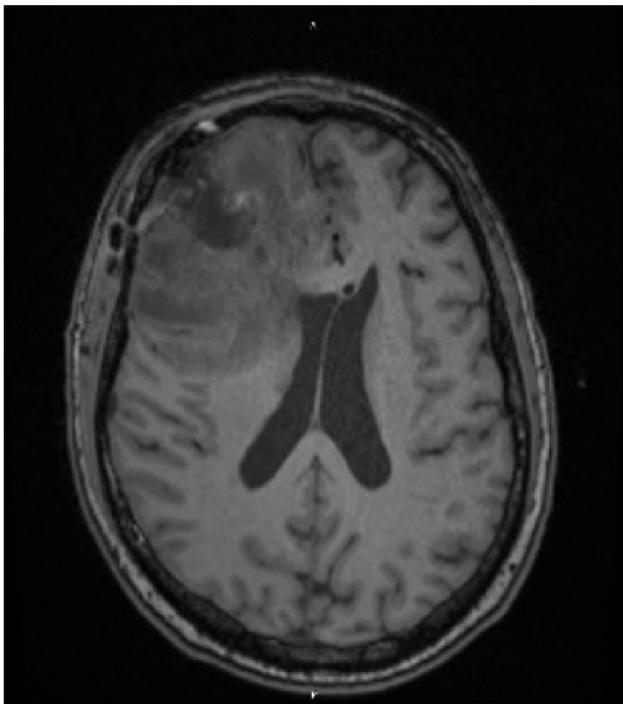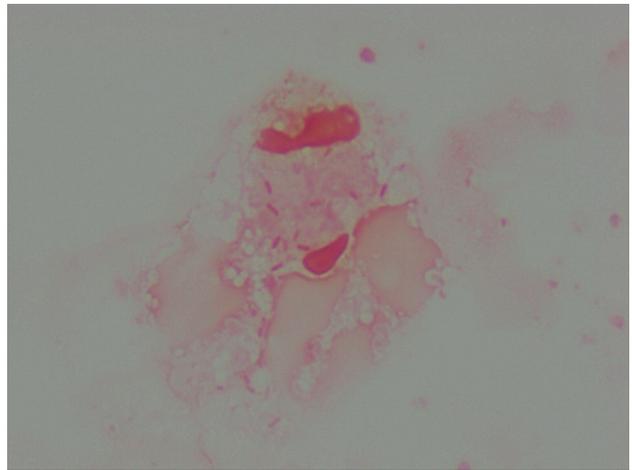New solitary ring-enhancing lesion with significant surrounding vasogenic edema within the anterior right frontal lobe.

09/23/20 MRI Brain



Post-Surgical right frontal lobe with edema, persistent cerebritis, and mass effect on the lateral ventricles.

Fluoribacter Bozemanae



Formerly known as Legionella bozemanii, an intracellular GNR grown on BCYE.

**Conclusion.** We present a diagnostically challenging case of *L. bozemanii* brain abscess in an immunocompromised patient. To our knowledge, this is the first case of culture proven *L. bozemanii* brain abscess in the literature. Considering the fastidious growth of the organism, fatal nature of the infection, and narrow therapeutic profile, *Legionella* infection should be considered in a multi-system disease in immunocompromised patients.

**Disclosures.** **Wesley Kufel, PharmD**, **Melinta** (Grant/Research Support)**Merck** (Grant/Research Support)**Theratechnologies, Inc.** (Advisor or Review Panel member)

### 275. Clinical and Laboratory Predictors of Stroke Associated with COVID-19 Disease

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**Session:** P-14. COVID-19 Complications, Co-infections, and Clinical Outcomes

**Background.** Although SARS-CoV-2 predominantly targets the respiratory system, it has also been associated with vascular complications including stroke. Identifying COVID-19 patients at elevated risk for stroke can help inform target anticoagulation strategies. We sought to understand how symptoms and laboratory markers at presentation with COVID-19 relate to stroke risk.

**Methods.** We enrolled a cohort of 1324 subjects who were hospitalized with COVID-19 across six PennMedicine hospitals between April and August 2020 and performed retrospective, manual chart review to measure exposures including presenting symptoms and admission inflammatory markers. Data were organized with a REDCap database, and analyses were performed using R statistical software, with Bayesian binomial regression models fit using Stan Hamiltonian Monte Carlo via the "brms" package.

**Results.** Among 1324 subjects, 19 stroke events were observed within 30 days of COVID-19 diagnosis. Admission inflammatory markers, including C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), ferritin, and D-dimer, were poor predictors of stroke risk. Among presenting symptoms, including respiratory, gastrointestinal, dermatologic, and neurologic features of COVID-19 disease, only altered mental status documented on presentation (in 529 subjects) was significantly associated with stroke risk (odds ratio 6.06, 95% credible interval 2.16 - 18.7).

**Conclusion.** Inflammatory markers associated with COVID-19 disease severity did not discriminate patients at high versus low risk of stroke in this cohort. Altered mental status documented on presentation was significantly associated with incident stroke during COVID-19 disease.

**Disclosures.** **Ebbing Lautenbach, MD, MPH, MSCE**, **Merck** (Other Financial or Material Support, Member of Data and Safety Monitoring Board (DSMB)) **Michael Z. David, MD PhD**, **GSK** (Board Member)

### 276. SARS-CoV-2 Infection in Solid Organ Transplant Candidates and Recipients at Texas Children's Hospital: A Retrospective Review

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**Session:** P-14. COVID-19 Complications, Co-infections, and Clinical Outcomes

*Background.* Texas Children's Hospital (TCH) is the largest pediatric solid organ transplant (SOT) program in the US, performing heart, kidney, liver, and lung transplants. Limited data exists about SARS-CoV-2 infection (COVID-19) in the pediatric SOT populations. We evaluated the impact of COVID-19 in a cohort of PCR positive SOT candidates and recipients. We hypothesized that COVID-19 would more severely impact SOT recipients compared to transplant candidates.

*Methods.* Patients with SOT or transplant candidates at TCH with a positive SARS-CoV-2 RT-PCR test since March 1, 2020 to April 12, 2021 were included in the cohort. Retrospective medical record review was performed, and descriptive statistics were used.

*Results.* A total of 103 SOT patients were identified, 13 candidates and 90 recipients. Of the SOT candidates, there were 1 heart, 3 kidney, and 9 liver transplant candidates. The SOT recipient cohort included 33 heart, 6 lung, 20 kidney, 33 liver and 2 multi-visceral recipients. A significant difference in age was observed between candidates and recipients with candidates being younger with median age of 4.5 years as opposed to recipient's median age of 12.8 years (p=0.0003). The majority of patients, 70 of 101 (69%), were symptomatic. Most common symptoms reported were fever in 34/70 (49%), cough in 31/70 (44%), and headache in 19/70 (27%). A higher percentage of candidates (31%, 4 of 13) were hospitalized for acute COVID-19 infection compared to (17%, 15 of 90) of recipients. A transplant candidate who ultimately died from underlying illness and COVID-19 was the only patient in the cohort who required mechanical ventilation. More deaths (2/13, 15%) occurred in transplant candidates with COVID-19 compared to transplant recipients (1/90, 1%, p=0.04); however, 2 of the deaths occurred after recovery from acute COVID-19 illness.

*Conclusion.* Our study suggests that pediatric candidates who are actively listed for transplant with underlying conditions have more severe acute COVID-19 illness than pediatric SOT recipients despite their immunosuppression based on the higher mortality observed in the transplant candidates. Prospective studies are needed to better understand which specific patients are at increased risk for mortality from COVID-19.

*Disclosures.* **Leanne Petters, MSN, APRN, CPNP-AC, Pfizer** (Scientific Research Study Investigator) **Flor M. Munoz, MD, Biocryst** (Scientific Research Study Investigator)**Gilead** (Scientific Research Study Investigator)**Meissa** (Other Financial or Material Support, DSMB)**Moderna** (Scientific Research Study Investigator, Other Financial or Material Support, DSMB)**Pfizer** (Scientific Research Study Investigator, Other Financial or Material Support, DSMB)**Virometix** (Other Financial or Material Support, DSMB) **Elizabeth A. Moulton, MD, PhD, Pfizer** (Scientific Research Study Investigator)

### 277. Low Rates of Bacterial Co-infection in Hospitalized Patients with COVID-19

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Temple University COVID-19 Research Group

**Session:** P-14. COVID-19 Complications, Co-infections, and Clinical Outcomes

*Background.* The rate of bacterial co-infection in inpatients with COVID-19 is unknown, however, patients who are hospitalized with COVID-19 often receive antibiotics for community-acquired bacterial pneumonia (CABP). Reducing unnecessary antibiotic usage in this population is important to prevent adverse effects and slow the development of antimicrobial resistance.

*Methods.* We performed a retrospective chart review on patients admitted to our health system between March and May 2020 with confirmed COVID-19 by nasopharyngeal PCR. We reviewed patients with positive cultures from urine, blood, sputum, and sterile sites. Positive cultures were reviewed to determine if they represented a true infection versus a contaminant or colonization. Patients with true infections were categorized as having a co-infection (CI) if the positive culture was collected within 48 hours of initial positive SARS-CoV-2 PCR test. Additional data was collected on patient demographics, types of infections, organisms grown, and antibiotic usage.

*Results.* 902 patients were admitted with positive SARS-CoV-2 tests during the study period. Of these, 47 patients (5.2%) had a bacterial CI. Some patients had more than one CI, with 53 total CIs identified. The median age of patients with CI was 66 years old (39 – 90). Tables 1 and 2 describe patient characteristics and infections. A subgroup analysis on types of bacteria was done on the 20 patients with a respiratory CI, who accounted for 2.2% of all COVID-positive patients admitted during the study period. In these infections, *Staphylococcus aureus, Streptococcus species,* and *Haemophilus influenzae* were the most common organisms, accounting for 60%, 15%, and 10% infections, respectively.

Table 1. Patient Characteristics

| Baseline Demographics | N = 47 (%) |
|---|---|
| Sex | |
| Male | 22 (47%) |
| Female | 25 (53%) |
| Ethnicity | |
| African American | 29 (62%) |
| White | 9 (19%) |
| Hispanic | 7 (15%) |
| Asian/Pacific Islander | 2 (4%) |
| Hypertension | 29 (62%) |
| Diabetes | 22 (47%) |
| Hyperlipidemia | 13 (28%) |
| Congestive heart failure | 12 (23%) |
| Obesity | |
| BMI: 30 – 35 | 10 (21%) |
| BMI: 35.1 – 40 | 5 (11%) |
| BMI: >40 | 3 (6%) |
| Chronic kidney disease | 9 (19%) |
| Chronic obstructive pulmonary disease | 8 (17%) |
| Asthma | 3 (6%) |
| Coronary artery or peripheral artery disease | 6 (13%) |
| Lung transplant | 1 (2%) |
| Renal transplant | 1 (2%) |
| Malignancy | 2 (4%) |
| Dementia | 4 (9%) |
| Psychiatric disorder | 6 (38%) |
| Hypothyroidism | 1 (2%) |
| Rheumatoid arthritis | 1 (2%) |
| No prior medical history | 3 (6%) |
| Admitted from long-term facility | 13 (28%) |
| Immunosuppressed prior to admission | 3 (6%) |
| | |
| **Clinical Status on admission according to NIH COVID-19 Ordinal Scale** | **N (%)** |
| 3 = Hospitalized, no oxygen therapy | 16 (34%) |
| 4 = Oxygen by mask or nasal prongs | 21 (45%) |
| 5 = Non-invasive ventilation or high-flow oxygen | 3 (6%) |
| 6 = Intubation and mechanical ventilation | 7 (15%) |
| 7 = Ventilation plus additional organ support (pressors, renal replacement therapy, or extracorporeal membrane oxygenation) | 0 |

Table 2. Co-infections

| Organism | Type | | | |
|---|---|---|---|---|
| | Pneumonia N=20 | Bloodstream N=14 | Urinary N=17 | Peritonitis N=1 |
| *Methicillin-susceptible Staphylococcus aureus* | 7 | 2 | 0 | 0 |
| *Methicillin-resistant Staphylococcus aureus* | 5 | 1 | 0 | 0 |
| *E. coli* | 0 | 2 | 8 | 1 |
| *Streptococcus spp.* | 3 | 1 | 2 | 1 |
| *Klebsiella spp.* | 1 | 1 | 5 | 0 |
| *Hemophilus influenzae* | 3 | 0 | 0 | 0 |
| *Coagulase-negative Staphylococcus spp.* | 0 | 2 | 0 | 0 |
| *Enterococcus spp.* | 0 | 1 | 1 | 0 |
| *Citrobacter spp.* | 0 | 1 | 1 | 0 |
| *Proteus spp.* | 1 | 0 | 1 | 0 |
| *Morganella spp.* | 0 | 0 | 1 | 0 |
| *Pseudomonas spp.* | 0 | 2 | 1 | 0 |
| *Enterobacter spp.* | 0 | 0 | 0 | 0 |
| *Serratia spp.* | 1 | 0 | 0 | 0 |
| *Psychrobacter phenulpyruvicus* | 0 | 1 | 0 | 0 |
| | | | | |
| Total* | 21 | 14 | 20 | 2 |

*Some patients had more than one organism and/or infection

*Conclusion.* The overall rate of CIs in patients admitted with COVID-19 was low. Some of these CIs may represent an "incidentally positive" COVID-19 test if a patient presented with one infection and had asymptomatic carriage of SARS-CoV-2 when community prevalence was high. Further analysis is needed to evaluate specific risk factors for co-infection.

*Disclosures.* **Jason C. Gallagher, PharmD, FIDP, FCCP, FIDSA, BCPS, Astellas** (Consultant, Speaker's Bureau)**Merck** (Consultant, Grant/Research Support, Speaker's Bureau)**Qpex** (Consultant)**scPharmaceuticals** (Consultant)**Shionogi** (Consultant) **Jason C. Gallagher, PharmD, FIDP, FCCP, FIDSA, BCPS**, Astellas (Individual(s) Involved: Self): Speakers' bureau; Merck (Individual(s) Involved: Self): Consultant, Grant/Research Support; Nabriva: Consultant; Qpex (Individual(s) Involved: Self): Consultant; Shionogi (Individual(s) Involved: Self): Consultant

### 278. Immunocompromised Patients with Prolonged Viral Shedding of SARS-COV-2

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