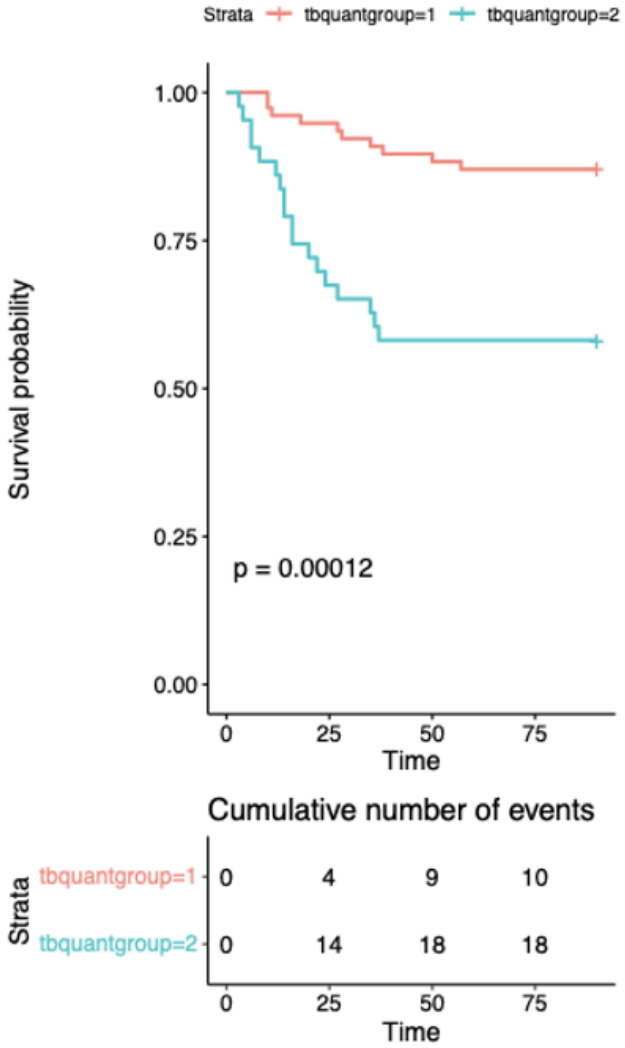

Methods. This is a retrospective study of patients who were admitted at our institute with COVID–19 and had a QFT done within one month of the positive SARS-CoV-2 nucleic acid amplification test result. Patient charts were analyzed for clinical course and outcomes, including in-hospital mortality (primary outcome), 90-day mortality, respiratory failure, requirement for intubation and other complications that would portend a more severe disease course.

Results. A total of 120 patient charts were analyzed, out of which 43 (35.8%) had an indeterminate QFT. All the indeterminate results were due to an inadequate mitogen response. The indeterminate QFT group had a 41.86% (18/43) in-hospital mortality vs. 9.09% (7/77) in the negative or positive QFT group (p-value of < 0.001). The 90-day mortality was similar between the two groups. Patients with indeterminate QFT also had a higher incidence of respiratory failure (97.7% vs. 75.3%; p-value = 0.020), requirement for mechanical ventilation (55.8% vs. 23.4%; p-value < 0.001), requirement of ECMO (25.58% vs. 0%; p-vale < 0.001), requirement of pressor (48.83% vs. 14.28%; p-value < 0.001) and requirement for renal replacement therapy (32.5% vs. 1.3%; p-value < 0.001), when compared to patients with a negative or positive QFT. Patients in indeterminate group had a higher hospital length of stay than the other group (p-value = 0.035).

Conclusion. Our study indicates that patients with COVID-19 who fail to mount an adequate IFNG mitogen response in QFT assay have worse clinical outcomes and a more complicated and protracted clinical course. Evaluating cell-mediated immune responses through commercially available IFNG release assays may yield a promising strategy to predict COVID-19 clinical outcomes.

Disclosures. **All Authors**: No reported disclosures

310. Cryptococcal Infection Following COVID-19 infection in Solid Organ Transplant Recipients: A Case Series

Jeremey Walker, MD[1]; Peter Pappas, M.D.[2]; Lauren Nicholas Herrera, MD[2]; Cameron White, MD, MPH[2]; Anoma Nellore, MD[3]; Todd P. McCarty, MD[4]; [1]University of Alabama in Birmingham, Birmingham, AL; [2]University of Alabama at Birmingham, Birmingham, Alabama; [3]UAB, Birmingham, Alabama; [4]University of Alabama at Birmingham; Birmingham VA Medical Center, Birmingham, Alabama

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Background. Fungal infections have been identified with or following SARS-CoV-2 infection, most commonly COVID associated pulmonary aspergillosis. *Cryptococcus* species are ubiquitous in the environment and the third most common invasive fungal infection following Solid Organ Transplant (SOT). We describe four cases of concurrent or subsequent cryptococcal infection within 90 days following COVID-19 infection.

Methods. We conducted a retrospective study of patients presenting with proven cryptococcosis either concurrently or within 90 days following COVID-19 diagnosis. Cases were identified March 2020 through May 2021. All were seen at the University of Alabama in Birmingham, a regional referral and comprehensive transplant center. Exemption for this review was approved by our IRB.

Results. Four cases were identified, all were SOT recipients. Case details are provided in Table 1. No patients required ICU level care at any point. COVID-19 treatment included 10 days of increased steroids for 3 patients, remdesivir for 2, and 1 received no treatment for COVID-19. In contrast to the typical time-course for cryptococcal infection post-SOT (median time approx. 500 days post-transplant), three patients were greater than 2 years post-transplant and were without rejection or recent changes in immunosuppression. Patient 1 was less than 6 months post liver-kidney transplant and was diagnosed at time of admission with concurrent COVID-19 and cryptococcal pneumonia. Infection was disseminated in the other 3 cases including positive blood cultures in 2 patients and cryptococcal meningitis (CM) in 2 patients. CM cases presented later following COVID-19 and had the longest delay between symptom onset (headache, neurologic symptoms) and CM diagnosis. One patient had CM 8 years prior, but had done extremely well off fluconazole for over 6 years prior to this recurrence. All patients are doing well at most recent follow-up evaluations.

Table 1. Summary of Cases

Patient ID #	Age, Gender	Immune-compromising condition	Time from COVID diagnosis to Cryptococcal Symptoms (days)	Time from COVID diagnosis to Cryptococcal Diagnosis (days)	Treatment for COVID-19	Immune-suppression Regimen	Comorbidities (DMII, HTN, Obesity)	Cryptococcal Symptoms	Cryptococcal Diagnostics	Cryptococcal Treatment	Complications	Outcome
(1)	70, F	Liver and Kidney transplant 4 months prior	Concurrent	Concurrent	Inpatient: Prednisone 10 mg & remdesivir	Azathioprine, prednisone, tacrolimus	HTN, obesity	Dry cough, dyspnea	Serum Ag 1:320, CSF Ag and cultures (neg)	Fluconazole	Prolonged dyspnea requiring home oxygen	Mild dyspnea at 6 month follow-up, off supplemental oxygen.
(2)	63, M	Kidney transplant 8 years prior	16	20	Inpatient: Dexamethasone 6mg	Mycophenolate mofetil, tacrolimus, prednisone	DM II, HTN	Persistent fever, cellulitis	Serum Ag 1:5,120, Blood culture positive. CSF Ag and culture (neg)	Amphotericin and flucytosine induction for two weeks followed by fluconazole	None	No symptoms at 3 months follow-up.
(3)	62, M	Heart transplant 9 years prior	47	93	Outpatient: None	Sirolimus, tacrolimus	DM II, HTN	Headache, nausea	Serum Ag 1:2,560, CSF Ag 1:5,120 Blood and CSF cultures (pos)	Amphotericin and flucytosine induction for two weeks followed by fluconazole	Prolonged increased intracranial pressure requiring ventriculoperitoneal shunt placement	Minimal headache at 6 week follow-up.
(4)	53, F	Kidney transplant 4 years prior	72	95	Inpatient: Dexamethasone 6mg & Remdesivir	Mycophenolate mofetil, tacrolimus, prednisone	DM II, HTN	Headache, nausea, confusion	Serum Ag 1:20,480, CSF Ag 1:20,480. CSF cultures (pos)	Two separate two-week inductions with Amphotericin and flucytosine followed by fluconazole	Ongoing meningeal symptoms at one month requiring reinduction and then recurrent meningeal symptoms at 5 months diagnosed as IRIS and treated with steroids	Minimal symptoms at 7 month follow-up.

Conclusion. We describe the first case series with a temporal association between SARS-CoV-2 infection and cryptococcosis. All cases were immunocompromised due to SOT. Some symptoms were attributed to post-COVID syndrome leading to significant delays in diagnosis for those patietns, highlighting the importance of considering this association for at-risk patients.

Disclosures. **Todd P. McCarty, MD**, **Cidara** (Grant/Research Support)**GenMark** (Grant/Research Support, Other Financial or Material Support, Honoraria for Research Presentation)**T2 Biosystems** (Consultant)

311. Impact of Non-alcoholic Fatty Liver Disease on Clinical Outcomes in Patients with COVID-19

Nina Vrsaljko, MD[1]; Lara Samadan, MSc[2]; Jelena Budimir, MD[1]; Mirjana Balen Topic, MD, PhD[2]; Ivan Kurelac, MD, PhD[1]; Adriana Vince, MD, PhD[1]; Neven Papić, MD, PhD[2]; [1]University Hospital for Infectious Diseases Zagreb, Zagreb, Grad Zagreb, Croatia; [2]School of Medicine, University of Zagreb, Croatia, Zagreb, Grad Zagreb, Croatia

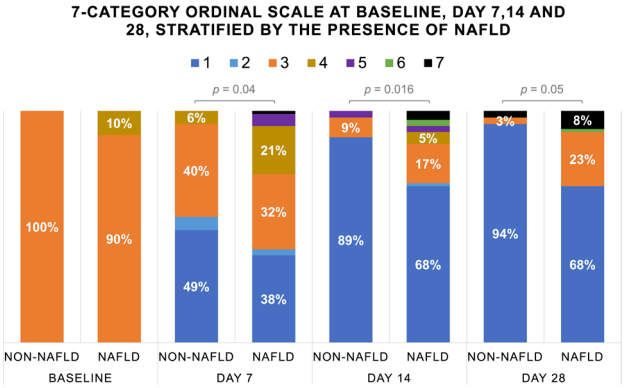
Session: P-14. COVID-19 Complications, Co-infections, and Clinical Outcomes

Background. Non-alcoholic fatty liver disease (NAFLD) is the most common liver disease with a prevalence up to 30%. NAFLD is strongly associated with components of metabolic syndrome, already recognized as risk factors for worse outcomes in COVID-19. However, the impact of NAFLD on COVID-19 is not well characterized. The aim of this study was to investigate a possible association between NAFLD and COVID-19 severity and outcomes.

Methods. A prospective observational study included consecutively hospitalized adult patients with severe COVID-19 at the University Hospital for Infectious Diseases in Zagreb, Croatia between March and June 2021. On admission patients were screened for fatty liver by the ultrasound and subsequently diagnosed with NAFLD according to current guidelines. Demographic, clinical and laboratory data was collected and correlated to clinical outcomes.

Results. Of the 112 patients included in the study, 77 (68.7%) had NAFLD (59.7% males; median age of 62, IQR 54-66 years). Except for higher prevalence of obesity in NAFLD group (61.0% vs 17.1%) there were no differences in other comorbidities. NAFLD group had higher inflammatory markers CRP (96, IQR 51-138 vs 59, IQR 29-99mg/L) and IL-6 (129, IQR 44-169 vs 25, IQR 8-56pg/mL). Steatosis stage showed positive correlation with BMI, waist/hip ratio, CRP, PCT, IL-6, AST, ALT, LDH and fibrinogen. Steatosis stage correlated with clinical status at the 7-category scale on admission and at days 7, 14 and 28. Patients with NAFLD had longer duration of hospitalization (9, IQR 6-15 vs 6, IQR 5-11 days, p=0.024), more frequently required noninvasive ventilation or high-flow oxygen (24.7% vs 5.7%, p=0.018) and had higher rate of pulmonary embolism (22.1% vs 5.7%, p=0.024). There was no difference in mortality. The median value for clinical status on the ordinal scale at day 7 was significantly

higher in NAFLD group at days 7 and 14, as presented in Fig. 1. Multivariable analysis identified age > 65 (OR 3.6, 95%CI 1.3-10.9), LDH > 350 (OR 8.1, 95%CI 2.7-29.4), NAFLD (OR 3.9, 1.1-20.5) and pulmonary embolism (OR 10.4, 2.7-48.3) associated with adverse outcomes at day 28.



The figure shows the patients' clinical status as assessed on the seven-category ordinal scale on admission and at day 7, 14 and 28, according to the presence of NAFLD. Categories on the ordinal scale were as follows: 1, discharged or ready for discharge; 2, hospitalization in a non–intensive care unit (ICU) without supplemental oxygen; 3, non–ICU hospitalization with supplemental oxygen; 4, ICU or non–ICU hospitalization with noninvasive ventilation or high-flow oxygen; 5, ICU hospitalization with mechanical ventilation; 6, ICU hospitalization with extracorporeal membrane oxygenation or mechanical ventilation and additional organ support; and 7, death.

Conclusion. Our data suggests that NAFLD is associated with COVID-19 severity and might be linked to adverse outcomes in hospitalized patients.

Disclosures. **All Authors**: No reported disclosures

312. Clinical Attributes and Risk Factors for In- Hospital Mortality among Covid-19 Patients in a Community Hospital Setting: A Propensity Matched Analysis

Karthik Seetharam, MD[1]; Premila Bhat, MD[1]; Kelash Kumar, MD[1]; Thinzar Wai, MD[1]; Vamsi Yenugadhati, MD[1]; Bhargav Desai, MD[1]; Christina Tamsukhin, MD[1]; Shurovi Jafar, MD[1]; Diego Castellon, MD[1]; Olga Badem, MD[2]; Tanveer Mir, MD[1]; Sadisept Vargas, MD[1]; FNU Poonam, MD[1]; Blanca Vargas, MD[1]; Juan Carlos Martinez, MD[1]; Sherin Pathickal, PharmD[1]; Olawale Akande, MBA[1]; Laurie Ward, MD[1]; Zeyar Thet, MD[1]; Maxine Orris, MD[1]; Ngozi Kanu, MD[1]; Utpal Bhatt, MD[1]; Pervez Mir, MD[1]; Juan Carlos Fuentes-Rosales, MD, JD, MPH, FACP, FHM[1]; Youn-sung Jung, MD[1]; Joseph Guadalupe, MD[1]; Pravin Bhat, MD[1]; Hejmadi Prabhu, MD[1]; Deepak Asti, MD[1]; Preety Chawla, MD[1]; Gopi Ponukollu, MD[1]; Carlos Gomez, BS[1]; Jilan M. Shah, MD[1]; [1]Wyckoff Heights Medical Center, Brooklyn, New York; [2]Wyckoff Heigh Medical Center, Brooklyn, NY

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Background. New York City emerged as the Epicenter for Covid-19 due to novel Coronavirus SARS-CoV-2 soon after it was declared a Global Pandemic in early 2020 by the WHO. Covid-19 presents with a wide spectrum of illness from asymptomatic to severe respiratory failure, shock, multiorgan failure and death. Although the overall fatality rate is low, there is significant mortality among hospitalized patients. There is limited information exploring the impact of Covid-19 in community hospital settings in ethnically diverse populations. We aimed to identify risk factors for Covid-19 mortality in our institution.

Methods. We conducted a retrospective cohort study of hospitalized in our institution for Covid 19 from March 1st to June 21st 2020. It comprised of 425 discharged patients and 245 expired patients. Information was extracted from our EMR which included demographics, presenting symptoms, and laboratory data. We propensity matched 245 expired patients with a concurrent cohort of discharged patients. Statistically significant covariates were applied in matching, which included age, gender, race, body mass index (BMI), diabetes mellitus, and hypertension. The admission clinical attributes and laboratory parameters and outcomes were analyzed.

Results. The mean age of the matched cohort was 66.9 years. Expired patients had a higher incidence of dyspnea (P < 0.001) and headache (0.031). In addition, expired patients had elevated CRP- hs (mg/dl) ≥ 123 (< .0001), SGOT or AST (IU/L) ≥ 54 (p < 0.001), SGPT or ALT (IU/L) ≥ 41 (p < 0.001), and creatinine (mg/dl) ≥ 1.135 (0.001), lower WBC counts (k/ul) ≥ 8.42 (0.009). Furthermore, on multivariate logistic regression, dyspnea (OR = 2.56, P < 0.001), creatinine ≥ 1.135 (OR = 1.79, P = 0.007), LDH(U/L) > 465 (OR = 2.18, P = 0.001), systolic blood pressure < 90 mm Hg (OR = 4.28, p = .02), respiratory rate > 24 (OR = 2.88, p = .001), absolute lymphocyte percent (≤ 12%) (OR = 1.68, p = .001) and procalcitonin (ng/ml) ≥ 0.305 (OR = 1.71, P = .027) predicted in- hospital mortality in all matched patients.

Conclusion. Our case series provides admission clinical characteristics and laboratory parameters that predict in- hospital mortality in propensity Covid 19 matched patients with a large Hispanic population. These risk factors will require further validation.

Disclosures. **All Authors**: No reported disclosures

313. Host Protein Biomarkers Predicting Severity of Lung Damage due to COVID-19

Isabell Kerschbaumer, MD[1]; Melissa Fazzari, PhD[1]; Shana R. Burstein, n/a[1]; Aisha Furey, n/a[1]; Amy S. Fox, MD[2]; Adam M. Cole, MD[2]; Inessa Gendlina[1]; Inessa Gendlina[1]; Jacqueline M. Achkar, MD[1]; [1]Albert Einstein College of Medicine, Bronx, New York; [2]Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, New York

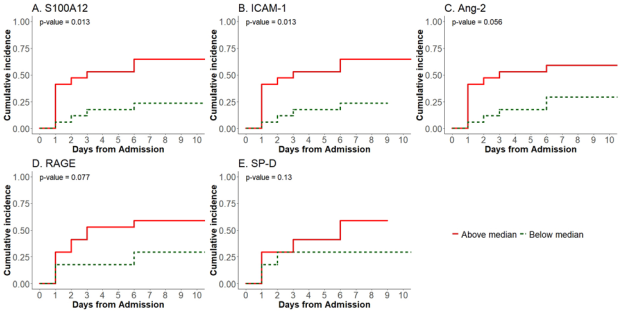
Session: P-14. COVID-19 Complications, Co-infections, and Clinical Outcomes

Background. Biomarkers to predict the severity of lung damage due to COVID-19 are urgently needed to inform management and treatment decisions. Our objective was to investigate the predictive value of host proteins for worsening respiratory failure in one of the by COVID-19 most affected and diverse patient populations in the US.

Methods. We performed a prospective single-center cross-sectional study of 34 adult patients admitted to Montefiore Medical Center in the Bronx, New York, for respiratory symptoms due to PCR-confirmed COVID-19. Exclusion criteria were age < 21, history of prior SARS-CoV-2 infection, and/or underlying severe chronic lung diseases requiring home O2 and/or high dose steroids. We stratified and compared patients by whether they developed worsening respiratory failure, necessitating transfer to the intensive care unit (ICU) during their hospital stay. Using a custom Luminex Assay, we measured hospital admission serum concentrations of 8 host proteins, representing respiratory-associated epithelial (RAGE, SP-D, CC16), endothelial (Ang-2, vWF), and immune pathways (S100A12, ICAM-1, VCAM-1).

Results. Except for race and WHO COVID-19 scores, demographics, co-morbidities, symptoms, and symptom duration were not statistically significantly different between patients requiring transfer to the ICU (n=15) and non-ICU patients (n=19). Higher log-transformed levels for 5/8 proteins (S100A12, ICAM-1, Ang-2, RAGE, SP-D) showed significant or marginally significant increased cause-specific hazard for ICU transfer (n=15). Estimated cumulative incidence functions further showed a significantly or near significantly increased risk for ICU transfer for patients with above the median values of S100A12 or ICAM-1 (p=0.013), Ang-2 (p=0.056) or RAGE (p=0.077), respectively (Figure 1). Host proteins predicting need for ICU transfer did not correlate strongly with other clinical laboratory markers for COVID-19 severity (CRP, LDH, D-Dimer, Fibrinogen, Ferritin).

Figure 1. Patients with above median levels of host protein markers S100A12, ICAM-1, Ang-2, and RAGE have a significantly or near significantly increased risk for severe respiratory failure requiring transfer to the ICU.



Comparison of estimated cumulative incidence at 7 days post admission for host protein markers above and below median levels for (A) S10012 (median 96,675 pg/ml); (B) ICAM-1 (median (1,192,277 pg/ml); (C) Ang-2 (median 3463 pg/ml); (D) RAGE (median 6356 pg/ml); and (E) SP-D (median 11,832 pg/ml).

Conclusion. These results suggest that host proteins have additional predictive value for the severity of COVID-19-associated lung damage at time of presentation to the hospital.

Disclosures. **Inessa Gendlina**, Nothing to disclose

314. Six-Month Post-Acute Sequelae of COVID-19: High Self-Reported Morbidity among Women and Younger Adults

Ashish Bhargava, MD[1]; Wei Zhao, Physician[2]; Mamta Sharma, MD[3]; Susan M. Szpunar, PhD[4]; LOUIS SARAVOLATZ, MD[5]; [1]Ascension St John, Grosse Pointe Woods, MI; [2]Ascension St John Hospital, Gross Pointe Woods, Michigan; [3]Ascension | St John Hospital & Medical Center, Grosse Pointe Woods, MI; [4]Ascension St. John Hospital, MI; [5]St John Hospital, Detroit, Michigan

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

Background. Long term sequelae across multiple medical domains, including the respiratory, psychiatric, and neurocognitive have been reported after COVID-19. Studies evaluating the impact of this symptom burden, however, are lacking. We aimed to describe the self-reported occurrence of symptoms and their effect on patient functioning six months after their acute hospitalization for COVID-19.

Methods. From a historical cohort study of patients hospitalized for COVID-19 between March 8, and June 14, 2020, we identified patients discharged home. The purpose of the study was explained, and they were asked to consent to a telephone questionnaire. We used a modified version of a previously validated general symptom questionnaire (GSQ-30) to assess multi-system symptom burden. The Patient Health Questionnaire-2 (PHQ-2) was used to screen for major depression.