Dr. Leo's "In the Literature"

1. Low-dose aspirin increased incident anemia and decline in ferritin in otherwise healthy older adults compared to placebo, independent of major bleeding. 51 events per 1000 person-years compared to 42 events per 1000 person-years.
2. Patients with culture-positive or culture-negative empyema who underwent thoracoscopic decortication showed similar short-term and long-term survival outcomes. however, culture positive patients did have longer ICU stays, longer vent usage and longer post-op stay in the hospital.
3. No improved clinical outcomes were noted with targeted carbapenem therapy for zosyn-nonsusceptible/ceftriaxone-susceptible infections
4. Cases and severe outcomes associated with SARS-CoV-2 reinfection have increased across the United States since September 2021. Delta wave reinfection rate was 2.7%, and increased to 28% during omicron wave. Reinfection rates leading to hospitalizations and death also increased from delta to omicron substantially.
5. In adults with obesity, retatrutide treatment for 48 weeks resulted in substantial reductions in body weight (average of >24% body weight loss.
6. RCT for oral semaglutide (Ozempic) 50 mg once per day led to a superior and clinically meaningful decrease in bodyweight compared with placebo

Annals - 6/2023 - effect of low dose aspirin on incidence of anemia in the elderly.

- 19 114 persons were randomly assigned.
- Anemia incidence in the aspirin and placebo groups was 51.2 events and 42.9 events per 1000 person-years, respectively (hazard ratio, 1.20 [95% CI, 1.12 to 1.29]). Hemoglobin concentrations declined by 3.6 g/L per 5 years in the placebo group and the aspirin group experienced a steeper decline by 0.6 g/L per 5 years (CI, 0.3 to 1.0 g/L). In 7139 participants with ferritin measures at baseline and year 3, the aspirin group had greater prevalence than placebo of ferritin levels less than 45 µg/L at year 3 (465 [13%] vs. 350 [9.8%]) and greater overall decline in ferritin by 11.5% (CI, 9.3% to 13.7%) compared with placebo. A sensitivity analysis quantifying the effect of aspirin in the absence of major bleeding produced similar results
- Low-dose aspirin increased incident anemia and decline in ferritin in otherwise healthy older adults, independent of major bleeding. Periodic monitoring of hemoglobin should be considered in older persons on aspirin
- https://www.acpjournals.org/doi/10.7326/M23-0675

OFID - 6/2023 - Culture positive and culture negative empyema after thoracoscopic decortication

- A total of 1087 patients with empyema received surgery, and 824 were enrolled after exclusion.
- Among these, 366 patients showed positive culture results and 458 patients showed negative results.
    - Longer intensive care unit stays (11.69 vs 5.64 days, $P < .001$),
    - longer ventilator usage (24.70 vs 14.01 days, $P = .002$), and
    - longer postoperative hospital stays (40.83 vs 28.37 days, $P < .001$) were observed in the culture-positive group.

- However, there was no significant difference in 30-day mortality between the 2 groups (5.2% in culture negative vs 5.0% in culture positive, *P* = .913). The
- 2-year survival was not significantly different between the 2 groups (*P* = .236).
- Patients with culture-positive or culture-negative empyema who underwent thoracoscopic decortication showed similar short-term and long-term survival outcomes
- https://doi.org/10.1093/ofid/ofad227

OFID - treatment of zosyn-nonsusceptible/ceftriaxone susceptible infections with carbapenems (CG) vs carbapenem sparing (CSG) regimens.

- Of 1062 patients screened, 200 were included (CG, n = 51; CSG, n = 149). Baseline characteristics, including Charlson Comorbidity Index (CCI; median [interquartile range], 6 [3–9] vs 6 [4–9]; *P* = .704), were similar between groups, except for more immunocompromised CG patients (29% vs 11%, *P* = .001).
- The most common infection sources were urinary (31% vs 57%, *P* = .002) and bloodstream (18% vs 17%, *P* = .887). Eighty-eight percent of the CG received meropenem, while 58% of the CSG received ceftriaxone as targeted therapy.
- There was no statistical difference in the primary endpoint between overall groups (27% vs 17%, *P* = .123), nor when stratified by infection source.
- More patients in the CSG switched to oral therapy (15 [29%] vs 100 [67%], *P* < .001). In multivariate analysis, CCI was an independent predictor of the primary outcome (odds ratio [OR], 1.199 [95% confidence interval, 1.074–1.340]; *P* = .001), while treatment with carbapenem-sparing therapy was not
- Our study did not find improved clinical outcomes with targeted carbapenem therapy for TZP-NS/CRO-S infections. Carbapenem-sparing agents may be considered to spare carbapenems in noncritically ill patients similar to those included in our cohort
- https://doi.org/10.1093/ofid/ofad262

CDC - 6/2023 - Trends in COVID reinfections and hospitalizations between 9/2021 and 12/2022

- Cases and severe outcomes associated with SARS-CoV-2 reinfection have increased across the United States since September 2021. CDC recommends staying up to date with COVID-19 vaccinations and receiving early antiviral treatment, if eligible, to reduce the risk for severe COVID-19–associated outcomes
- As a percentage of all infections, reinfections increased substantially from the
    - Delta (2.7%) to the
    - Omicron BQ.1/BQ.1.1 (28.8%) periods; during the same periods,
- increases in the percentages of reinfections among COVID-19–associated hospitalizations
    - (from 1.9% [Delta] to
    - 17.0% [Omicron BQ.1/BQ.1.1]) and
- deaths
    - (from 1.2% [Delta] to
    - 12.3% [Omicron BQ.1/BQ.1.1]) were also substantial.
- Percentages of all COVID-19 cases, hospitalizations, and deaths that were reinfections were consistently higher across variant periods among adults aged 18–49 years compared with those among adults aged ≥50 years. The median interval between infections ranged from 269 to 411

days by week, with a steep decline at the start of the BA.4/BA.5 period, when >50% of reinfections occurred among persons previously infected during the Alpha variant period or later. To prevent severe COVID-19 outcomes, including those following reinfection, CDC recommends staying up to date with COVID-19 vaccination and receiving timely antiviral treatments, when eligible.

- https://www.cdc.gov/mmwr/volumes/72/wr/mm7225a3.htm?s_cid=mm7225a3_x

NEJM - 6/2023 - retratrutide for obesity - phase 2 trial

- Retatrutide (LY3437943) is an agonist of the glucose-dependent insulinotropic polypeptide, glucagon-like peptide 1, and glucagon receptors
- We enrolled 338 adults, 51.8% of whom were men. The least-squares mean percentage change in body weight at 24 weeks in the retatrutide groups was −7.2% in the 1-mg group, −12.9% in the combined 4-mg group, −17.3% in the combined 8-mg group, and −17.5% in the 12-mg group, as compared with −1.6% in the placebo group.
- At 48 weeks, the least-squares mean percentage change in the retatrutide groups was −8.7% in the 1-mg group, −17.1% in the combined 4-mg group, −22.8% in the combined 8-mg group, and −24.2% in the 12-mg group, as compared with −2.1% in the placebo group.
- At 48 weeks, a weight reduction of 5% or more, 10% or more, and 15% or more had occurred in 92%, 75%, and 60%, respectively, of the participants who received 4 mg of retatrutide; 100%, 91%, and 75% of those who received 8 mg; 100%, 93%, and 83% of those who received 12 mg; and 27%, 9%, and 2% of those who received placebo.
- The most common adverse events in the retatrutide groups were gastrointestinal; these events were dose-related, were mostly mild to moderate in severity, and were partially mitigated with a lower starting dose (2 mg vs. 4 mg). Dose-dependent increases in heart rate peaked at 24 weeks and declined thereafter
- In adults with obesity, retatrutide treatment for 48 weeks resulted in substantial reductions in body weight
- https://www.nejm.org/doi/full/10.1056/NEJMoa2301972?query=featured_home

LANCET - 6/2023 - oral ozempic RCT

- The estimated mean bodyweight change from baseline to week 68 was –15·1% (SE 0·5) with oral semaglutide 50 mg versus –2·4% (0·5) with placebo (estimated treatment difference −12·7 percentage points, 95% CI −14·2 to −11·3; p<0·0001)
- In adults with overweight or obesity without type 2 diabetes, oral semaglutide 50 mg once per day led to a superior and clinically meaningful decrease in bodyweight compared with placebo
- https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(23)01185-6/fulltext