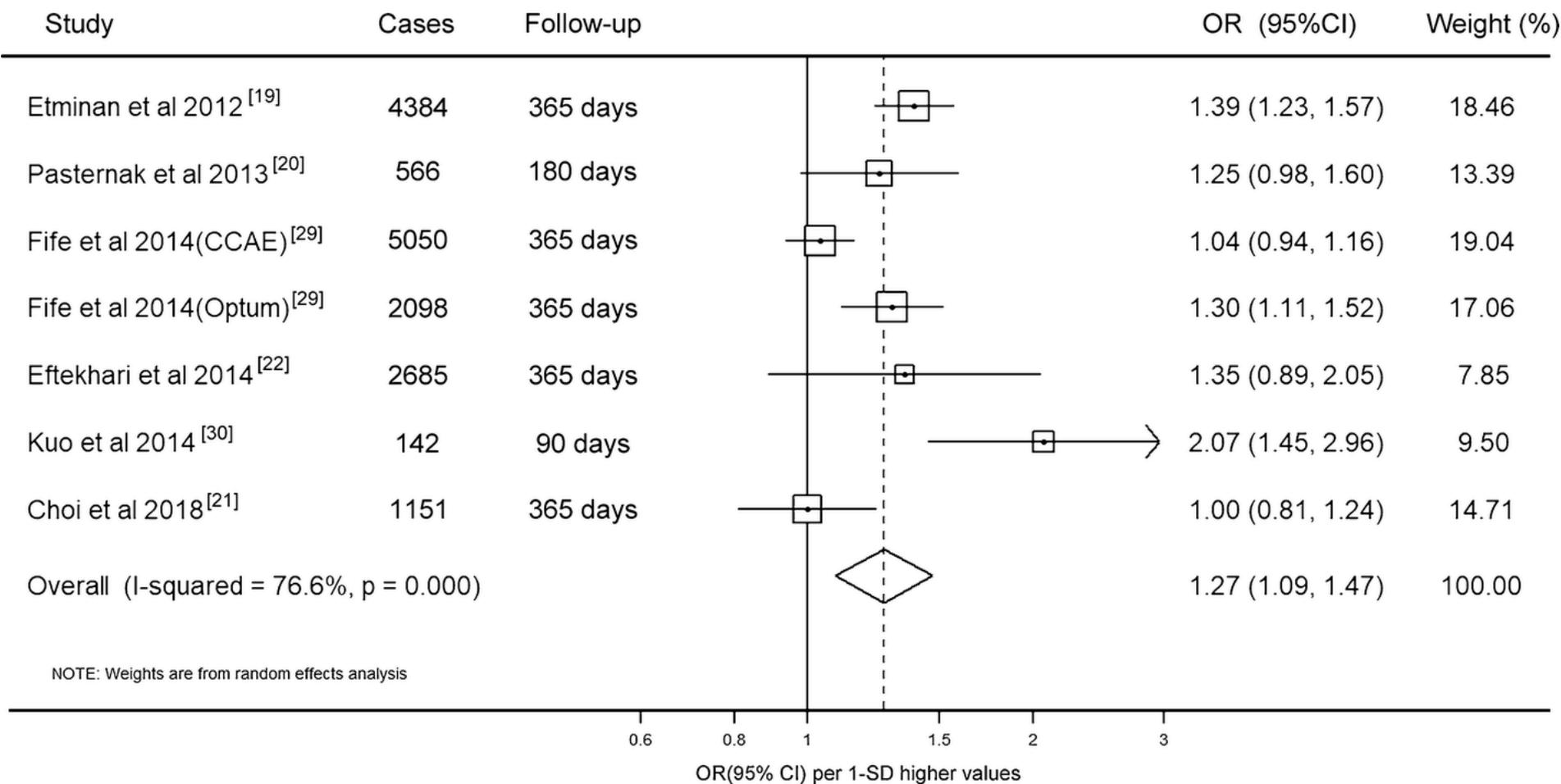
FluoroquinoDON'TS

Fluoroquinolones use and aortic dissection or aortic aneurysm



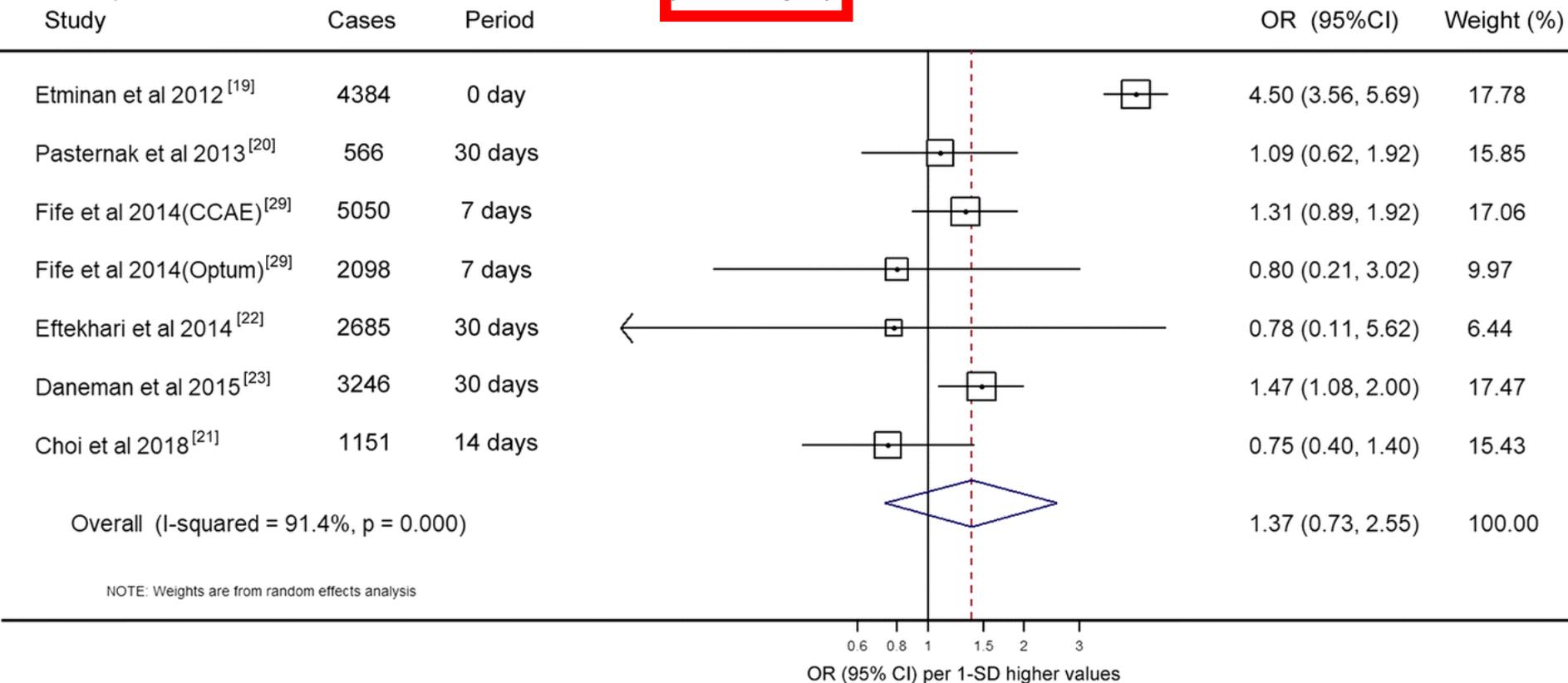
FluoroquinoDON'TS

Fluoroquinolones use and retinal detachment (>30days and ≤365 days)



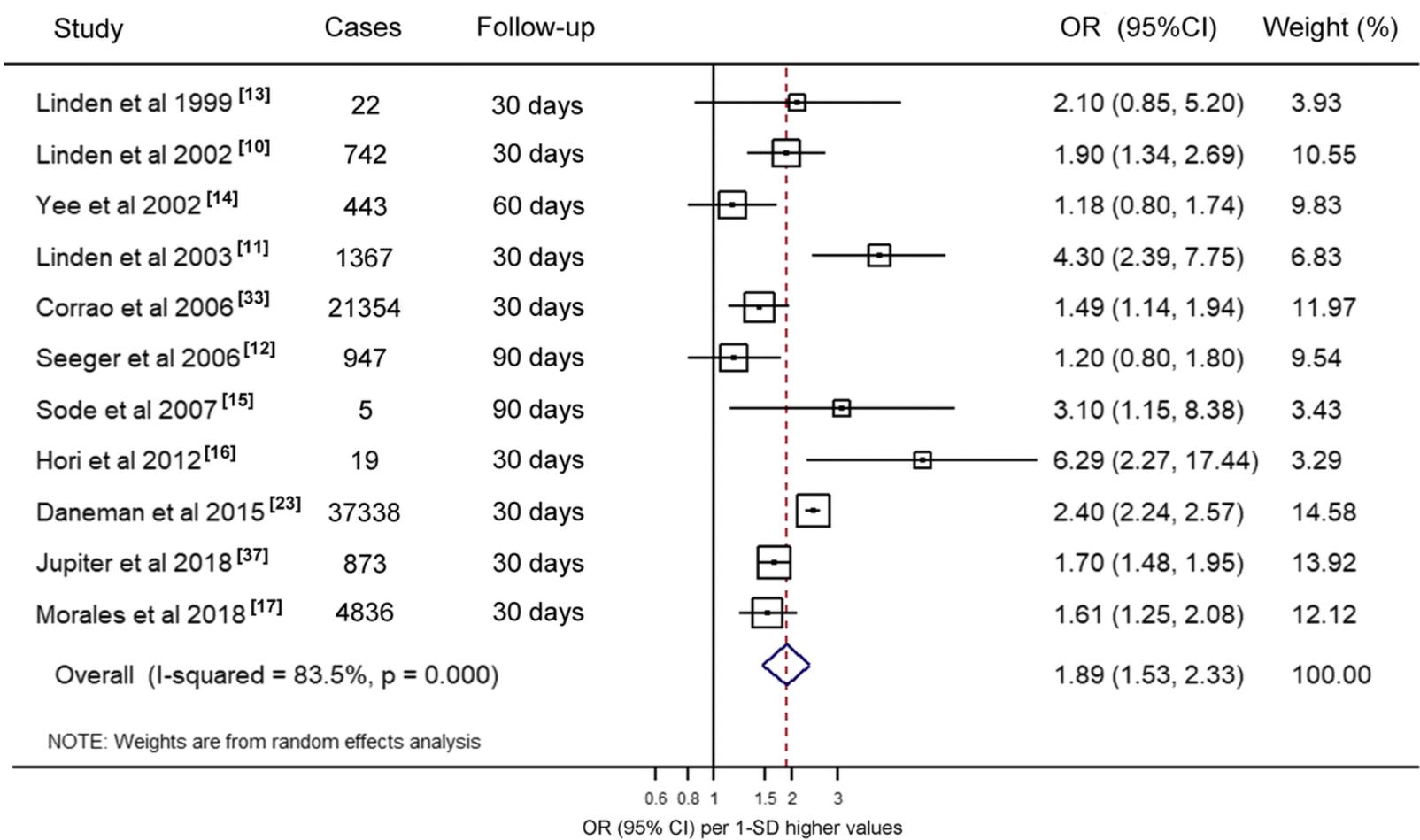
Fluoroquinolone DON'TS

Fluoroquinolones use and retinal detachment (≤30 days)



FluoroquinoDON'TS

Fluoroquinolones use and tendon disorders



Other Antimicrobial AEs

- Nitrofurantoin
 - Pulmonary injury (acute and sub-acute)
 - Liver injury
 - Hemolytic anemia
- Daptomycin
 - Eosinophilic pneumonia
 - Rhabdomyolysis/myopathy
- Linezolid
 - Thrombocytopenia/other cytopenias
 - Peripheral neuropathy (usually not reversible)
 - Optic neuropathy



Like other drugs,
antimicrobials can
be dangerous!



Do you have an AE story for the group?

