Table. Comparison of Sociodemographic, Clinical, and Laboratory Characteristics among Children with Kawasaki Disease and Multisystem Inflammatory Syndrome in Nashville

| Demographics | KD (603) | MIS-C (52) | p-value |
|--------------|----------|-----------|---------|
| Age - median | 2.8      | 2.6       | <0.001  |
| Sex, male (%)| 64.5     | 57.7      | 0.138   |
| Race - (%)   |          |           |         |
| White        | 64.0     | 69.2      | 0.561   |
| Black        | 29.0     | 28.9      | 1.000   |
| Asian        | 4.6      | 1.9       | 0.219   |
| Other        | 2.9      | 4.0       | 0.561   |
| Ethnicity - Hispanic | 14.9% | 15.4% | 0.802 |

Kawasaki Criteria

| Meets complete Kawasaki criteria (Febrile > 24 Kawasaki criteria (%) | 83.7 | 1.9 | <0.001 |
|-------------------------|------|-----|-------|
| Length of hospital stay - median | 3.06 | 5.0 | <0.001 |

Labs at presentation

| WBC - median (×10³/cumm) | 13.7 | 9.5 | <0.001 |
|----------------------------|------|-----|-------|
| Hemoglobin median (g/dl)  | 15.9 | 11.6| <0.001 |
| CRP - median (mg/l)       | 90.9 | 192.3| <0.001 |
| % elevated CRP (>1)       | 96.2 | 100 | 0.326 |
| ESR, median (mm/hr)       | 62.7 | 53.0 | 0.007 |
| % elevated ESR (>33 mm/hr) | 81.9 | 72.6 | 0.092 |
| Neutrophil lymphocyte ratio | 3.9 | 5.9 | <0.001 |
| ALK - (10³ cells/ml)      | 2.7  | 0.9 | <0.001 |
| ALB - (10³ cells/ml)      | 2.3  | 3.0 | 0.221 |
| Platelet - (10⁹ cells)    | 335  | 181  | 0.015 |
| Sodium (mEq/l)            | 139  | 133  | <0.001 |
| Potassium (mEq/l)         | 4.9  | 4.8  | 0.100 |
| ALT (units)               | 52   | 52   | 0.293 |

Echocardiography, abnormal |

| IQR, interquartile range | 48.8 | 74.0 | <0.001 |

Conclusion.

MIS-C and KD present similarly in children; however, age, laboratory and echocardiography findings can help differentiate between them. Different laboratory values suggest different pathophysiology and inflammatory mediators behind these two illnesses, warranting further research.

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489. SARS-CoV-2 Seroprevalence and Antibody Response Among Pregnant People in Seattle, WA

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Background. Antenatal care is a unique opportunity to assess SARS-CoV-2 seroprevalence and antibody response in pregnant people, including those with previously unknown infection.

Methods. Pregnant people were screened for SARS-CoV-2 IgG during antenatal care or delivery in Seattle, Washington with Abbott Architect chemiluminescent immunoassay which provides quantitative index (positive ≥1.4). Participants with IgG+ results or identified with RT-PCR+ results via medical records were invited to enroll in a longitudinal evaluation of antibody responses. We report preliminary results of an ongoing seroepidemiology and longitudinal study with planned 18-month follow-up.

Results. Between September 9, 2020-May 7, 2021, we screened 1304 pregnant people; 62 (4.8%) tested SARS-CoV-2 IgG+, including 28 (45%) with known prior SARS-CoV-2 infection. Among participants testing IgG+, median age was 32 years (interquartile range [IQR] 26–35) and median gestational age was 21 weeks (IQR 12–38) at screening; median IgG index was 3.2 (IQR 2.1–4.9, range 1.4–9.9), including 3.9 (IQR 2.3–5.8) among those with vs. 2.7 (IQR 1.9–4.2) among those without prior RT-PCR+ results (p=0.05 by Wilcoxon rank-sum). Of 30 longitudinal study participants enrolled, 24 tested IgG+ at baseline (75% with prior RT-PCR+ result) and 6 tested IgG- on enrollment but were identified as previously RT-PCR+ via medical records; 24/30 (80%) reported previous symptoms. Of 24 participants testing IgG+ at baseline, 14 (58%) had first follow-up IgG results at median of 66 days (IQR 42–104) since initial testing, with median IgG index of 2.0 (IQR 1.3–8.9); 9/14 (64%) participants with repeat IgG testing remained IgG+ at first follow-up (≤280 days after first RT-PCR+ result for those with and ≥2104 days after first IgG detection for those with prior RT-PCR+ results), while 5/14 (26%) had a negative IgG test at a median of 81 days (IQR 75–112) since initial testing.

Conclusion. Nearly half of pregnant people testing SARS-CoV-2 IgG+ reported no known prior SARS-CoV-2 diagnosis or symptoms. SARS-CoV-2 IgG antibody response and durability in pregnancy has implications for maternal and neonatal protection and susceptibility and highlights potential benefits of vaccination in this population.

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490. Uptake and Perceptions of COVID-19 Vaccines Among US Pregnant Women

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Background. Compared to the non-pregnant population, pregnant persons are at increased risk for severe COVID-19 related illness, including higher rates of admission.
to intensive care and greater mortality. Despite the potential benefits of COVID-19 vaccines for pregnant persons, current guidelines for the use of COVID-19 vaccines during pregnancy are limited, and the uptake of COVID-19 vaccines among US pregnant adults is unclear.

Methods. As part of an ongoing national longitudinal cohort study, 1,372 pregnant and recently postpartum pregnant persons participated in an online baseline survey, including questions on COVID-19 vaccination status and perceptions of COVID-19 vaccines. Preliminary analyses were restricted to 1,041 individuals who were pregnant during vaccine availability (after 14 December 2020). Post-stratification survey weights were applied to ensure results are representative of the general population. Weighted percentages and odds ratios were estimated based on survey responses.

Results. 39.4% (95% CI 33.7, 45.1%) of respondents received a COVID-19 vaccine during pregnancy. Predictors of vaccination included belief that COVID-19 was a serious disease (OR 2.49; 95% CI 1.41, 4.41) and concerns about giving birth during the COVID-19 pandemic (OR 1.83, 95% CI 1.10, 3.04). The most common reason for receiving a COVID-19 vaccine was to protect themselves (21.2%) or their baby (39.1%). Among unvaccinated respondents, 14.9% planned to receive a vaccine during their pregnancy and 35.3% after pregnancy. 28.6% had no intention of receiving a vaccine, and the remaining 21.1% were uncertain. Among those who never planned to vaccinate, the most common reason was concern about side effects (57.2%). Percent of pregnant persons receiving at least one dose of COVID-19 vaccine, by month of delivery (postpartum participants) or estimated month of delivery (pregnant participants).

Conclusion. Our results indicate that despite the lack of clear recommendations for vaccination during pregnancy, more than one-third of pregnant persons received a COVID-19 vaccine during pregnancy. Evaluation of the health effects of COVID-19 vaccination during pregnancy, including the ability to protect pregnant persons and their infants from infection, is needed.

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Figure 1. Plot of immunocompromised children in cohort with positive SARS CoV2 PCR and subsequent testing (n = 67).

Figure 2. Plot of CT values from SARS-CoV-2 PCR testing over time among children with sequential samples available for retesting (n = 7)

491. Persistence of SARS-CoV-2 Infection in Immunocompromised Children
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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. The temporal dynamics of SARS-CoV-2 infectivity in immunocompromised children (IC) are unknown but may have important infection control implications. We evaluated SARS-CoV-2 viral persistence and assessed factors associated with viral persistence and cycle threshold (CT) values as a surrogate of viral load for IC.

Methods. We conducted a retrospective cohort study of SARS-CoV-2-positive IC at a large quaternary pediatric hospital from March 2020-2021. Immunocompromised status was defined as primary or secondary/acquired immunodeficiencies due to comorbidities or immunosuppressive treatment. The primary outcome was time to first of two consecutively negative SARS-CoV-2 PCR tests 24 hours apart. Polymerase chain reaction (PCR) testing of sequential patient samples was conducted using the Centers for Disease Control 2019-nCoV Real-Time RT-PCR Diagnostic Panel (CDC assay). Chi-square, Fisher exact, and Wilcoxon tests were used to compare demographic and clinical characteristics. Kaplan-Meier curve of median event times and log-rank tests were used to compare outcomes. Subjects without 2 consecutive negative tests censored at the last test. Analyses were conducted using SAS v 9.4.

Results. Ninety-one children met inclusion criteria, and 67 children had more than 1 test (Figure 1). Median age was 15.5 years (IQR 8-18 yrs), 64% were male, 58% of children were white, and 43% were Latina. Most (67%) were tested in outpatient settings, and 58% of children were asymptomatic. The median time to two negative tests was 42 days (IQR 25.0,55.0), with no difference in duration of positivity with specific diagnoses, degree of lymphopenia, or symptomatic vs asymptomatic illness. Five of 7 (71%) children with samples available for repeat testing had initial C values < 30, indicating a moderate to high viral load, and of these, 4 (57%) had repeat testing 21 to 30 days later with C values < 30 (Figure 2), suggesting persistence of moderate to high viral loads.

Conclusion. Our results indicate that despite the lack of clear recommendations for vaccination during pregnancy, more than one-third of pregnant persons received a COVID-19 vaccine during pregnancy. Evaluation of the health effects of COVID-19 vaccination during pregnancy, including the ability to protect pregnant persons and their infants from infection, is needed.

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