



Summer Training Project

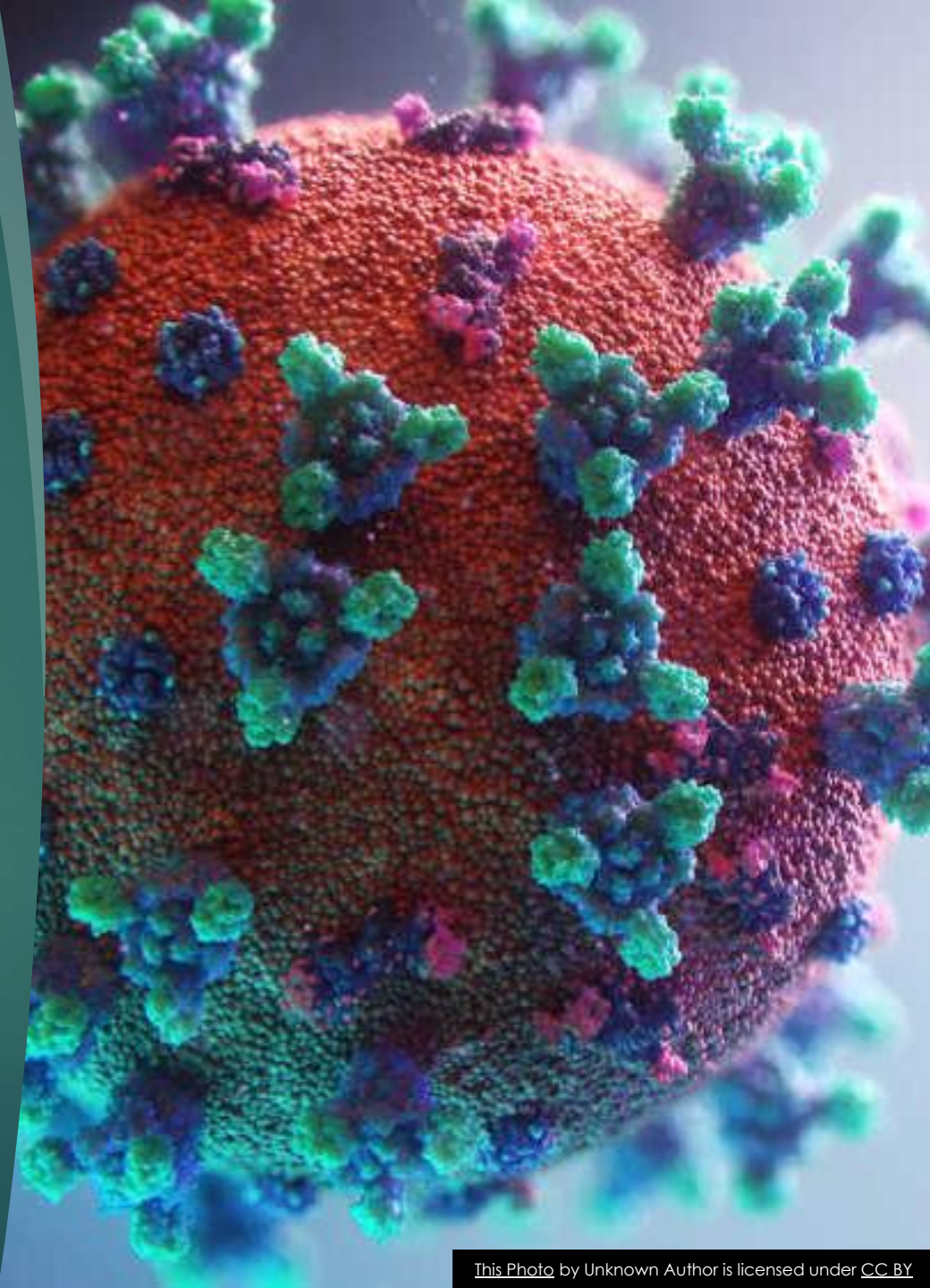
**“EFFECTS OF
REMDESIVIR,
DEXAMETHASONE
AND ITOLIZUMAB
ON COVID
TREATMENT IN
TERMS OF
CLINICAL
OUTCOMES IN
PATIENTS”**

BY

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Introduction

- ❖ **Corona Virus Disease** is a communicable disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).
- ❖ Possible symptoms are symptoms of upper respiratory tract infection like fever, cough, shortness of breath, difficulty in breathing, sore throat, congestion, or runny nose etc., and others are nausea, vomiting, body ache, headache, and diarrhea etc.
- ❖ First known case was found in Wuhan, China in December 2019 and in India first case was identified in January 2020 in Kerala.
- ❖ Till date in India around 3,03,62,162 people are infected and around 3,98,487 people died due to this covid-19 disease.





- ❖ Medication used in hospitalized patients- Remdesivir, Corticosteroids (Dexamethasone, Methylprednisolone), Itolizumab, Tocilizumab, Blood thinners.

- ❖ **Remdesivir:**

It is an anti-viral drug used to treat corona virus disease.

- ❖ **Dexamethasone:**

It is a glucocorticoid medication.

It has anti-inflammatory and immunosuppressant effects.

- ❖ **Itolizumab:**

Itolizumab is a first-in-class anti-CD6 monoclonal antibody that was initially developed for various cancers and was later developed and approved in India for treatment of moderate to severe chronic plaque psoriasis in 2013. This drug is now being re-purposed for COVID-19.

A photograph of a patient lying in a hospital bed, partially visible on the left side of the frame. The patient is wearing a white hospital gown. Medical equipment, including a blue and green ventilator circuit and various tubes, are connected to the patient. The background is slightly blurred, showing more medical equipment and a hospital room setting. The right side of the slide features a dark teal background with a red vertical bar at the top right.

Objective

- ❖ To find out the probabilities of Remdesivir, Dexamethasone and Itolizumab in reducing the mortality and duration of stay in hospital of confirmed covid positive patients.

Literature review

- International Journal of Infectious Diseases a study on “**Remdesivir and Systemic Corticosteroids for the treatment of Covid-19: A Bayesian re-analysis**”.
- The New England Journal of Medicine “**Dexamethasone in Hospitalized Patients with Covid-19**”
- The New England Journal of Medicine “**Remdesivir for the Treatment of Covid-19 — Final Report**”



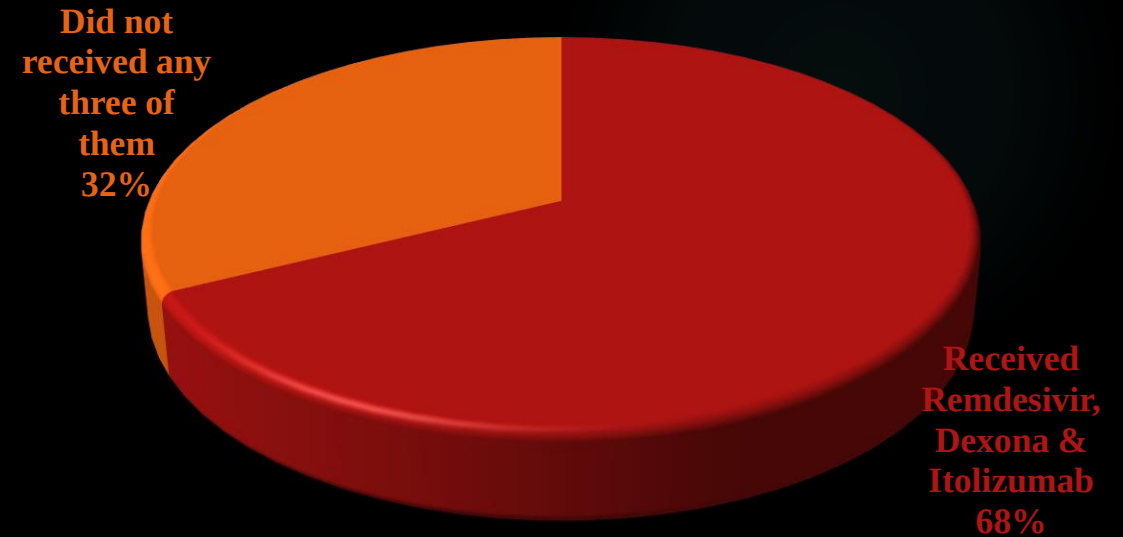
Literature Review



Sample size

- ❖ We took admission and discharge data of 321 patients from May 1st, 2021 to June 8th, 2021, out of which 211 received Itolizumab or Remdesivir either with Dexamethasone or alone. And 101 patients did not receive any three of them, 9 patients are removed due to data error.

DIVISION OF SAMPLE



Criteria



❖ Inclusion Criteria:

- ✓ Hospitalized patients above 18 years of age with confirmed RT-PCR for SARS-CoV- 2
- ✓ Confirmed Pneumonitis

❖ Exclusion criteria:

- ✓ Patients who were not admitted in the hospital with positive RT-PCR and
- ✓ who were not in the list of the patients who received remdesivir or dexona issued by the hospital or from outside

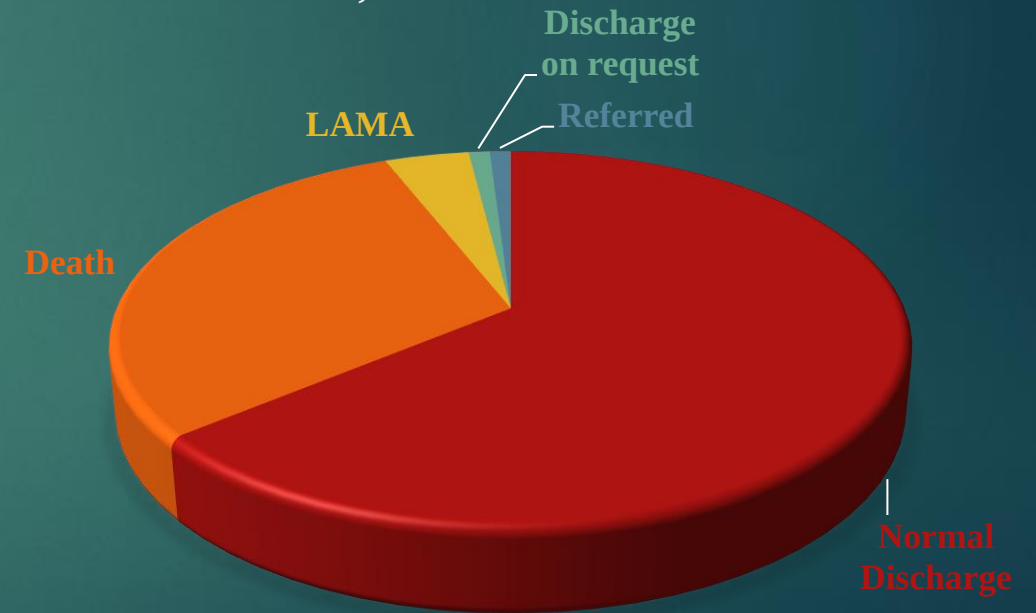
Data collection method & Study design

- Secondary data is collected from the record of patients who were admitted and discharged in time duration of 1/05/2021 to 8/06/2021.
- It is a retrospective cohort study in which we collected the existing data from the hospital of the patients who were admitted as SARS-CoV-2 positive patient in Hospital

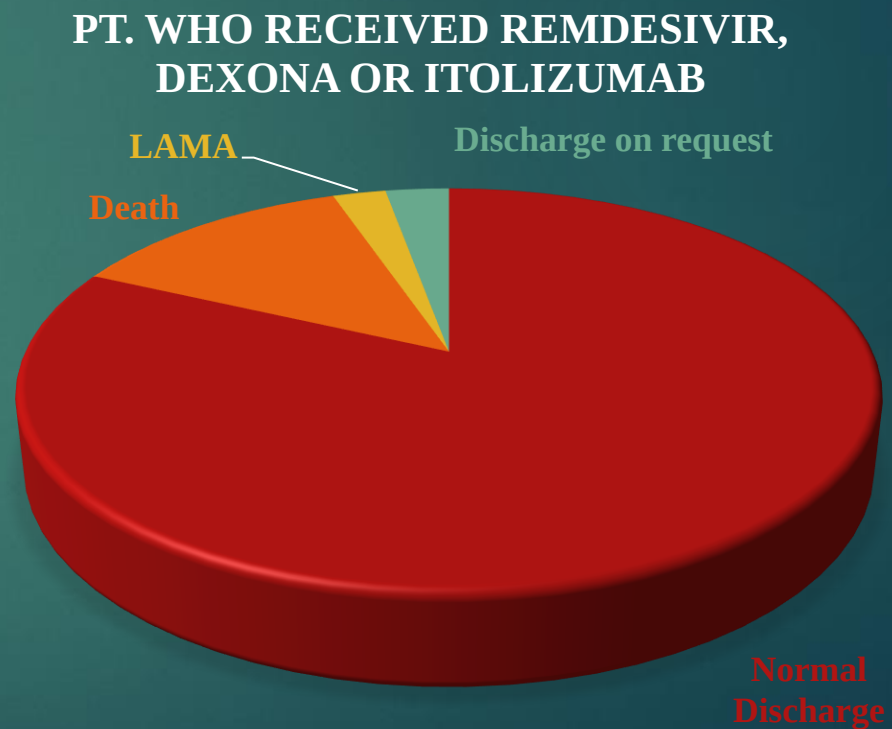
RESULTS

PATIENTS WHO DIDN'T RECEIVE EITHER OF THE THREE		
	Numbers	Percentage
Total	101	100%
Normal Discharge	64	63%
Death	30	30%
LAMA	4	4%
Discharge on request	1	1%
Referred	1	1%

PATIENTS WHO DID NOT RECEIVE
REMDESIVIR, DEXONA OR ITOLIZUMAB.

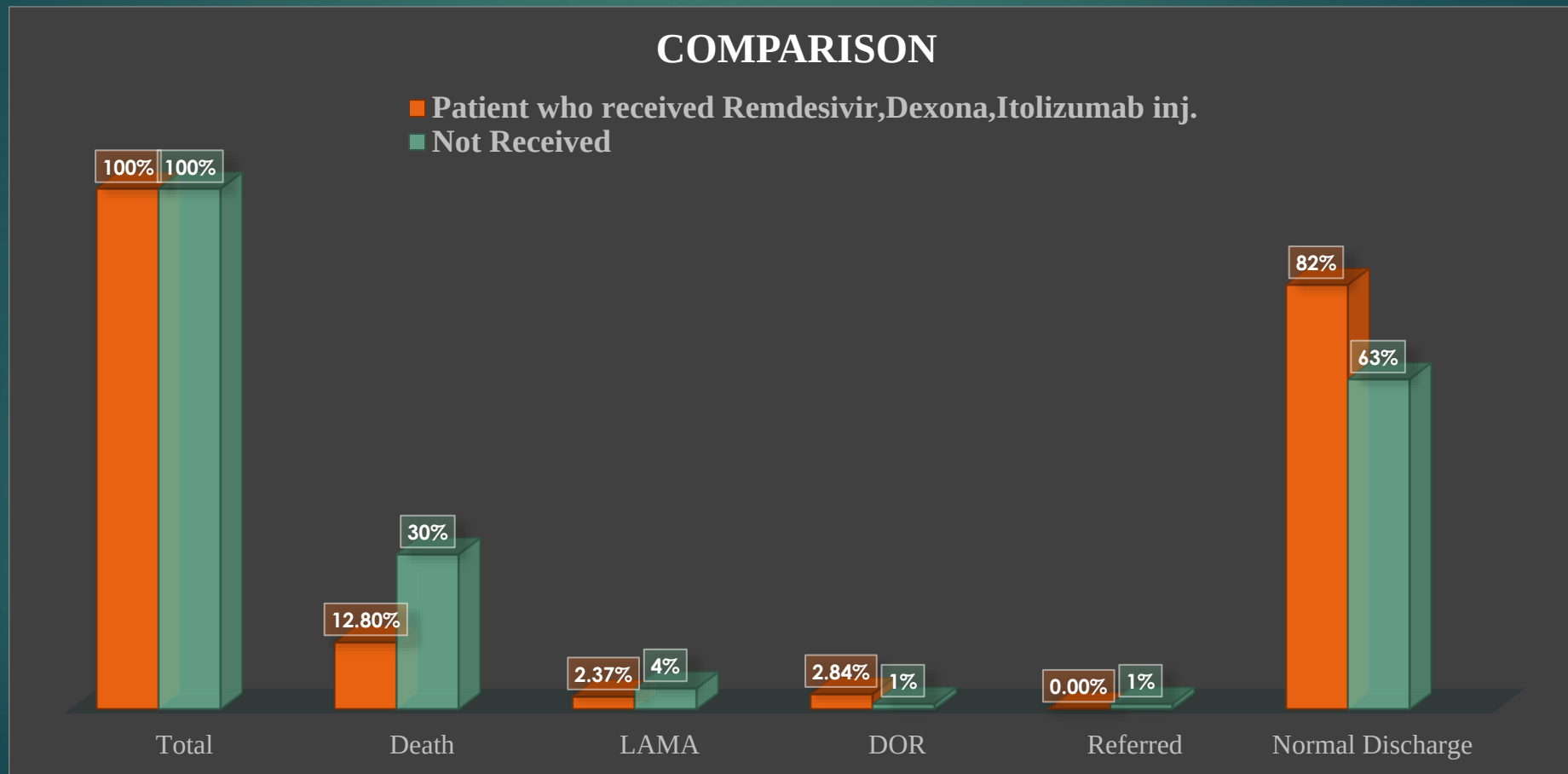


Pts. WHO RECEIVED REMDESIVIR, DEXONA OR ITOLIZUMAB	Numbers	Percentage
Total	211	100%
Normal Discharge	172	82%
Death	27	13%
LAMA	5	2%
Discharge on request	6	3%
Referred	0	0%



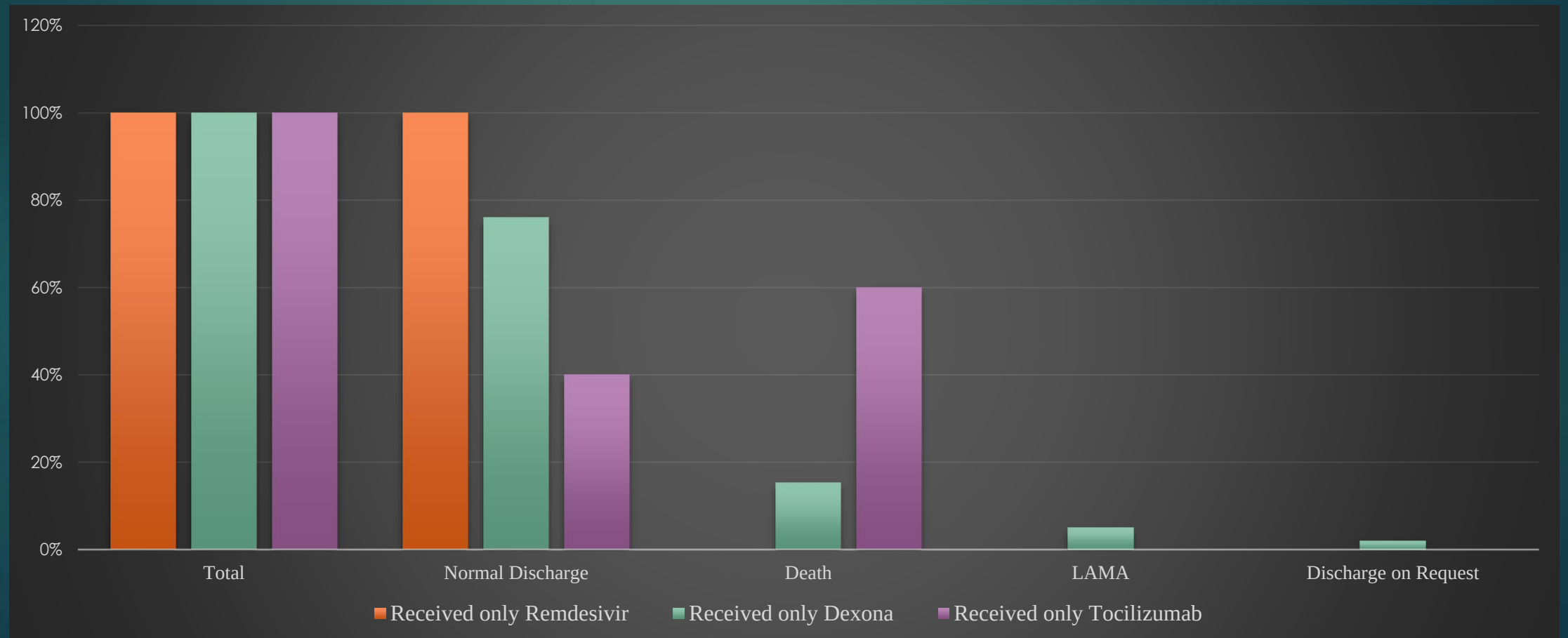
Overall comparison between the groups who received Remdesivir, Dexamethasone and Itolizumab Injections and who did not.

	Total	Death	LAMA	DOR	Referred	Normal Discharge
Patients who received Remdesivir, Dexona, Itolizumab inj.	100%	12.80%	2.37%	2.84%	0.00%	82%
Not Received	100%	30%	4%	1%	1%	63%



Trends observed in patients who received individual medication.

	Total	Normal Discharge	Death	LAMA	Discharge on Request
Received only Remdesivir	100%	100%	0%	0%	0%
Received only Dexona	100%	76%	15.25%	5%	2%
Received only Tocilizumab	100%	40%	60%	0%	0%



Conclusion

- ❖ Itolizumab had very low probability of achieving meaningful results in the treatment of covid 19.
- ❖ Remdesivir and Dexamethasone seems more promising in reducing the mortality of the patients who needs supplemental oxygen with mechanical ventilation.
- ❖ Comparatively remdesivir produced more auspicious results in reducing the mortality of critically ill patients who were on mechanical ventilation.
- ❖ The length of stay of both the groups are similar, who received Remdesivir, Dexamethasone and Itolizumab & who did not receive.
- ❖ Although these are the probabilistic results because of the small sample size. It may vary if we take a larger sample size. For more definitive results we must do further study with larger sample size.

References

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- [COVID-19 - Wikipedia](#)
- [Remdesivir and systemic corticosteroids for the treatment of COVID-19: A Bayesian re-analysis - International Journal of Infectious Diseases \(ijidonline.com\)](#)
- [nejmoa2021436.pdf, Dexamethasone in Hospitalized Patients with Covid-19 \(cardiff.ac.uk\)](#)
- [Remdesivir for the Treatment of Covid-19 — Final Report | NEJM](#)
- [Treatments for COVID-19 - Harvard Health](#)

Thank you