

Prolonged Viral Shedding of SARS-CoV-2 in Solid Organ Transplant Recipients

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Background

- The rapid spread of **SARS-CoV-2**, the causative agent of **COVID-19**, has a significant impact on solid organ transplant recipients
- The duration of viral shedding in this population is not exactly defined, although reports of prolonged shedding are present

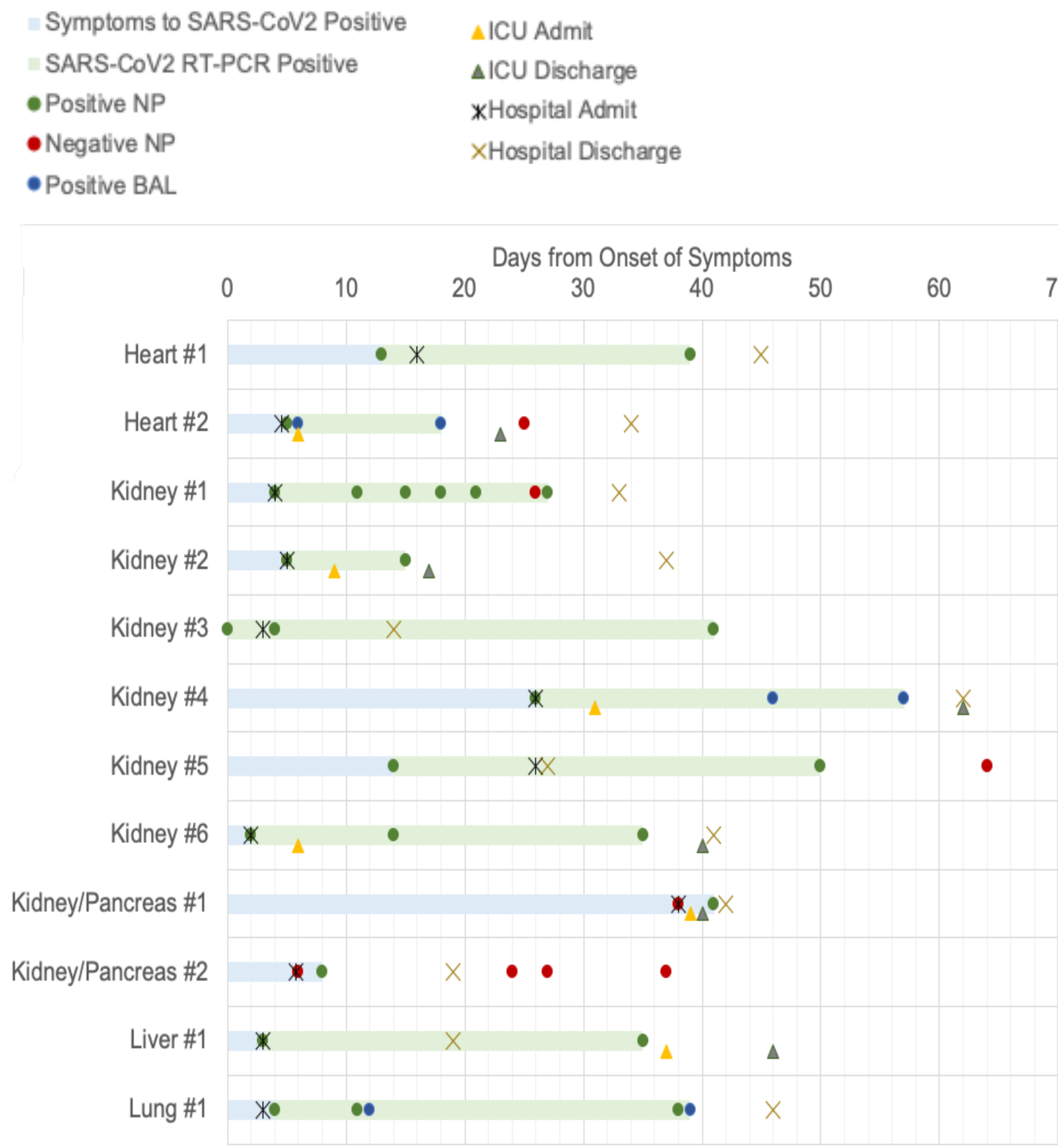
Objectives

- To understand the duration of viral shedding of SARS-CoV-2 in solid organ transplant recipients
- To describe the demographics of those with SARS-CoV-2 in solid organ transplant recipients

Methods

- Population:** 21 SOT recipients with diagnosis of SARS-CoV-2 (NP or BAL) were identified from March 6, 2020 through August 1, 2020. Data was obtained from electronic medical record.
- Viral Shedding:** All SOT recipients were evaluated for all subsequent SARS-CoV-2 PCR results following initial positivity over time
- Severity of Illness:** Mild for those treated only outpatient, Moderate if inpatient but no ICU (under 4 LPM of O2), and Severe if ICU admission (over 4LPM of O2)

Duration of Viral Shedding



Demographics and Outcomes

	Mild/Moderate (n=50)	Severe (n=21)	Total (n=71)	p-value
Demographics				
Median Age (years, IQR)	52 (44, 60)	62 (55, 68)	56.5 (45, 61.5)	0.003
Male (%)	28 (56.0%)	13 (61.9%)	41 (57.8%)	0.211
Race				
Black	20 (39.2%)	12 (57.1%)	32 (44.4%)	0.198
Latinx/Hispanic	15 (29.4%)	5 (23.8%)	20 (27.8%)	0.775
White	13 (25.5%)	1 (4.8%)	14 (19.4%)	0.038
Asian	3 (5.9%)	3 (14.3%)	6 (8.3%)	0.348
Type of Transplant				
Kidney	33 (64.7%)	13 (61.9%)	46 (63.9%)	0.514
Liver	8 (15.7%)	5 (23.8%)	13 (18.1%)	0.504
Heart	5 (9.8%)	1 (4.8%)	6 (8.3%)	0.664
Lung	2 (3.9%)	1 (4.8%)	3 (4.2%)	0.651
Kidney-Pancreas	8 (15.7%)	1 (4.8%)	9 (12.5%)	0.268
Median duration since transplant (years, IQR)	3 (1, 10)	8 (4, 10)	5 (2, 10)	0.058
Outcomes				
Median LOS (days, IQR)	10 (3, 12)	17 (13.5, 20.5)	11 (3, 17)	0.004
Death	0 (0.0%)	4 (19.1%)	4 (5.6%)	0.006

Conclusions

- COVID-19 can lead to significant outcomes in solid organ transplant with increased mortality in those with severe disease
- Prolonged viral shedding (up to >100 days) can be observed in those with history of solid organ transplant