



Observational Study of SARS-CoV-2 in A Public Academic Medical Center

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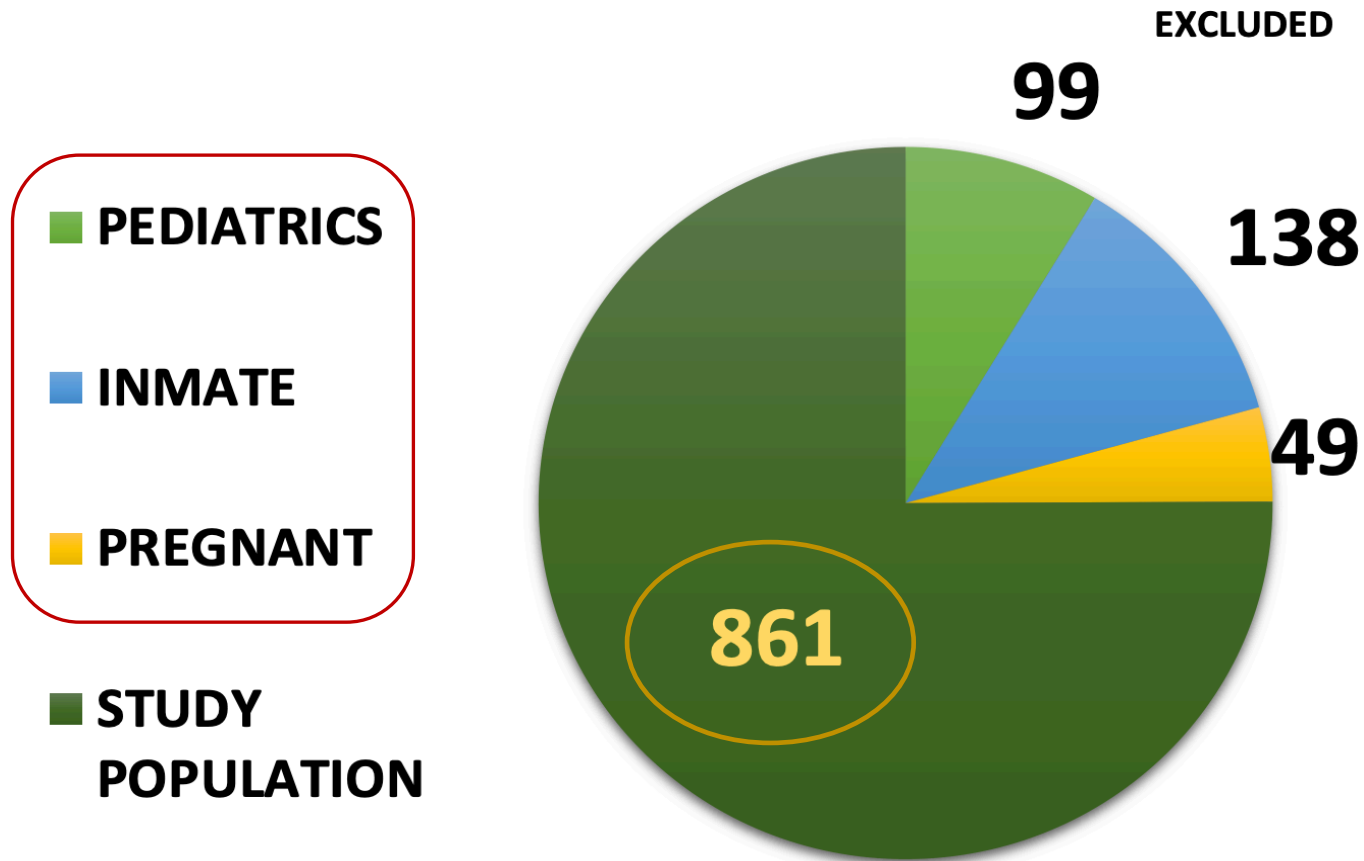
Introduction

- Evaluating the response to the COVID-19 pandemic at our institution
- Observational study of individuals with SARS-CoV-2 seen at Kern Medical ED and clinics
- We determined to analyze cases presenting at Kern Medical to identify the clinical characteristics and severity of the disease

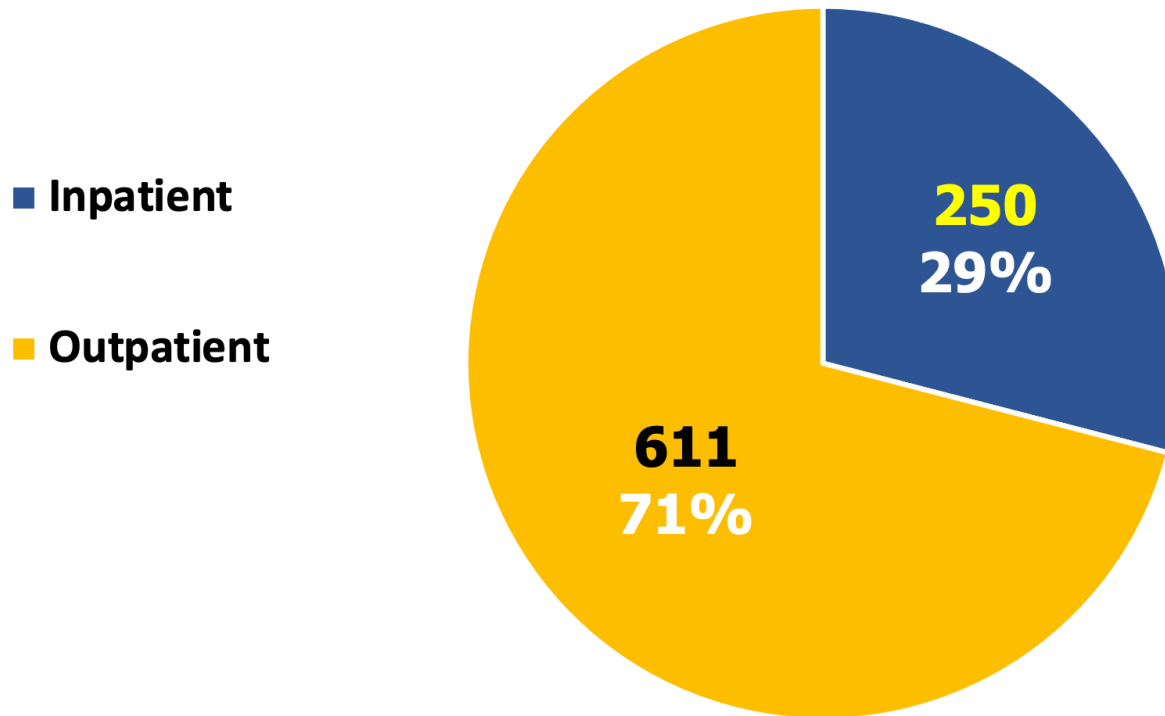
Data

- **IRB Approval:** Kern Medical, March 2020
- **Data Collection:** March 12th 2020 – November 2020
- **Analyzed Variables:**
 - Demographics
 - Clinical
 - Laboratory
 - Outcomes

Patient Types (n=1147)

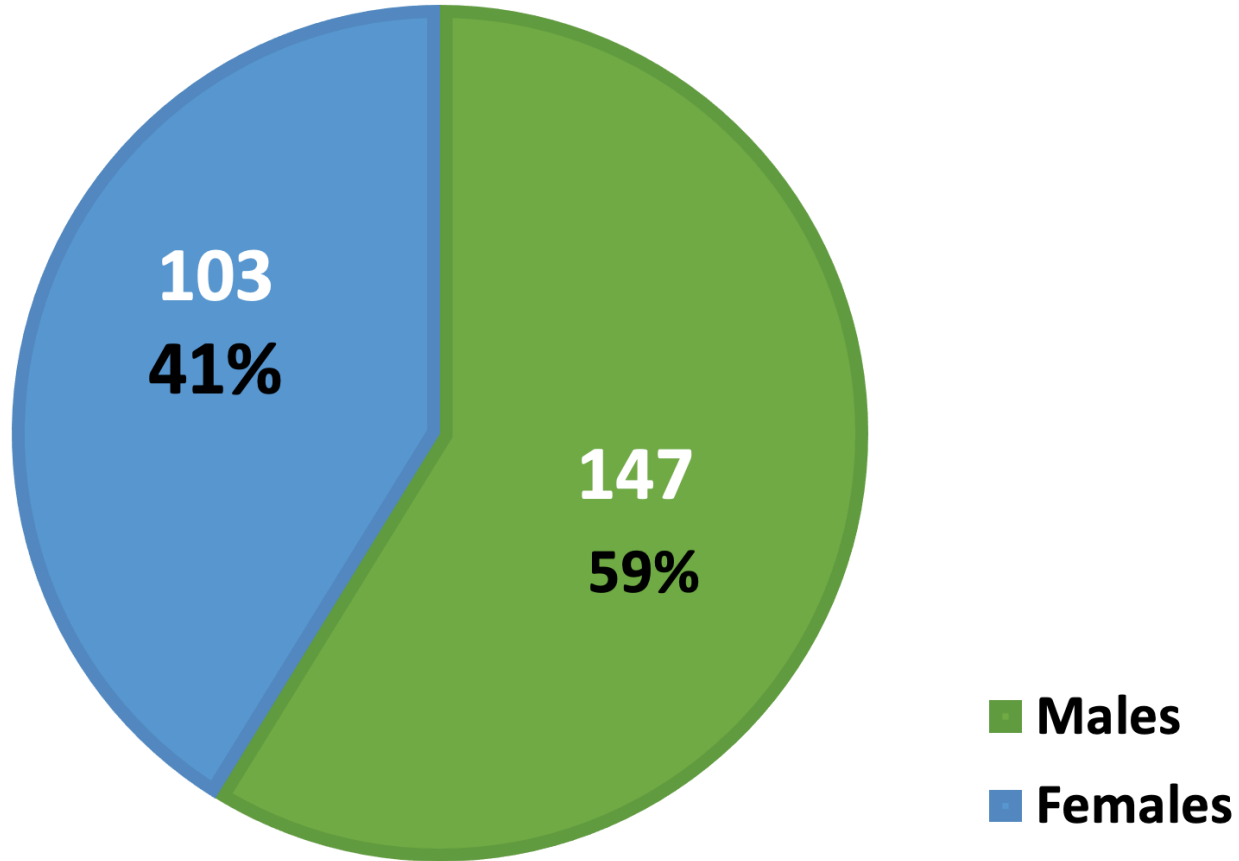


Inpatient vs. Outpatient (n= 861)



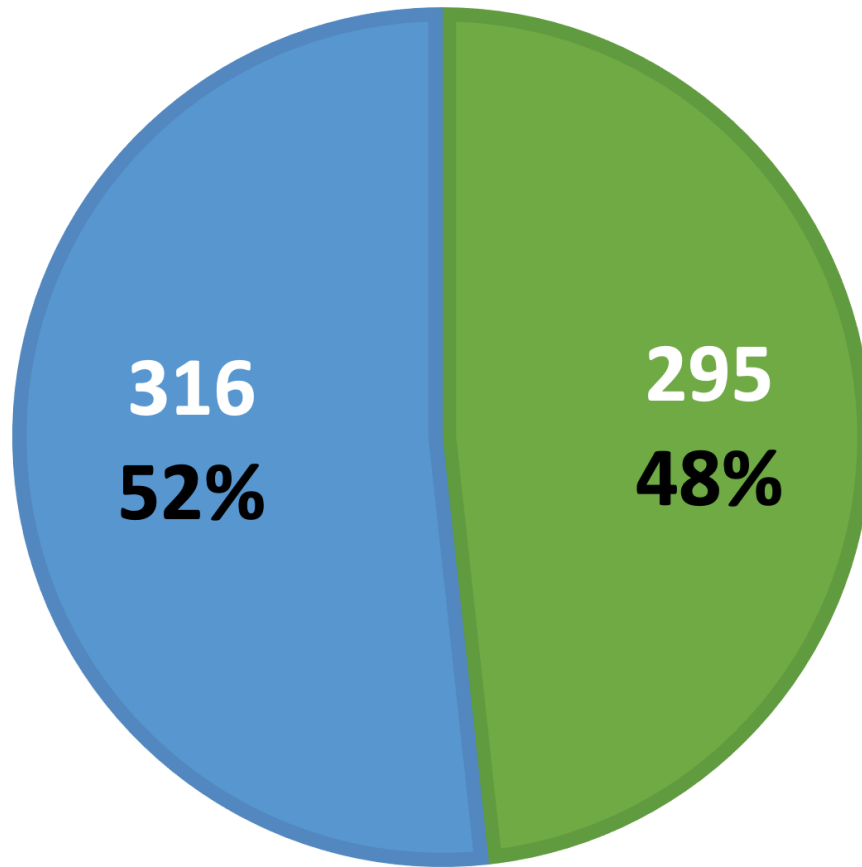
Outcome

Inpatient Gender (n= 250)



Outcome

Outpatient Gender (n= 611)

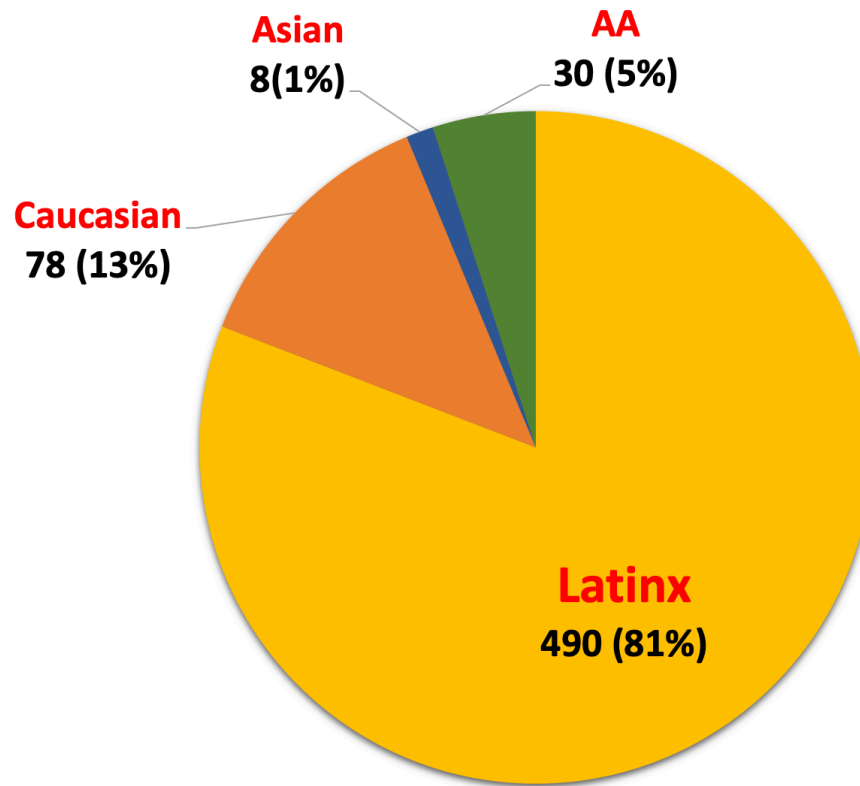


■ Males

■ Females

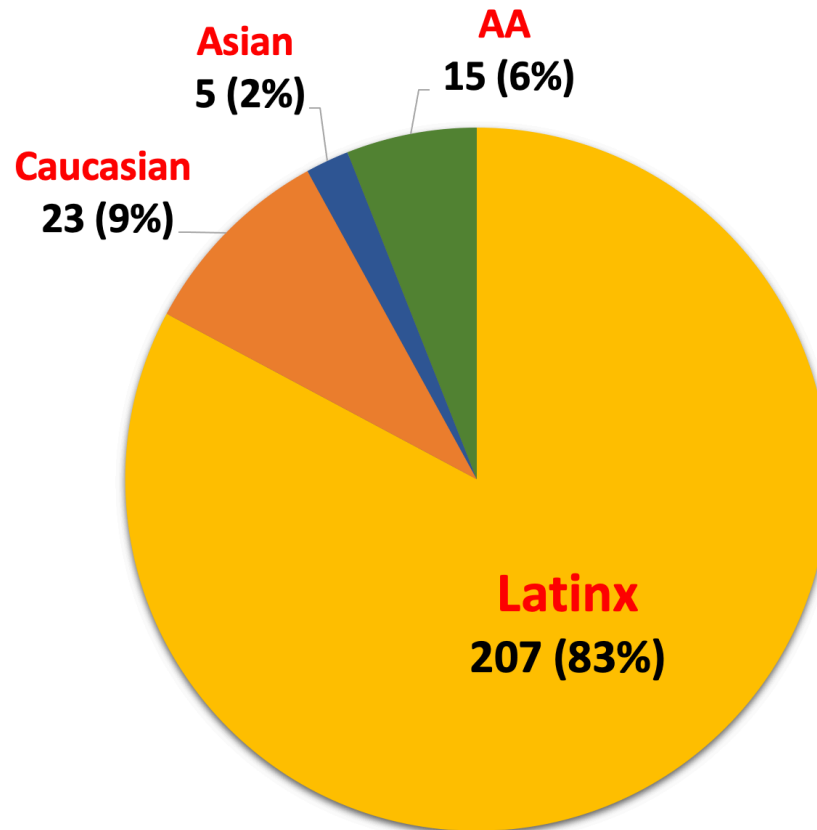
Outcome

Racial/Ethnic Demographics (n= 611) Outpatient



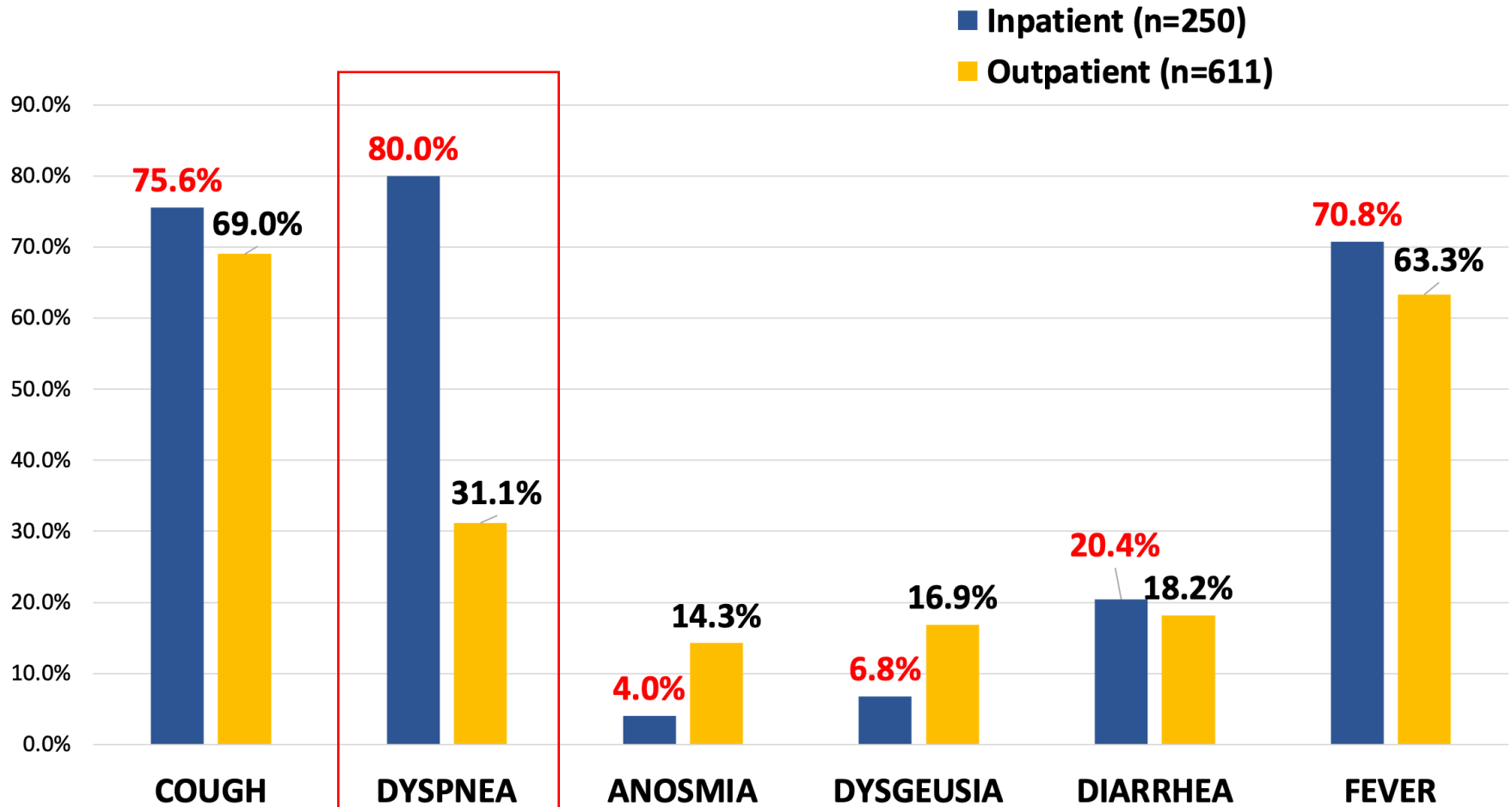
Outcome

Racial/Ethnic Demographics (n= 250) Inpatient



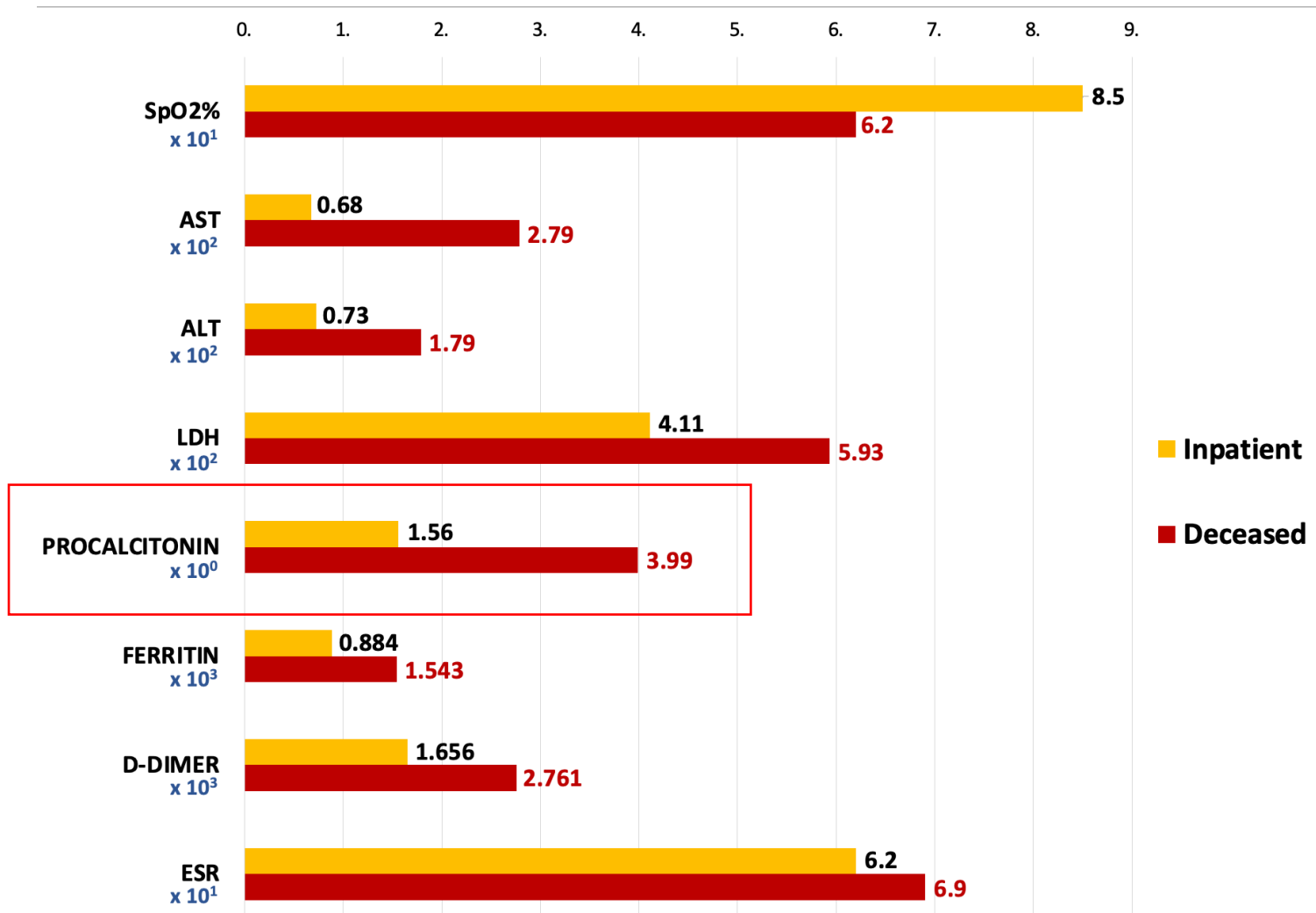
Outcome

Symptoms



Outcome

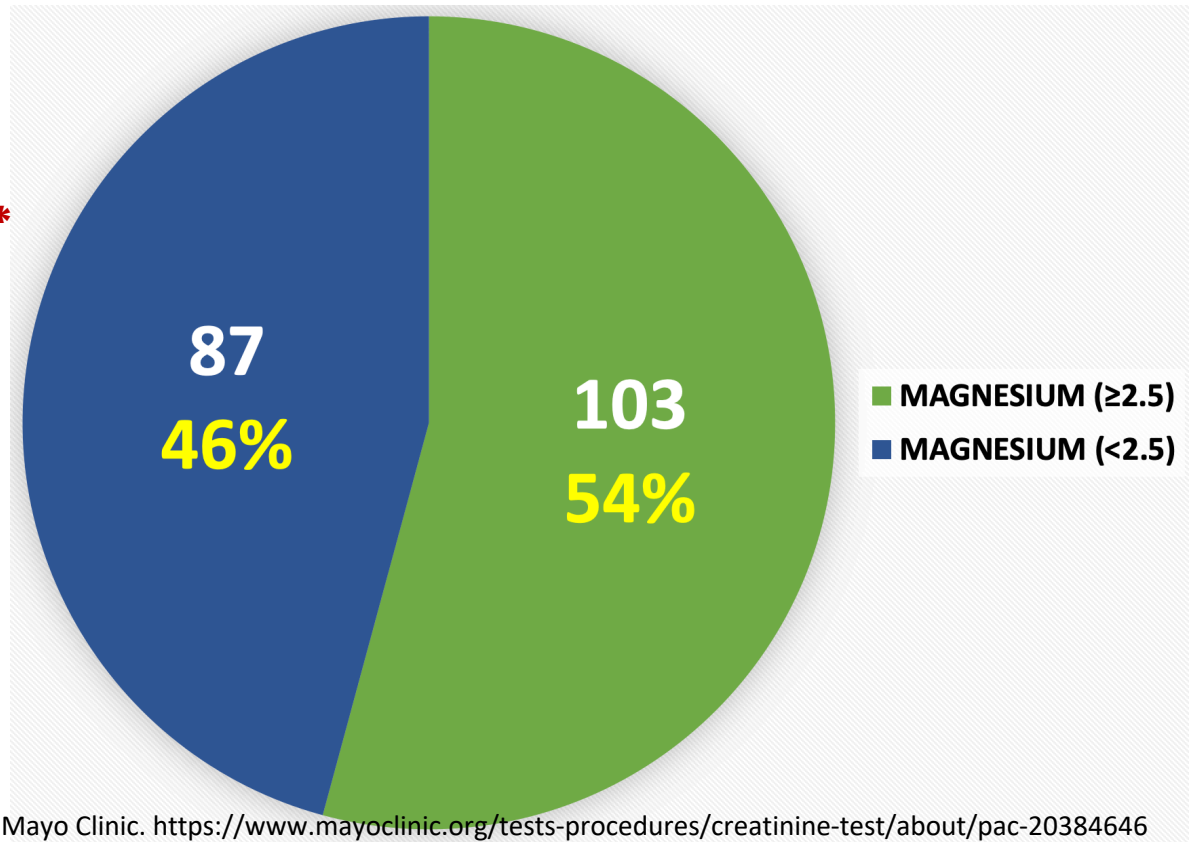
Average Clinical Inflammatory Markers



Outcome

Inpatient Magnesium Levels (n = 190)

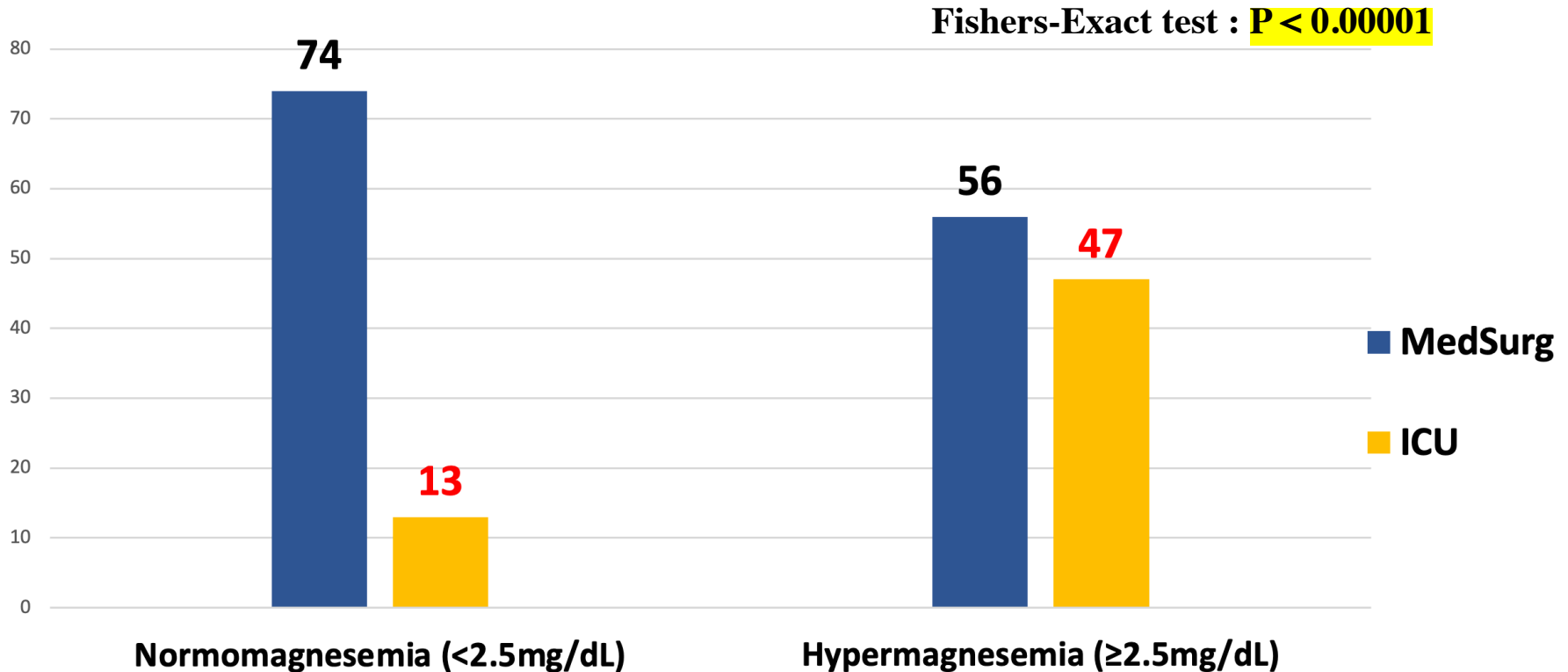
60 patients with Acute
Kidney Injury excluded
(Serum creatinine > 1.21)*



*Creatinine tests - Mayo Clinic. (2021, February 25). Mayo Clinic. <https://www.mayoclinic.org/tests-procedures/creatinine-test/about/pac-20384646>

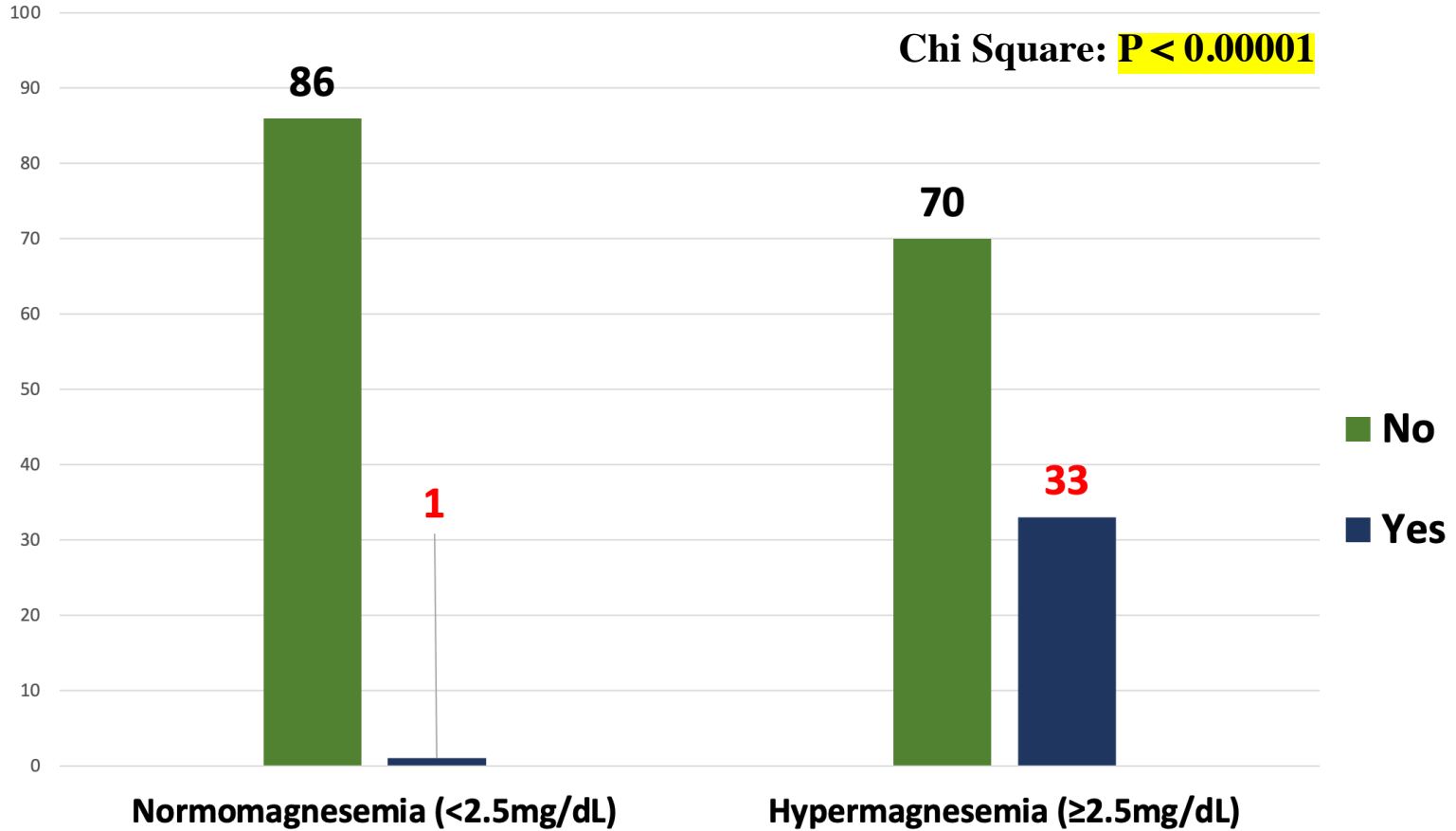
Outcome

MedSurg vs. ICU (n = 190)



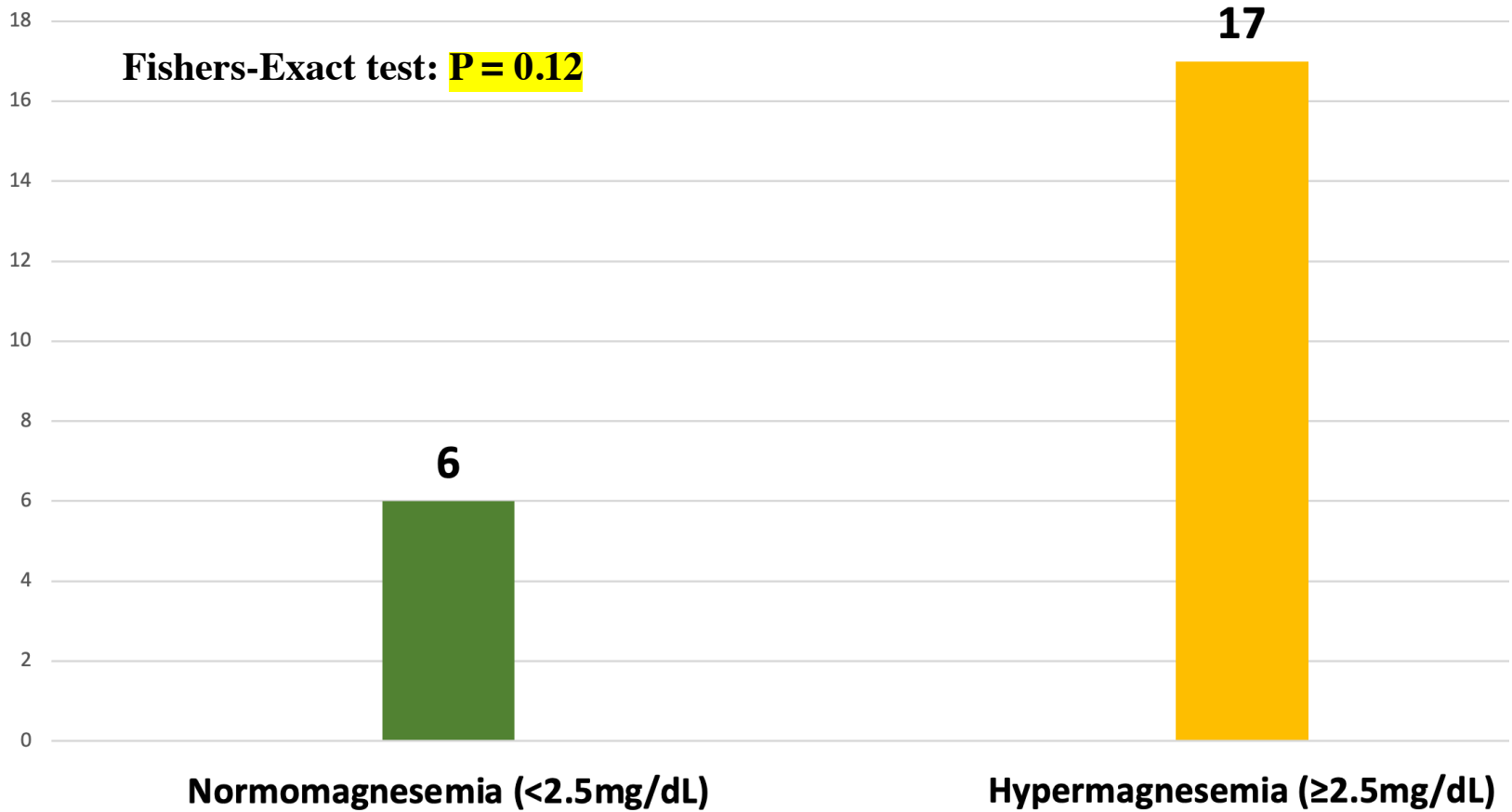
Outcome

Ventilator (n = 190)



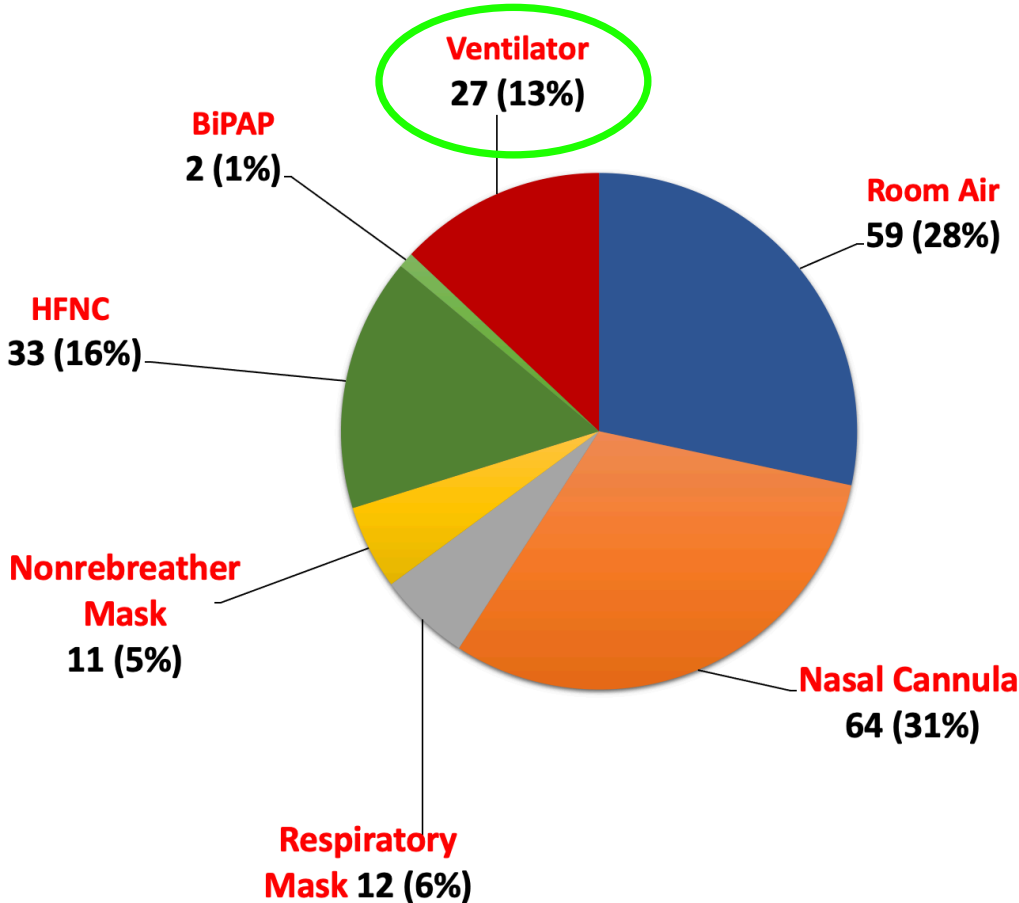
Outcome

Deceased

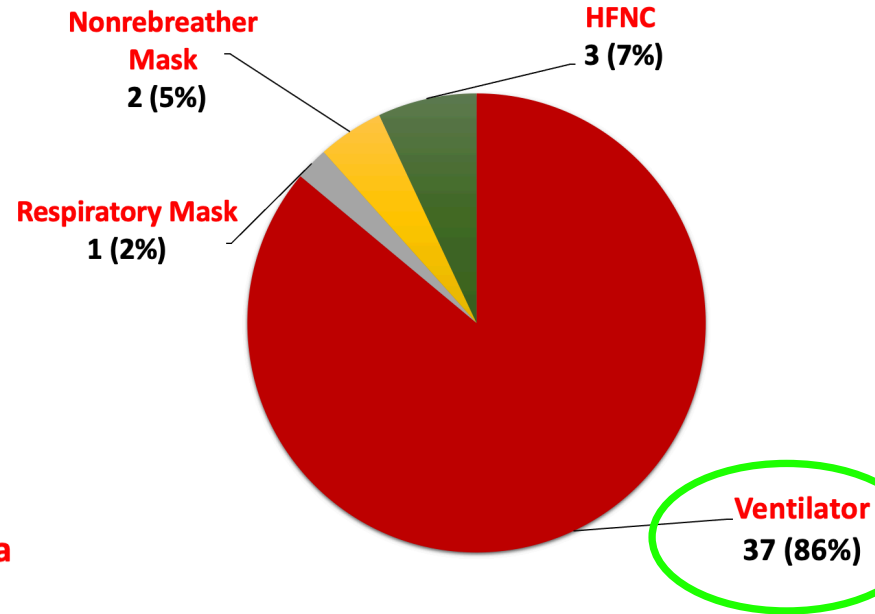


Outcome: Oxygenation

Discharged
(n=207)

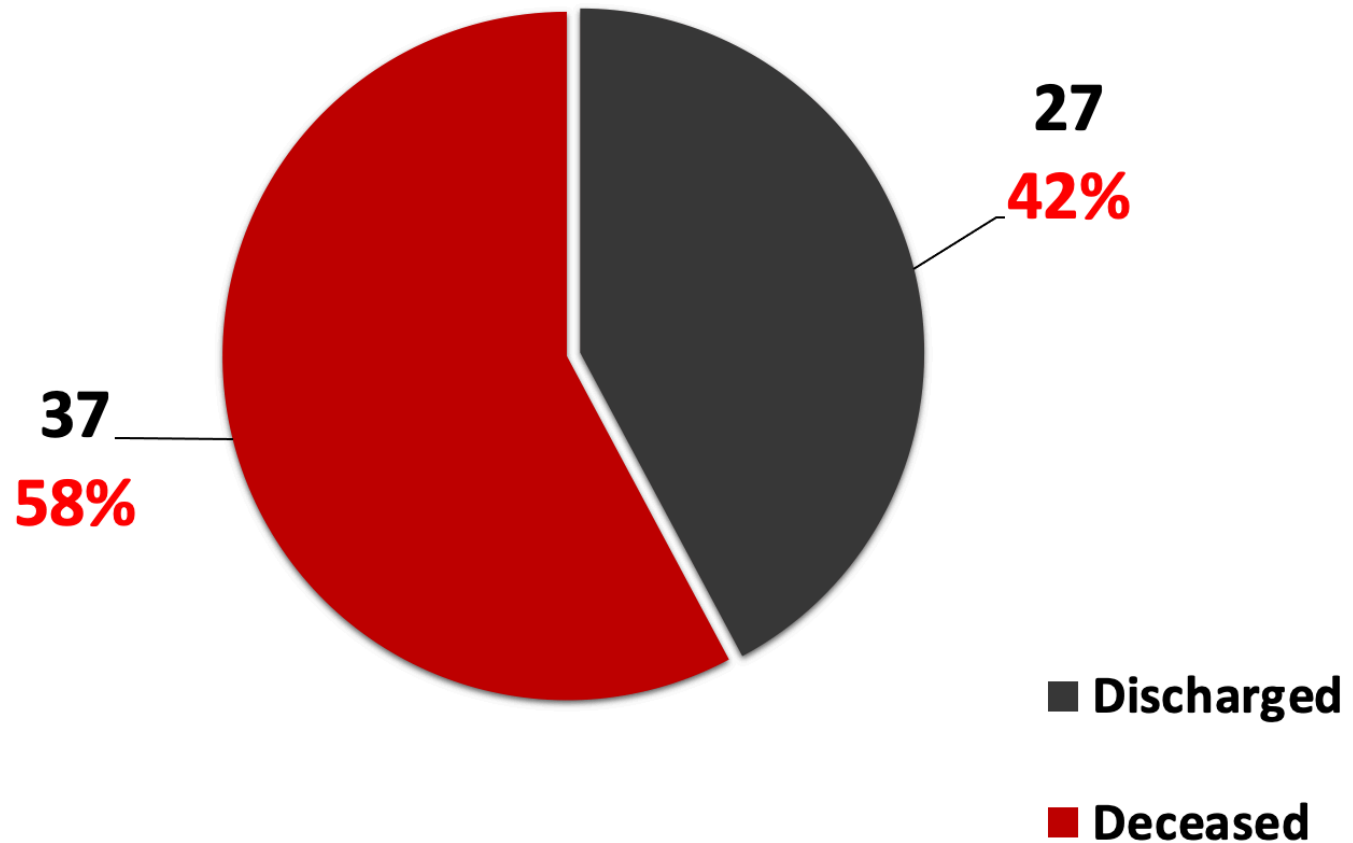


Deceased
(n=43)



Outcome: Oxygenation

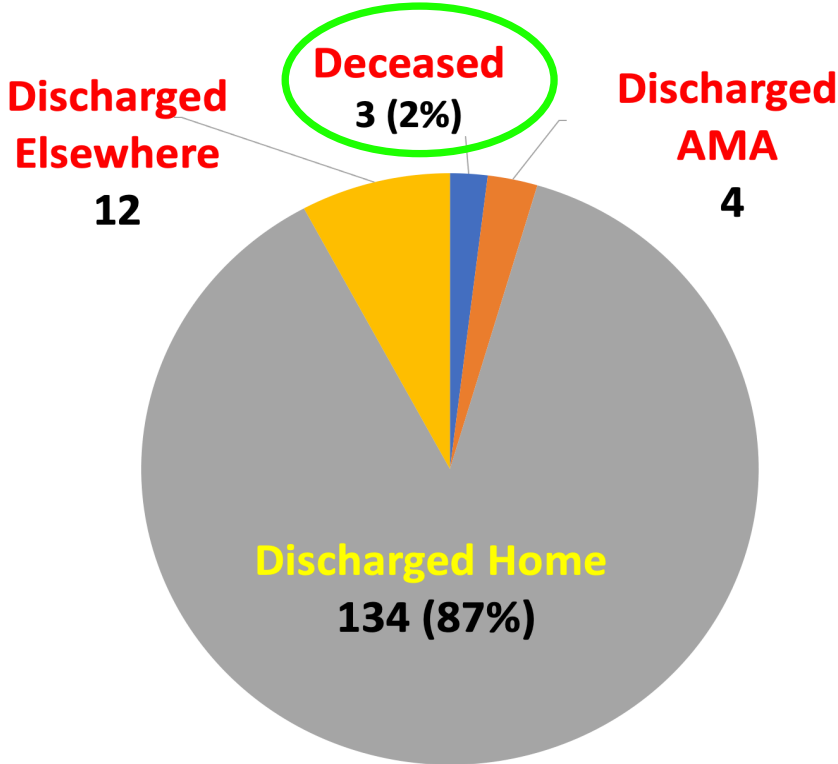
Ventilator (n=64)



Outcome: Hospital Level of Care

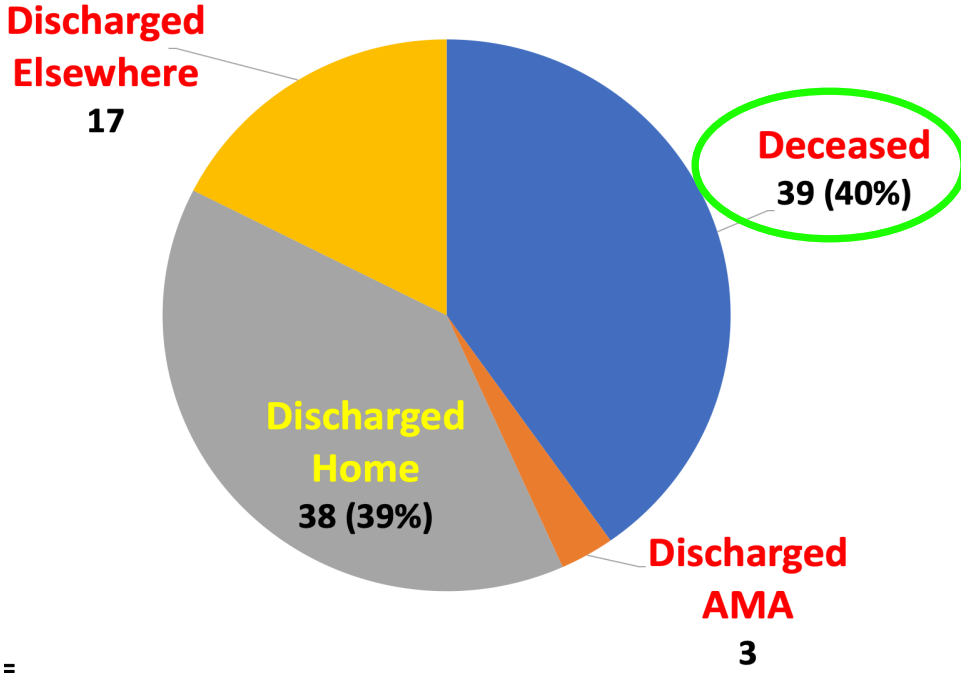
MedSurg

(n=151)



ICU

(n=97)



Discussion

- Evaluate whether our response was appropriately designed and instituted based on outcome data
- Comparative Survival

	Location	Total (n)	ICU Admission rate (%)	Ventilator Support	Mortality rate (%)
Paranjape I, et al.	NY	1,078	36%		31%
Patel, S, et al.	FL	1,747	21.1%	55%	17.8%
Cummings, M, et al.	NY	257	37%	41%	39%
Arentz, M, et al.	WA	21	81%	71%	52.5%
Sharma, R, et al.	CA	250	38.8%	25.6%	40%

Paranjape I, Russak AJ, Freitas JK De, et al. Authors : Affiliations : Published online 2020:1-20.

Patel SR, Mukkera SR, Tucker L, et al. Characteristics, Comorbidities, Complications, and Outcomes Among 802 Patients With Severe Acute Respiratory Syndrome Coronavirus 2 in a Community Hospital in Florida. *Crit Care Explor.* 2021;3(5):e0416. doi:10.1097/cce.0000000000000416

Cummings MJ, Baldwin MR, Abrams D, et al. Epidemiology, clinical course, and outcomes of critically ill adults with COVID-19 in New York City: a prospective cohort study. *Lancet.* 2020;395(10239):1763-1770. doi:10.1016/S0140-6736(20)31189-2

Arentz M, Yim E, Klaff L, et al. Characteristics and Outcomes of 21 Critically Ill Patients With COVID-19 in Washington State. *JAMA.* 2020;323(16):1612. doi:10.1001/jama.2020.4326

Conclusions

- Under-represented – White, Asians
- Over-represented – Latinx
- Hypermagnesemia correlates
 - ICU admission
 - Ventilator requirement
 - Trend towards death

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Thank you!