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**“PREDICTORS OF MORTALITY IN COVID 19 PATIENTS  
-A ONE YEAR INSTITUTION BASED OBSERVATIONAL  
RETROSPECTIVE CASE CONTROL STUDY”**

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By

REG NO: BR0120004

**Dissertation**

Submitted to the  
**KAHER, Belagavi, Karnataka**

In partial fulfillment of the requirements for the degree of

**DOCTOR OF MEDICINE (M.D.)**

**IN**

**RESPIRATORY MEDICINE**

**DEPARTMENT OF RESPIRATORY MEDICINE**

**JAWAHARLAL NEHRU MEDICAL COLLEGE  
NEHRU NAGAR BELAGAVI  
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**JUNE/JULY 2023**

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## LIST OF ABBREVIATIONS USED

COVID	-	Corona Virus Disease
Hscrp	-	High-sensitivity C-reactive protein
LDH	-	Lactate dehydrogenase
IL-6	-	Interleukin-6
PCT	-	Procalcitonin
SARS-CoV-2	-	Severe acute respiratory syndrome coronavirus 2
ACE 2 Receptor	-	Angiotensin-converting enzyme 2 receptor
HFNC	-	High-flow nasal cannula
HTN	-	Hypertension
CKD	-	Chronic Kidney Disease
CVA	-	Cerebrovascular accident
T2DM	-	Type II diabetes mellitus
IHD	-	Ischemic Heart Disease
ROC	-	Receiver Operating characteristic Curve
NIV	-	Noninvasive mechanical ventilation
IMV	-	Invasive mechanical ventilation
SpO2	-	Peripheral capillary oxygen saturation
CT	-	Computerized Tomography
RR	-	Respiratory rate

# ABSTRACT

## BACKGROUND

A Novel coronavirus (SARS-CoV-2)-based infectious illness known as COVID-19 pneumonia in December 2019, first surfaced in Wuhan City, Hubei Province, China, which became a pandemic soon, taking many lives creating havoc in all aspects and shattered the life of whole mankind. In order to identify the risk factors of mortality based on symptoms, comorbidities, vital signs, and laboratory examinations, we retrospectively analysed data from a recognised COVID-19 tertiary care centre , KLE'S Dr Prabhakar Kore Hospital And MRC, Karnataka.

As it was novel virus for everyone , the predictors for the mortality were not known ,so this study was done to find out the same.

**OBJECTIVES:** To assess the predictors of mortality in COVID 19 patients

## METHODOLOGY:

Data on clinical manifestations, comorbidities, vital signs, lab investigations ,HRCT and treatment details were collected in this single-centered, retrospective, observational study who were hospitalised to KLE hospital (Belagavi,india). Univariate and multivariate logistic regression was performed to investigate the relationship between each variable and the risk of death of covid-19 patients. Data were retrospectively analysed to ascertain predictors of mortality using their relative difference in distribution among 'survivors' and 'non-survivors'. A total of 176 patients with covid-19 who died in KLE hospital served as case and total of 680 covid-19 patients who were discharged during the same period served as control.

## RESULTS:

Among 856 covid-19 patients hospitalised [680“survivors” and 176 “non-survivors” (deaths)], there was a male predilection [77% , 524/746] among survivors and 90% (159/176) among non survivors. Mean age being 62yr among cases and 50yr among control group. Comorbid conditions HTN 83/176(47%) and T2DM 98/176(55.7%) having a significant impact on mortality. Significant other variables predicting mortality were: symptomology ,type of steroid used and inflammatory markers.

## **INTERPRETATION AND CONCLUSION**

Hypertension, cardiovascular disease, and diabetes were the most common comorbidity in patients death due to COVID-19.

Inflammatory markers have a prognostic significance with higher levels being associated with worst outcomes.

The clinician can better manage and treat patients by identifying those who are at risk of death with the aid of COVID19 mortality predictors.

**KEY WORDS:** COVID-19 , Inflammatory markers, Mortality predictors

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# **INTRODUCTION**

## INTRODUCTION

In December 2019, SARS CoV-2, a novel coronavirus based infectious illness first surfaced in Wuhan City, China, which became a pandemic soon, taking many lives creating havoc in all aspects and shattered the life of whole mankind.

The COVID-19 pandemic's first case was identified in the India in Karnataka on March 8, 2020. As of October 25, 2022, there were 40,097 fatalities and 40,01,655 confirmed cases in Karnataka with 9,135 current cases and 39,52,381 recoveries.

On March 11, 2020, the World Health Organization declared the disease brought on by the novel severe respiratory syndrome coronavirus 2 to be a Pandemic <sup>[1]</sup>.

Advanced age, male gender, and comorbidities such as diabetes mellitus, systemic hypertension, renal disease, and coronary artery disease were all reported as risk factors for mortality in COVID-19 patients.<sup>[6,7,8]</sup>

A higher plasma level of biomarkers like D-dimer, C-Reactive Protein (CRP), serum ferritin, Interleukin-6 (IL-6), and procalcitonin (PCT) provided early clues to the severity of disease.<sup>[3-5,6,7,12]</sup>

In addition, symptoms such as fever, cough, dyspnea, weakness might give early indications of the severity of the illness.<sup>[2,6,8]</sup>

Studies that have already been published include limitations in their design, such as single-center data analysis and relatively small sample numbers.<sup>[2-6]</sup>

In order to identify the risk factors of mortality based on vital signs, symptoms, comorbidities, and laboratory examinations, we analysed the data retrospectively from a recognised COVID-19 tertiary care facility, Dr Prabhakar Kore KLE hospital and MRC centre, Belgaum, Karnataka.

As it was novel virus for everyone , the predictors for the mortality were not known ,so this study was done to find out the same.

The clinician can better manage and treat patients by identifying those who are at risk of death with the aid of COVID19 mortality predictors.

# *Objectives*



## **AIMS AND OBJECTIVES**

- To assess the predictors of mortality in Covid -19 patients



# **REVIEW OF LITERATURE**

## **REVIEW OF LITERATURE**

The viruses was known by many names like "coronavirus" , "Wuhan coronavirus" and "Wuhan pneumonia." [9,10,11,12,13]

Many diseases, including the Spanish flu, Middle East respiratory syndrome, and Zika virus, have historically been named after specific geographic regions. [14]

In accordance with 2015 recommendations and global guidelines against using geographic locations or groups of people in disease and virus names in order to prevent social stigma, the World Health Organization (WHO) recommended '2019-nCoV acute respiratory disease' as interim names for the virus and disease. [15,16,17,18]

On February 11, 2020, the WHO announced the official names as COVID 19 and SARS-CoV-2. [19]

### **Background**

SARS-CoV-2 is a recently identified virus that shares a close relationship with SARS-CoV, pangolin coronaviruses, and bat coronaviruses. [20,21,22] In China's Hubei province, Wuhan, the first reported outbreak began in November of that year. People who had been to the Huanan Seafood Wholesale Market there, were connected to numerous early cases.[23] However, it's probable that human-to-human transmission started earlier. [24][25]

The virus most likely originated from bats or another closely similar mammal, according to scientific opinion.[26][27][28]

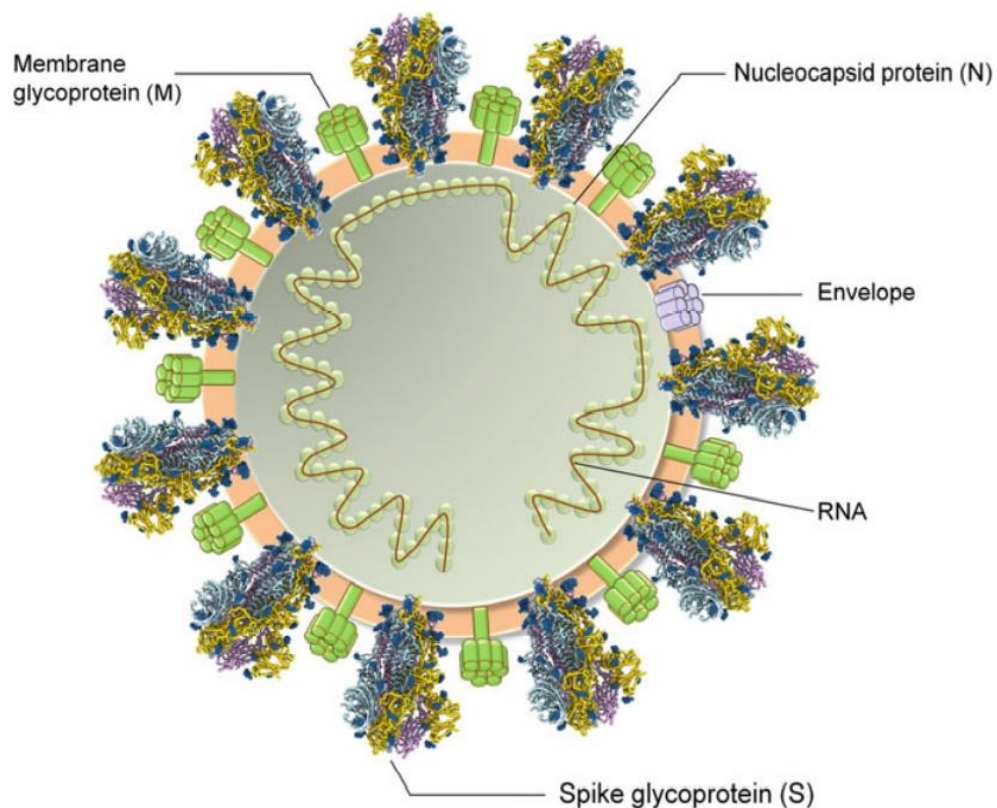
On December 1, 2019, the first known infected person became unwell, having symptoms of respiratory illness which was acute onset, rapidly progressing to ARDS. Later on, cluster of people with similar complaints were found which was spreading across China very rapidly and

within no time majority of all the provinces of China were affected with the illness. It was found to be viral illness due to SARS COV2 and named as ‘SARS COV2’ .

### Epidemiology

#### Morphology of SARS-CoV-2

Structure of SARS-CoV-2 as seen by examination of infected cells three days after infection.



**Fig.** Structure of SARS-CoV-2. SARS-CoV-2 has surface viral proteins, namely, spike glycoprotein (S), which mediates interaction with cell surface receptor ACE2. The viral membrane glycoprotein (M) and envelope (E) of SARS-CoV-2 are embedded in host membrane-derived lipid bilayer encapsulating the helical nucleocapsid comprising viral RNA

**Figure 1: Structure of SARS COV -2**

Electron imaging revealed coronavirus-specific form of SARS-CoV-2, particularly in vesicles, with virus particle size ranging from 70 - 90 nm.

The helical nucleocapsid of the coronavirus, composed of the viral protein spike, envelope, and membrane on its surface, is enclosed by the lipid bilayer formed from the coronavirus membrane.

### **Structure of Genome**

The enclosed envelope and positive stranded RNA viruses are members of the Coronaviridae family. The biggest positive-sense RNA genome, measuring 26–32 kilobases (kb), belongs to coronaviruses.

Open reading frames (ORFs) of various numbers can be found in the coronavirus genome.

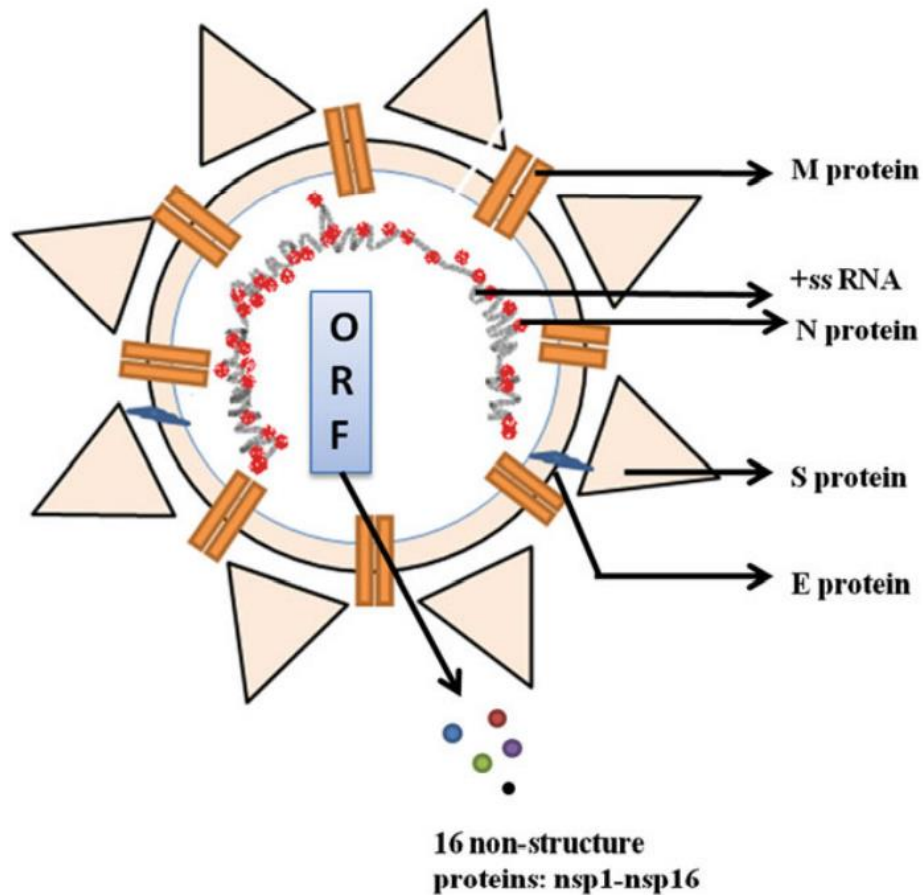
In the host cells as a result of infection ,two significant precursor polyproteins (pp1a and pp1ab) have been translated by the viral genome.

Viral proteinases convert the translated precursor polyproteins into mature non-structural proteins .

The positions from the N to C terminus have been used to number these non-structural proteins.

The other ORFs code for accessory proteins.

Spike glycoprotein (S), matrix (M), envelope (E) and nucleocapsid protein are the structural proteins.



**Figure 2: Structure of Genome**

The function of M protein is formation of envelop and transport of transmembrane nutrient . Along with several accessory proteins ,E protein and N protein obstruct the host immune response.

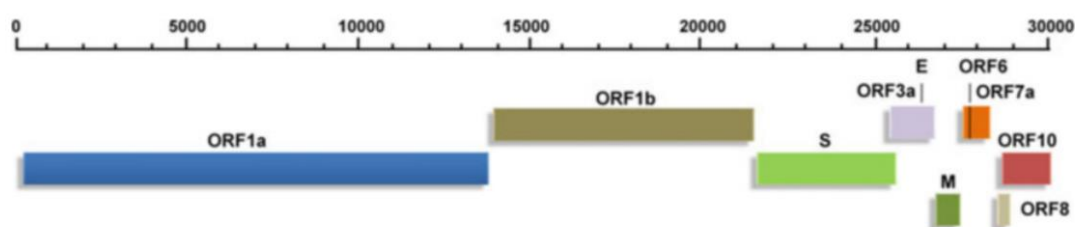
During viral RNA replication and transcription, the non structural proteins play a vital role.

## Genomic Organization of SARS-CoV-2

The SARS-CoV-2 genome is ranging between 26 - 32 kb in size. It has 6 to 11 open reading frames (ORFs) that encodes polyproteins with 9680 amino acids.<sup>[29]</sup>

Approximately 67% of the genome's encoding space is occupied by the first ORF. Except for 16 non structural proteins and structural proteins, the remaining ORF's encodes accessory proteins.

SARS- COV-2 genome lacks the hemagglutinerase gene. However , it has two flanking untranslated regions (UTRs) towards the end of it.



**Fig. 3.2** Genomic organization of SARS-CoV-2. The size of coronavirus genome ranges from 26 to 32 kb and comprises 6–11 open reading frames (ORFs) encoding 9680 amino acid polyprotein. The first ORF comprises of approximately 67% of the genome that encodes 16 nonstructural proteins (nsps), whereas the remaining ORFs encode for accessory and structural proteins. The nsps includes two viral cysteine proteases, including papain-like protease (nsp3), chymotrypsin-like, 3C-like, or main protease (nsp5), RNA-dependent RNA polymerase (nsp12), helicase (nsp13), and others likely to be involved in the transcription and replication of SARS-CoV-2. In addition to nsps, the genome encodes for four major structural proteins including spike surface glycoprotein (S), membrane, nucleocapsid protein (N), envelope (E) and accessory proteins like ORFs

### Figure 3: Genomic organisation of SARS COV-2

#### Entry and Replication of SARS-CoV-2 in Host Cells

The spike glycoprotein must bind to the cellular receptor, prior to virus entry into host target cells. S protein must then be activated by proteases of the host cell .

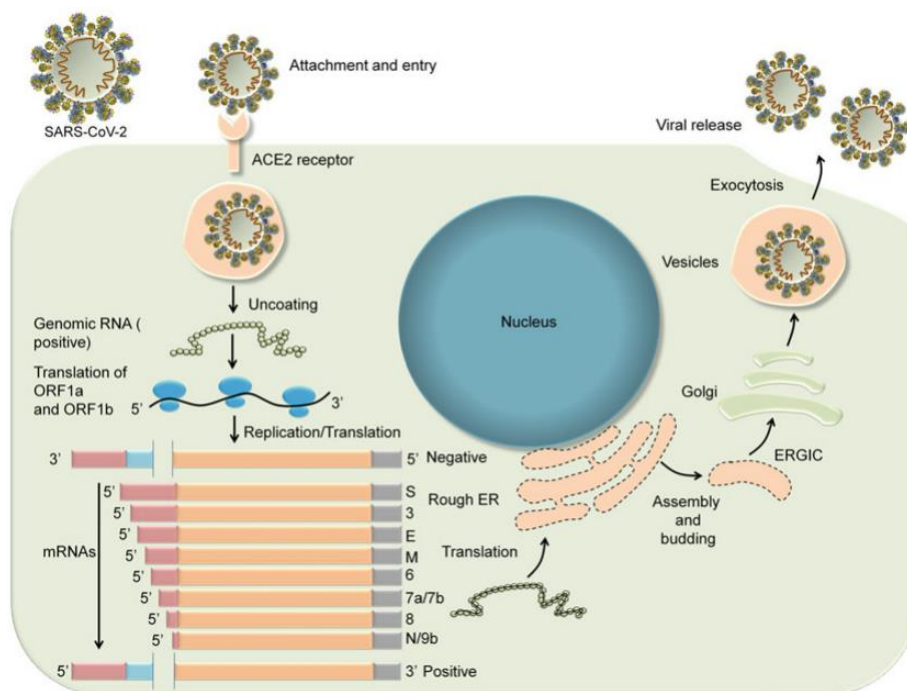
The ACE2 receptor is used by virus to internalise as it is comparable to the ACE2 receptor, which is distributed broadly throughout tissue, extrapulmonary dissemination of virus may be seen.

After viral entry via the endosomal pathway, spike protein associated with the ACE2 spike protein undergoes conformational changes as a result of the receptor, which results in the fusing of the host cell's membrane.

This happens when viral RNA that has been translated enters the host's cytoplasm. Ribosomal frame shifting, which takes place during translation when a coronavirus multiplies, causes genomic and discontinuous transcription.

These viruses are then expelled from the cells by vesicles.

### Pathogenesis of SARS-CoV-2



**Fig. 3.:** and replication of SARS-CoV-2 in host cells. Entry of SARS-CoV-2 into host target cells depends on the binding of spike glycoprotein to the cellular receptor ACE2 for internalization. Internalization results in uncoating of viral RNA into cytoplasm that undergoes translation and generates replicase polyproteins pp1a and pp1b, which is further cleaved by virus-encoded proteinases into small proteins. The replication of SARS-CoV-2 involves ribosomal frame shifting during the translation process and generates both genomic and multiple copies of subgenomic RNA species by discontinuous transcription required for relevant viral proteins. Assembly of virion takes place via interaction of viral RNA and protein at endoplasmic reticulum (ER) and Golgi complex. These virions are subsequently released out of the cells via vesicles via exocytosis

### Figure 4: Pathogenesis of SARS COV-2

### **Transmission from Animals to Human**

Several attempts to identify the primary host or intermediate carriers have been made from which the sickness may have been transmitted to humans. Bats are the most likely hosts for SARSCoV-2 since the two viruses share more than 95% of their genetic sequences.

Additional animal species, such as snakes and pangolins, were identified as viral reservoirs in addition to bats. SARS-CoV and SARS-CoV-2 are thought to have originated in bats. However, it is still unclear what precise mechanism underlies viral zoonotic spill over. The evidence suggests that the local bat population may have experienced SARS-CoV recombination episodes.

The severity of a disease in animal host, quantity of virus exposed, and susceptibility of the individual, all influence the likelihood of animal-to-human transmission.

### **Transmission Among Humans**

Data from numerous investigations to date suggest that SARS-CoV and SARS-CoV-2 are zoonotic pathogens. The rapid transmission among humans supports transmission among individuals. SARS spreads via air borne transmission like the flu and cold viruses do.

The virus is dispersed through air in the form of tiny droplets, when an individual who is infected sneezes or coughs. Therefore, a person who breathes in such droplets or touches contaminated surfaces could become affected as well.

Live SARS-CoV-2 has also been found in the patient's stool in recent data, demonstrating the persistence of virus in gastrointestinal system, supporting the evidence of gastrointestinal symptoms.

However, it is uncertain if eating food contaminated with viruses can lead to infection or transmission.

It was also found out that prolonged unprotected exposure to the virus may result in person-to-person transmission, with the sick individual proposing persistent pathogen pressure that causes infection and disease. <sup>[30]</sup>

As of now, intimate contact, aerosols, respiratory droplets, and the Covid virus infected person have served as significant infection sources. <sup>[31]</sup>

Once the virus has bound to a set of host receptors, it merges with the cell membrane to begin the infection process. In cases of SARS CoV human-to-human transmission, reports claim that the receptor-binding domain (RBD) of the virus spikes connects with the ACE2 receptor of the probable host cell <sup>[32]</sup>

The most intriguing characteristic strongly suggests a same pathway of entrance into host cells via the ACE2 receptor for SARS-CoV-2 virus. The spread of this virus from domestic pets to humans is currently little understood, but given how quickly things are changing, it is impossible to make predictions about the future. <sup>[33]</sup>

The majority of the cases (55%) concentrated in Wuhan, were initially spread through contacts directly with a nearby wholesale seafood market. Person-to-person transmissions were discovered to be the primary mechanism of infection.

It was also found that angiotensin-converting enzyme 2 receptor, on type II alveolar and intestinal cells is where the virus interacts. <sup>[34]</sup>

Since risk is only present within six feet of the patient, airborne big droplets are the primary means of transmission. By employing surgical face masks and other airborne measures, infection can be contained due to massive droplet-borne transmission. <sup>[35]</sup>

The other method of transmission between people is through contact with fomites, which must be decontaminated and improper hand hygiene practised due to the huge droplets that settle on surfaces and infect them.

### **Reproduction Number and Secondary Attack Rates**

After quarantine measures were put in Wuhan, the reproduction number (the number of new cases that result from an infected case) which was first identified at 2.35 had decreased to 1.05 over the period of one month <sup>[36]</sup>.

Reproduction numbers above one, indicates further spread of epidemic . Secondary attack rate (SAR), which is the likelihood that an infection happens among vulnerable individuals within a particular group (such as a home or close contacts).

They play an important role in determining social interaction in epidemic transmission and also emphasises on contact tracing.

Precautionary measures like masking, sanitising and isolation protocols were standardised. Initially the transmission was tried to curb by isolation and other protective measures but slowly it took the whole world into the Pandemic.

### **Pathophysiology Behind Symptoms and Signs**

An infected individual goes through several stages of replication during the initial few days, then an adaptive immunity stage occurs during the following few days <sup>[37]</sup>.

The virus reproduces during the replicative stage, causing a sickness that resembles influenza and has moderate symptoms brought on by direct cytotoxic contact.

In adaptive immunity when immune system takes control, level of virus decreases . It can causes tissue damage and clinical deterioration due to the inflammatory cytokine storm, which accounts for the phenomena where patients first appear to be doing okay before suddenly getting worse called as cytokine storm.

This suggests using immunosuppressive treatments throughout the adaptive immune stage and starting antiviral treatments earlier to achieve better results.

### **Incubation Period (IP)**

The COVID-19 incubation period is defined as the time period, which must occur within 14 days of exposure i.e between the earliest date of exposure with the source to the date on which symptoms (such as cough, fever, fatigue, or myalgia) first appear.

The 50% of cases are disseminated throughout the median IP of 4 days (interquartile range, 2–7 days) <sup>[38]</sup>.

### **Demographic Features and General Symptoms of COVID-19**

Confirmed cases of COVID-19 showed that illness spectrum ranged from mild disease (no or mild pneumonia) in majority of the individuals with a typical recovery period of about 2 weeks, to severe disease (dyspnea, hypoxia, or >50% lung involvement on imaging within 24-48 hrs) in 14% of cases with a recovery period of about 3-6 weeks, to critical disease (ARDS, sepsis, septic shock, or MODS) in 5% of cases. <sup>[39]</sup>

Majority of those affected by COVID-19 were males , with extremely few occurrences documented among youngsters .The age groups most affected were middle aged and elderly (median: 47 years; range: 30-79 years). Elderly people experienced more severe symptoms and had a higher mortality rate <sup>[40]</sup>.

Most frequent COVID-19 symptoms present were fever , fatigue, dry cough , anorexia , myalgia , and dyspnea. In several cohorts of COVID-19, fever has been described as being very low grade (axillary temperature >37.5 C), intermittent, and lasting a long time (up to about 14 days).<sup>[41]</sup>

Diarrhea and other gastrointestinal symptoms including nausea, loose stools and vomiting were rather infrequent. [42]

**Table 1** General symptoms at the time of presentation in various cohorts

	Guan et al. N = 1099	Shi et al. N = 21	Xu et al. N = 62	Zhou et al. N = 191	Yang et al. N = 52
<i>Constitutional symptoms</i>					
Fever	975 (88.7%)	18 (86%)	48 (77%)	180 (94%)	46 (88%)
Myalgia	164 (14.9%)			29 (15%)	6 (12%)
Headache	150 (13.6%)	2 (10%)	21 (34%)		3 (6%)
<i>Upper respiratory symptoms</i>					
Rhinorrhoea	53 (4.8%)	5 (24%)			3 (6%)
Sore throat	153 (13.9%)				
<i>Lower respiratory symptoms</i>					
Dyspnoea	205 (18.7%)	9 (43%)	2 (3%)	56 (29%)	33 (64%)
Chest tightness		5 (24%)			
Cough	745 (67.8%)	15 (71%)	50 (81%)	151 (79%)	40 (77%)
Sputum	370 (33.7%)	3 (14%)	35 (56%)	44 (23%)	
Haemoptysis	10 (0.9%)		2 (3%)		
<i>Gastrointestinal symptoms</i>					
Nausea/vomiting	55 (5%)	2 (10%)		7 (4%)	2 (6%)
Diarrhoea	42 (3.8%)	1 (5%)	3 (8%)	9 (5%)	

### **Clinical Course of COVID-19 (Day-Wise)**

The signs and symptoms initially included weakness, fever, myalgia, dry cough, and dyspnoea. With early diagnosis and conservative treatment, the symptoms either improve or worsen and progress to dyspnea and productive cough.

It was discovered that 6 days after exposure, the median amount of time before dyspnea started were different in different cohorts. The median length of time between admission was 8 days, the onset of ARDS being 8.2 days, and the requirement for mechanical ventilation and intensive care unit care was 10 days respectively. [43]

It was found out that the median duration from symptom onset to discharge was 22 days (IQR: 18–25 days). In survivors, the median duration of fever and cough was 12 days (8-13 days) and 19 days respectively.(IQR: 12-23 days). [44]

Complications that was noticed were acute heart injury at median intervals of 12 days (8-15 days), acute kidney injury at 9 days (7-13 days), and secondary infection at 15 days (13–19 days).

Bilateral pneumonia, which can advance to ARDS and septic shock, as well as acute renal injury, coagulopathy, rhabdomyolysis, hyponatremia, acidosis are the most frequent problems that arise in COVID-19 patients.

### **Underlying Co-morbidities Complicating COVID-19**

Uncontrolled hypertension, diabetes, coronary heart disease, cerebrovascular disease, chronic obstructive pulmonary disease, and other conditions like cancer, chronic kidney disease, and immunodeficiency are the main underlying co-morbidities that complicate the course of COVID-19 by increasing the severity of illness, use of mechanical ventilation, and length of ICU stay increasing the mortality.

**Table 2** Summarized co-morbidities, complications and mortality in various cohorts of

Variables	Guan et al. <i>N</i> = 1099 (%)	Zhou et al. <i>N</i> = 191 (%)	Huang et al. <i>N</i> = 41 (%)
Hypertension	15	30	15
Diabetes	7.4	19	20
Coronary heart disease	2.5	8	15
Chronic obstructive pulmonary disease	1.1	3	2
Cerebrovascular disease	1.4		
Hepatitis B	2.1		
Cancer	0.9	1	2
Pneumonia	91.1		
Septic shock	1.1	20	7
ARDS	3.4	31	29
Acute kidney injury	0.5	15	7
Acute cardiac injury		17	12
Coagulopathy	0.1	19	
Rhabdomyolysis	0.2		
Invasive mechanical ventilation	2.3	17	5
ECMO	5	2	5
CRRT	9	5	7
Mortality	1.4	28.3	15

In the above table by understanding the various cohorts of Covid 19,its found that patients with more comorbidities had a higher mortality compared to those who didn't have.

Moreover, the table also explains that patients with higher incidence of complications like AKI,ARDS had higher fatality.

### **Case Definitions (WHO 2020)**

Surveillance definition :

A person with an acute respiratory illness, whether or not they need hospitalisation (sudden start of at least one of the following symptoms: fever, cough, sore throat, or shortness of breath), satisfies at least one of the following epidemiological criteria within the 14 days before the onset of symptoms :

- Travel history to regions of China where SARS-CoV-2 transmission is still occurring in the community
- Close contact with a confirmed or suspected case of COVID-19
- Employment in or attendance at a medical facility where COVID-19 patients were being treated.

Confirmed case: A person with laboratory confirmation of virus causing COVID19 infection by RT-PCR of oropharyngeal or nasopharyngeal swab, irrespective of clinical signs and symptoms.

### **Clinical Diagnosis of Novel Coronavirus Disease 2019 (COVID-19)**

The clinical diagnosis is based on the signs and symptoms mentioned in the previous sections, as well as support from standard laboratory tests, imaging, and RT-PCR of nasopharyngeal or oropharyngeal samples.

### **Routine Pathology and Biochemistry Lab Findings and Imaging in COVID-19**

Leukopenia, lymphopenia, increased transaminases, and D-dimer are the major laboratory findings in all other respiratory viral illnesses. [45]

Higher mortality is linked to severe lymphopenia, increased C-reactive protein (CRP), increased D-dimer (>1 g/L), IL-6, ALT, serum ferritin, lactate dehydrogenase, creatine kinase, high-sensitivity cardiac troponin I, creatinine, prothrombin time, and procalcitonin [46].

The liver produces the protein CRP, which is released in bloodstream in reaction to inflammation. The inflammatory marker interleukin-6 is also a measure of disease severity [47].

Highly elevated levels of IL-6 peak was discovered to occur between the fourth and seventh days among critically ill survivors. Contrarily, among those who fail to survive, this rises steadily.

D-dimer( coagulopathy marker) is still elevated in those who do not survive compared to those who do. In the early stages of the disease, D-dimer levels were seen to be within normal levels or slightly elevated. D-dimer levels considerably rise as the disease and severity worsen.

There is evidence to support the significance of creatinine, lactate dehydrogenase levels, lymphocyte count, D-Dimer, troponin, IL-6, and CRP as biomarkers for the COVID-19 severity prognosis .

Nearly every cell in the body contains the energy-producing enzyme LDH, for monitoring tissue damage brought on by variety of illnesses, including liver diseases and interstitial lung diseases(ILD).

Lactate dehydrogenase levels are higher because of lung damage from pneumonia brought on by SARS-CoV-2 virus.

On the other hand, there is mounting evidence that the combined sensitivity of nose and pharyngeal swabs may not be enough if acquired at a single time point, depending also on the technical aspects of the test and manner of specimen collection [47, 48].

A large number of SARS-CoV-2 patients would not be quickly identified and may not receive the proper care due to the relatively long turn around time (TAT) for viral testing and the low sensitivity of a single real-time reverse-transcriptase polymerase-chain reaction (RT-PCR) assay of nasal and pharyngeal swab specimens.

#### Correlation between the chest CT score and illness severity

Building on the knowledge gained during the height of the first wave of the pandemic, the COVID-19 Reporting and Data System (CO-RADS) exhibits strong inter-observer reliability and effective performance in foretelling moderate-to-severe disease based on CT scans.

Because CT being very sensitive in SARS CoV-2-infected patients, it's frequently employed to aid in patient care [49].

In a group of 82 asymptomatic carriers who boarded the international cruise ship "Diamond Princess," a high incidence of bilateral ground glass opacities (54%) has been found. [50]

Those discoveries, made in what momentarily grew to be the biggest cluster of SARS-CoV-2 cases outside of China, may have raised serious doubts about the possibility of clinico-radiological dissociation in asymptomatic people and its potential effects on clinical judgement.

On X-ray and CT scans of the thorax, bilateral ground-glass opacities (GGOs), with or without consolidation, are the most often seen radiological abnormalities.

#### CO-RADS: Coronavirus Classification

A high-sensitivity diagnostic technique for interstitial pneumonia, chest computed tomography (CT) played a crucial role in determining the severity and scope of pulmonary involvement. <sup>[51]</sup>

With the help of the CO-RADS evaluation scheme, a patient's non-enhanced chest CT scan can be divided into categories based on how likely it is that the patient has confirmed COVID-19 with lung involvement.

The simplicity of this classification leads to moderate to large agreement among observers, even among radiologists with varying levels of experience, and its main strength.

The ability of the classification to distinguish between radiological abnormalities associated with a low and high probability of COVID-19, tested against both a clinical diagnosis and positive results for RT-PCR testing, which is another significant strength of the classification.

The CO-RADS are divided into seven groups. Categories 1 through 6 represent the progression of COVID-19 risk, from very low risk (CO-RADS 1) to infection that has been established with a positive RT-PCR experiment (CO-RADS 6).

**Table 3** Laboratory findings in patients of COVID-19 in various cohorts

Variables	Guan et al. N = 1099 (%)	Zhou et al. N = 191 (%)	Huang et al. N = 41 (%)
Lymphopaenia $<0.8 \times 10^9/L$	83.2	40	63
Thrombocytopenia $<100 \times 10^9/L$	36.2	7	5
Elevated ALT $>40$ U/L	21.3	31	37
Elevated D-dimer $>1$ $\mu\text{g/L}$	46.4	42	
Elevated CRP	60.7		
Elevated creatininc	1.6	4	10
Elevated LDH $>245$ U/L	41	67	73
Elevated IL-6 $>7.4$ pg/mL			
Serum ferritin $>300$ $\mu\text{g/L}$		80	
Elevated creatinine kinase $>185$ U/L	13.7	13	33
High-sensitivity troponin I $>28$ pg/mL		17	12
Increased procalcitonin $\geq 0.5$ ng/mL	5.5	9	8
Increased prothrombin time $\geq 16$ s		6	

### **Poor Prognostic Factors in COVID-19**

Elderly ( $> 70$  years) ,underlying co-morbidities include uncontrolled HTN, T2DM, CAD, COPD, and malignancy are all significant independent predictors of increased mortality. Severe lymphopenia ( $1 \text{ g/L}$ ), elevated levels of C-reactive protein, LDH, ALT, serum ferritin, IL-6, and high-sensitivity cardiac troponin are additional indicators of poor prognosis. <sup>[52]</sup>

### **Treatment of Novel Coronavirus SARS-CoV-2 Infection**

#### **Approved Nucleoside Analogs**

Ribavirin and favipiravir, two authorised nucleoside analogues, have currently shown antiviral effectiveness against SARS CoV-2 infection <sup>[53]</sup>.

A wide variety of RNA viruses, including beta coronaviruses, can have their replication process slowed down by the use of nucleoside analogues, which are effective in targeting RNA-dependent RNA polymerase.

Initially ribavirin was approved for the treatment of respiratory syncytial virus and hepatitis C virus. Ribavirin was clinically tested for its ability to combat the MERS and SARS coronaviruses, but its effectiveness is debatable because it is linked to serious side effects such as anaemia and hypoxia at high doses.

Favipiravir was initially authorized for the treatment of influenza. It is also reported that favipiravir is effective against a number of RNA viruses (Ebola, Nipah, enterovirus and SARS-CoV-2).

Currently favipiravir drug is in randomized trials with interferon  $\alpha$  along with baloxavir, marboxil for SARS-CoV-2 infection <sup>[54]</sup>.

The drug is well absorbed after oral administration in the gastrointestinal tract (98% bioavailability) and metabolized in liver, and the metabolites are excreted in urine.

Favipiravir drug is contraindicated in pregnancy due to its teratogenic effect. It also decreases the excretion of angiotensin-converting enzyme inhibitors such as captopril.

## Therapeutic Development and Drugs for the Treatment of COVID-19

**Table 4** List of drugs that have antiviral activity compounds against SARS-CoV-2

Antiviral agents	Drug targets	Reported mechanism of action
<i>Virus-based treatment approaches</i>		
Favipiravir	RdRp	Inhibits RdRp
Ribavirin	RdRp	Inhibits viral RNA synthesis and mRNA capping
Penciclovir	RdRp	Inhibits RdRp
Remdesivir (GS-5734)	RdRp	Terminates the non-obligate chain
Lopinavir	3CLpro	Inhibits 3CLpro
Ritonavir	3CLpro	Inhibits 3CLpro
Darunavir and cobicistat	3CLpro	Inhibits 3CLpro
ASC09F (HIV protease inhibitor)	3CLpro	Inhibits 3CLpro
Nafamostat	Spike glycoprotein	Inhibits spike-mediated membrane fusion
Griffithsin	Spike glycoprotein	Inhibits spike-mediated membrane fusion
Arbidol (umifenovir)	–	–
Oseltamivir	–	–
<i>Host-based treatment approaches</i>		
Recombinant interferons	Interferon response	Exogenous interferons
Chloroquine	Endosomal acidification	A lysosomotropic base that appears to disrupt intracellular trafficking and viral fusion events
Nitazoxanide	Interferon response	Induces the host innate immune response to produce interferons by the host's fibroblasts and protein kinase R (PKR) activation

**Treatment with steroids for COVID patients**

If taken at the right moment during the course of the disease, glucocorticoid medications are known to be effective in calming the inflammatory storm by lowering cytokine levels and suppressing pro-inflammatory gene expression [47].

For instance, some studies found that administering corticosteroids to treat MERS and influenza resulted in higher mortality and longer viral clearance times [55, 56].

Furthermore, differences in the dosage and administration of corticosteroids in early COVID-19 investigations have produced conflicting data about the effectiveness of these drugs<sup>[57]</sup>. Later, research however, has demonstrated the effectiveness of methylprednisolone in COVID-19 patients.

On comparing to therapy given with 6 mg per day of dexamethasone in hospitalised COVID-19 pneumonia patients, the administration of 2 mg/kg per day of intravenous methylprednisolone resulted in a shorter hospital stay, less need for mechanical ventilation, and improved clinical status at days 5 and 10.<sup>[58]</sup>

Although administering glucocorticoids to COVID-19 patients may result in problems such superimposed infections, immunosuppression, and hyperglycemia, recent studies have not found any significant issues during their research.

Additionally, it is advised that patients should receive the recommended dosage of antibiotics and immunological regulators like human immunoglobulin to boost their immunity in cases when there are difficulties.

# *Methodology*



## MATERIALS AND METHODS

The present retrospective study was conducted in the department of Pulmonary Medicine, KLE'S Prabhakar Kore Hospital and Medical Research Centre, Belagavi in Covid patients during the period of January 2021 to December 2021

### STUDY DESIGN

A one-year institution based –Observational retrospective case control study.

### METHOD OF COLLECTING DATA

#### Source of data

The data was collected retrospectively from patients diagnosed with COVID pneumonia admitted at KLE's Prabhakar Kore Hospital and Medical Research Centre, Belagavi

#### Sample size

A total of 856 diagnosed cases of COVID 19 pneumonia were analyzed in the study

#### Sampling procedure:-

##### SAMPLE SIZE:

It was estimated based on the difference in proportion of HTN as risk factor or predictor for mortality among Covid 19 subjects without and with mortality was 39.2% and 56.8% respectively from the study by **Wenjie Tian et al.** Using these values in the below mentioned formula

$$N = \frac{2 ( Z_{\alpha/2} + Z_{\beta} )^2 P ( 1-P )}{(p_1 - p_2)^2}$$

Where ,

$Z_{\alpha/2} = Z_{0.05/2} = Z_{0.025} = 1.96$  at type 1 error of 5%

$Z_{\beta} = Z_{0.20} = 0.842 =$  At 80% power

$p_1 - p_2 =$  Difference in proportion in the two different groups = 17.6%

$P =$  Pooled prevalence =  $[\text{Proportion in Survivors } (p_1) + \text{Proportion in Non Survivors } (p_2)]/2 =$   
 $[39.2 + 56.8 ]/2 = 48$

$N = \frac{2 \times 48 \times 52 (1.96 + 0.84)^2}{17.6 \times 17.6} = \frac{39137.28}{309.76} = 126$  in each group

Sampling comparison of Proportions

**Type I and II error**

Type I error ( Alpha, significance) : 0.05  
 Type II error (Beta ,1- Power ) : 0.20

**Input**

Proportion in group 1 ( % ) : 39.2  
 Proportion in group 2 ( % ) : 56.8  
 Ratio of sample size in group/group 2 : 1

**Results**

No of cases required in group I : 137  
 No of cases required in group II : 137  
 Total sample size (both groups together) : 274

**Table 5**

	Type I Error – Alpha			
	0.20	0.10	0.05	0.01
0.20	83+83	110+110	137+137	198+198
0.10	116+116	148+148	179+179	249+249
0.05	147+147	183+183	218+218	295+295
0.01	217+217	261+261	303+303	393+393
Type II error- Beta				

**SELECTION CRITERIA:****Inclusion criteria:**

1. Patients diagnosed with SARS COV2 through RT PCR positive or Rapid antigen test positive or CBNAAT positive with age group of more than 18 years will be included in the study.

2. HRCT/CT -covid 19 suspect individuals were also included in the study

A chest CT scan can be classified according to the likelihood that a patient has verified COVID-19 with lung involvement using the COVID-19 Reporting and Data System (CO-RADS) assessment method.

If one or more of the clearly described signs, such as ground-glass opacities in a typical peripheral subpleural distribution, subpleural/interlobular interstitial thickening, the atoll sign, halo and reverse halo signs, were present, HRCT was considered "positive" for the diagnosis of COVID-19 pneumonia.

**Exclusion criteria:**

1. Patients in the age group less than 18 years of age were excluded
2. Pregnant and lactating women

**PROCEDURE**

The study was approved by the ethical and research committee of Jawaharlal Nehru Medical College, Belagavi and requested for waiver of consent which was accepted.

The study was retrospective observational case control study.

A questionnaire concerning : age, sex, oxygen saturation at the time of presentation ,date of symptom onset to hospital, laboratory biomarkers(Hscrp,D-dimer,S.PCT,IL6, S.ferritin) comorbidities (HTN/T2DM/ IHD/CKD/CLD/ CVA), any past pulmonary disease (as defined by chronic obstructive pulmonary disease , asthma , tuberculosis,bronchiectasis etc), mode of respiratory support (IMV, noninvasive mechanical ventilation [NIV], oxygen mask) at the time of admission, medications were recorded. All patients with diagnosis of covid pneumonia as per inclusion criteria were included in the study.

For the 856 individuals with confirmed COVID-19, this retrospective observational study will look at clinical traits and potential risk factors for mortality. The purpose of this study was to look into any clinical traits and laboratory measurements that might be indicators of mortality among COVID-19 patients who were admitted.

**Statistical analysis**

Categorical variables are expressed as number of patients and percentage of patients and compared across the groups using Pearson's chi-square test for independence of attributes /Fishers' exact test as appropriate. Continuous variables are expressed as mean and standard

deviation and compared across the groups using independent sample t-test/Mann-Whitney U-test as appropriate. For graphical representation of data pie diagrams and bar diagrams are used. The statistical software SPSS version 25 has been used for the analysis. An alpha level of 5% has been taken. i.e; if p-value is less than 0.05 it has been considered as significant.

The relationship between clinical traits and laboratory values and the likelihood of death was examined using univariate and multivariate logistic regression. Stepwise selection was used to select the multivariate logistic model. This approach uses a combination of forward and backward selection methods. We began by using the forward selection method, which gradually incorporated important predictors from the univariate logistic model to the model.

Each time we added a predictor, we examined the model's existing predictors. Any that weren't statistically significant (p-value >0.05) were removed from the model. Only predictors with a statistically significant (p-value 0.05) were included in the final multivariate model. The stepwise selection method's benefit is that it enables the use of different models for testing

### **ROC CURVE**

A **receiver operating characteristic curve**, or **ROC curve**, is a graphical plot that illustrates the diagnostic ability of a binary classifier system as its discrimination threshold is varied.

**Sensitivity** (also called the **true positive rate**) measures the proportion of actual positives that are correctly identified as such (e.g., the percentage of sick people who are correctly identified as having the condition).

**Specificity** (also called the **true negative rate**) measures the proportion of actual negatives that are correctly identified as such (e.g., the percentage of healthy people who are correctly identified as not having the condition).

The ROC curve is created by plotting the sensitivity against the specificity at various threshold settings

If the area under ROC curve is large (greater than 0.7) then the given method of classification can be considered as a perfect one.

The model is better when AUC is close to 1.

### **Logistic regression analysis**

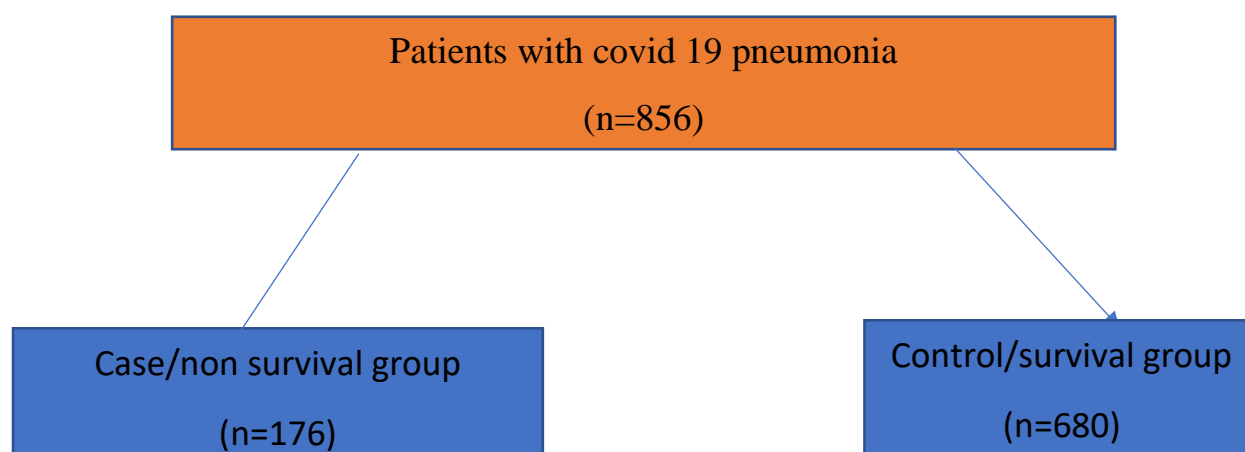
A binomial logistic regression (often referred to simply as logistic regression), predicts the probability that an observation falls into one of two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical. The Wald test is used to determine statistical significance for each of the independent variables. Variables with a p-value less than or equal to 0.05 is considered as significant

(In logistic regression table OR is the odds ratio , B is the coefficient of regression and S.E denotes the standard error)

# *Results*



## RESULTS



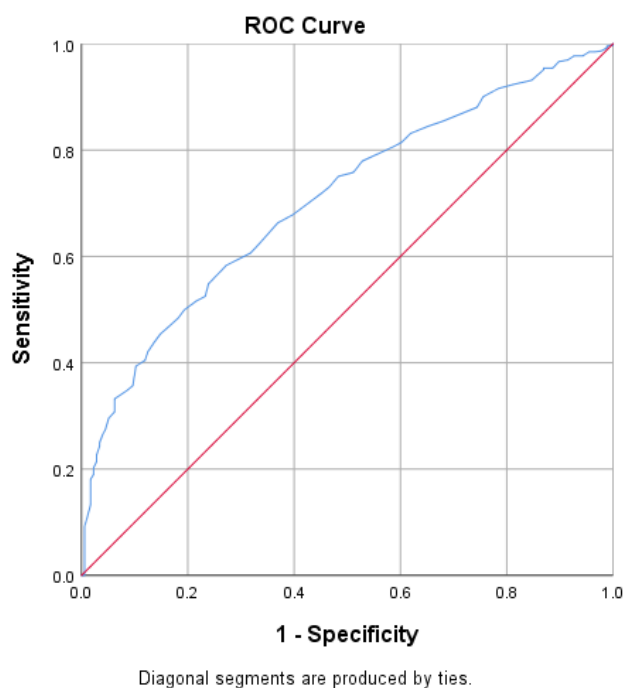
The research comprised a total of 856 COVID-19 patients with a mean age being 52.816 years . Around 683 patients (79.7 %) were male.

176 patients out of the 856 died which were included in the case group (non survival group). 680 patients out of the 856 patients who survived were included in the control group.

### Age group of the patients in the case and control group [Table 6]

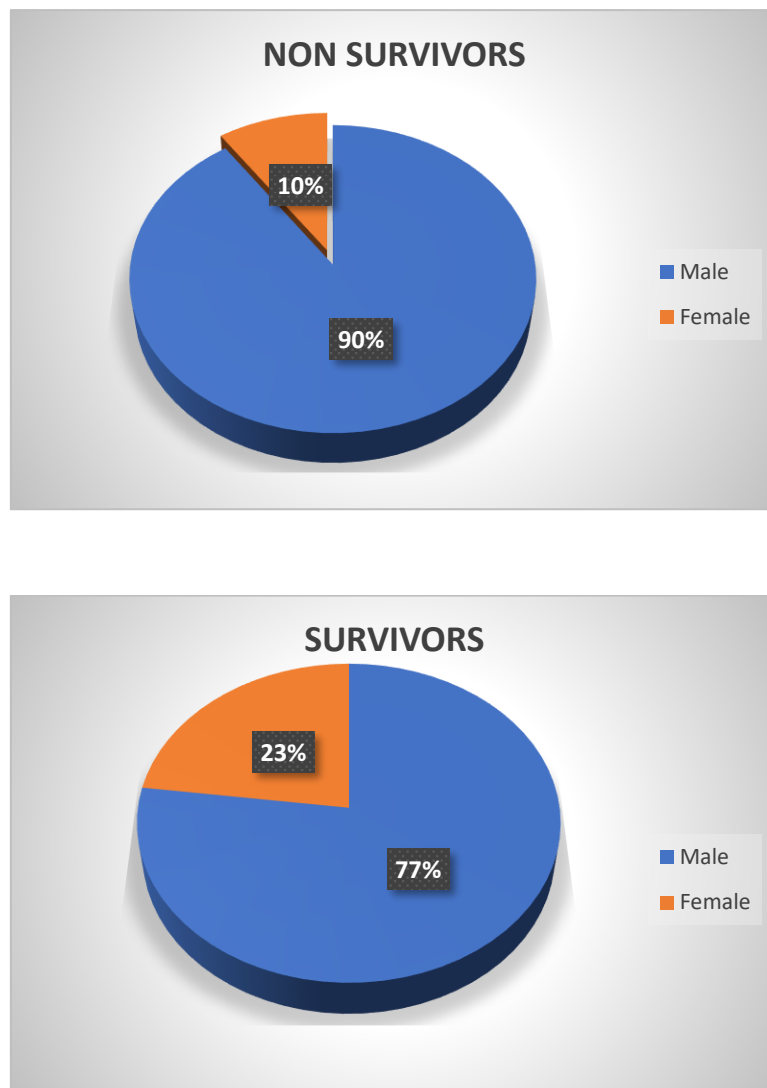
	<b>Total No(%)</b>	<b>Non survival group No(%)</b>	<b>Survival group No(%)</b>	<b>p-value</b>
Patients	856	176	680	
	Mean age in years			
Age in year	52.8±16.7 years	62.1±13.2 years	50.3±16.7 years	<0.001
<b>Sex</b>				
Male	683(79.7%)	159(90.3%)	524(77.1%)	<0.001
Female	173(20.3%)	17(9.7%)	156(22.9%)	

---

**Illustration of the ROC curves with age****[Graph 1]**

The area under this ROC curve of the test variable: age is 0.706 which shows how accurate a logistic regression model distinguishes positive and negative outcomes at all potential cutoffs. Age shows higher sensitivity and specificity in predicting the mortality of covid patients. Mean age of the patients in mortality group was  $62.1 \pm 13.2$  years and in the control group it was  $50.3 \pm 16.7$  years ( $p < 0.001$ )

---

**Gender distribution in the case and control groups****[Graph 2]**

There were 159 males (90%) in the case group and 17 females(9.7 %) in the case group whereas in the survival group, were 524 males(77%) and 156 were females patients(23%).

**Table 7 :Variables at the time of admission**

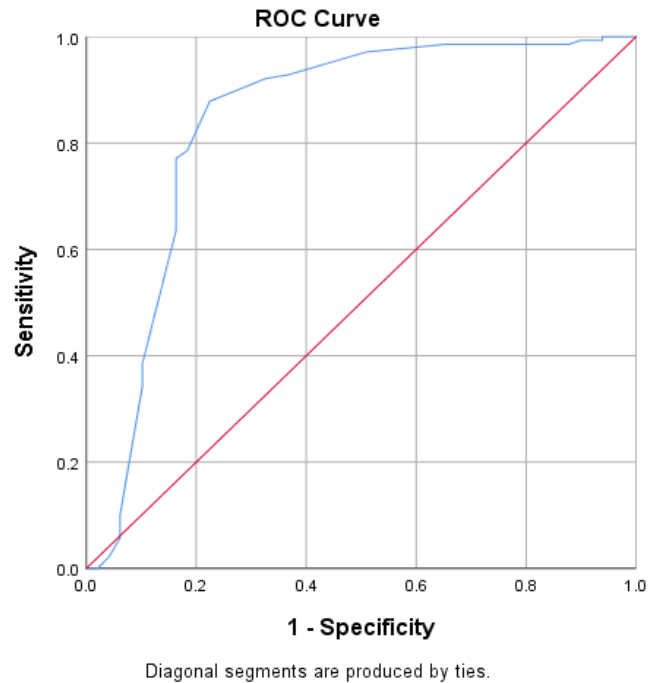
Variable	Non survival group	Survival group	p- value
Admission Respiratory rate	29.8±8.9 rpm	20.9±4.2 rpm	0.001
Admission Spo2	85.2±13.9 %	95.4±39.3 %	0.001
Time to Hospital from symptom onset	4.9±3.5 days	4.4±3.13 days	0.215

It was found that mean admission respiratory rate in the case group (29.8±8.9 cycles/min) was higher than control group (20.9±4.2 cycles/min) thereby showing its statistical significance. (p=0.001).

Among the case group, 176 died in the hospital. Initial oxygen saturation (85.2±13.9%) was associated with a risk for mortality which showed its statistical significance (p=0.001) on comparing with the control group (95.4±39.3%)

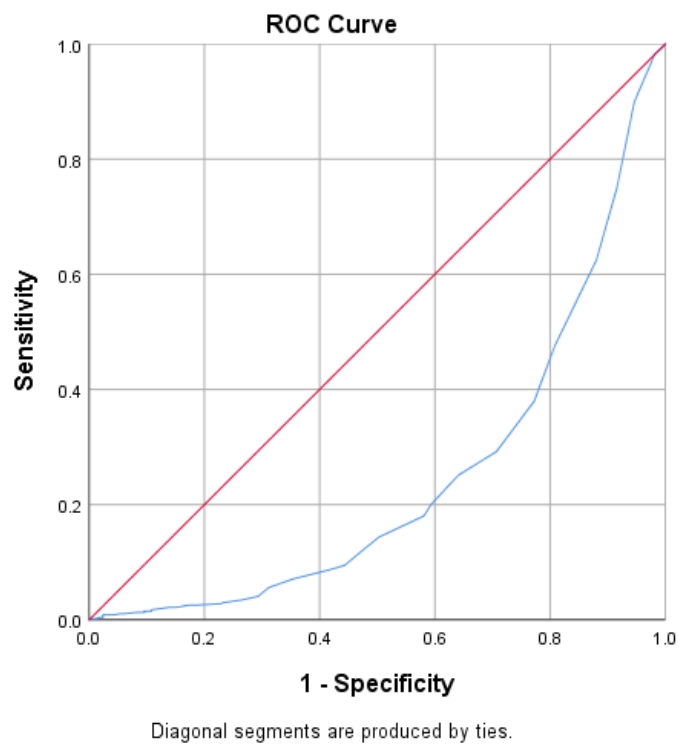
Mean duration of the time to hospital from symptom onset was higher in the case group (4.9±3.5 days), although it was not statistically significant. (p=0.215)

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**Illustration of the ROC curves with respiratory rate****[Graph 3]**

The area under this ROC curve of the test variable: Respiratory rate is 0.840 which shows significance our logistic regression model.

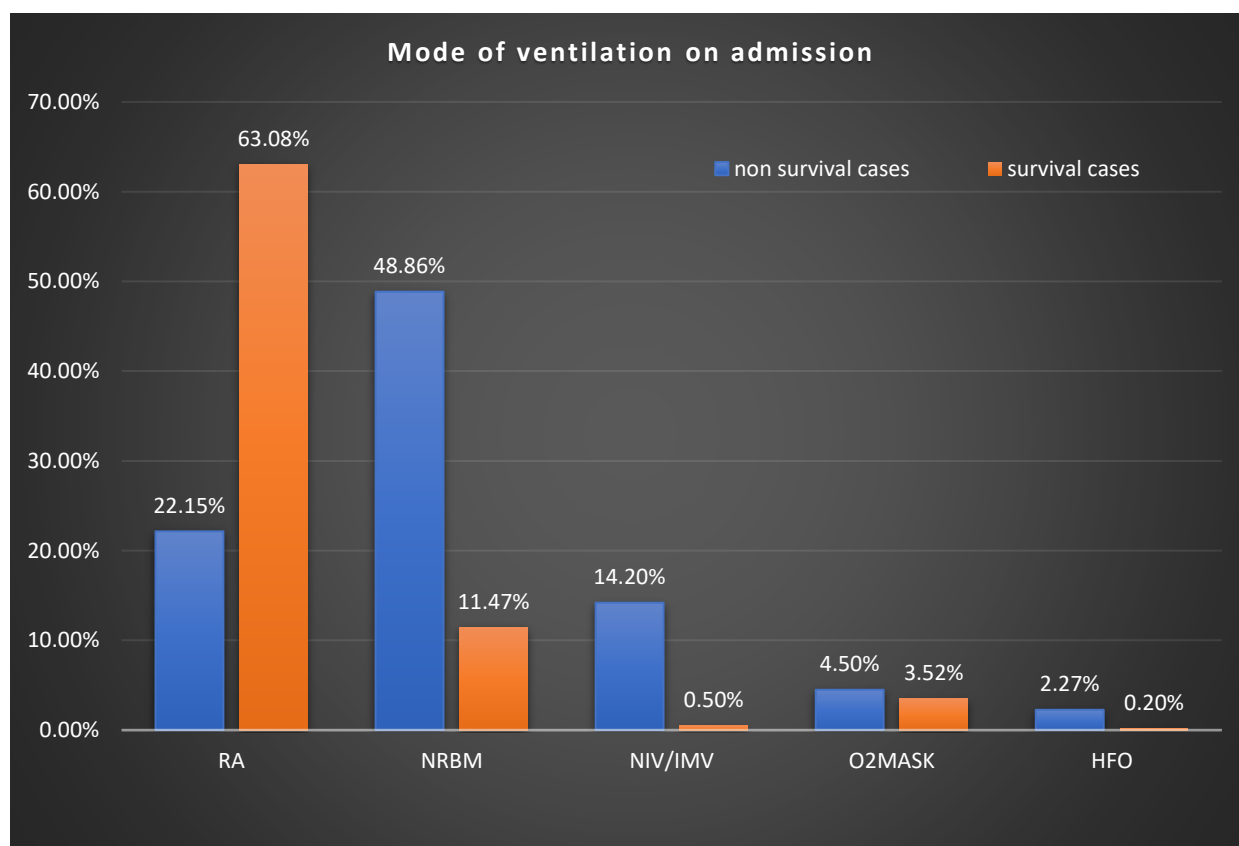
Respiratory rate at the time of admission shows higher sensitivity and specificity in predicting the mortality of covid patients.

**Illustration of the ROC curves with admission Spo2 [Graph 4]**

The area under this ROC curve of the test variable: Admission Spo2 is 0.246. Admission spo2 shows low sensitivity and higher specificity in predicting the mortality of covid patients.

**Table 8 :Mode of ventilation on admission**

	Group		Total
	Non survival cases n (%)	Survived cases n (%)	
Missing Data	14 (7.90%)	143 (21.02%)	157 (18.30%)
High Flow Nasal cannula	4(2.27%)	2(0.20%)	6 (0.70%)
Non Invasive/Invasive mechanical ventilation	25(14.20%)	4 (0.50%)	29 (3.30%)
Non rebreathing mask	86 (48.86%)	78 (11.47%)	164 (19.15%)
Oxygen Mask	8 (4.5%)	24 (3.52%)	32 (3.70%)
Room air	39 (22.15%)	429 (63.08%)	468 (54.67%)
Total	176 (20.60%)	680 (79.40%)	856 (100.00%)

**Graph 5 :Mode of ventilation**

Out of 176 COVID-19 positive patients who died, it was found that majority of the patients were on rebreathing mask (48.86%) at the time of admission, followed by patients maintaining at room comprising upto 22.15%.

14.2% of the study group required invasive/non invasive mechanical ventilation at the time of admission. It was also found that only 4.5% of the study group was on oxygen mask and 2.2% on HFNC.

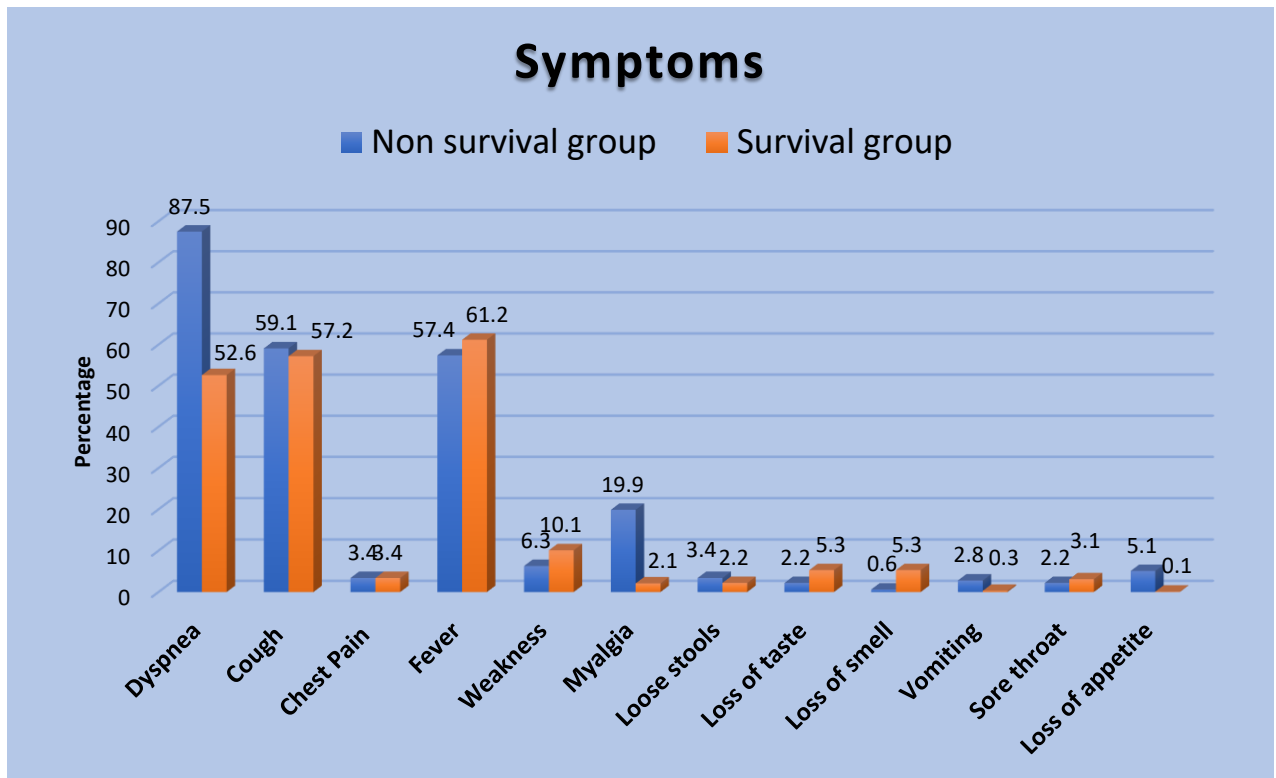
Out of 680 COVID-19 positive patients who survived, it was found that majority of the patients were maintaining at room air comprising upto 429 individuals (63.08%) at the time of admission.

11.4% (78 patients) of the control group required rebreathing mask. It was also found that only 0.5% (4 patients) of the control group required mechanical ventilation and 0.2% (2 patients) on HFNC.

In both the group, we had a missing data of the mode of ventilation at the time of admission comprising upto 14 (7.9%) and 143 (21.02%) in the study and control group.

**Table 9: Symptoms in the case and control groups**

Symptoms	Total No(%)	Mortality cases No(%)	Survived cases No(%)	P value
Dyspnea	512(59.8)	154(87.5)	358(52.6)	0.002
Cough	493(57.6)	104(59.1)	389(57.2)	0.673
Chest pain	29(3.4)	6(3.4)	23(3.4)	0.712
Fever	517(60.4)	101(57.4)	416(61.2)	0.325
Weakness	80(9.3)	11(6.3)	69(10.1)	0.014
Myalgia	49(5.7)	35(19.9)	14(2.1)	0.007
Loss of smell	21(2.5)	6(3.4)	15(2.2)	0.822
Loss of taste	40(4.7)	4(2.2)	36(5.3)	0.042
Loose stools	37(4.3)	1(0.6)	36(5.3)	0.003
Vomiting	7(0.8)	5(2.8)	2(0.3)	0.001
Sore throat	25(2.9)	4(2.2)	21(3.1)	0.562
Loss of appetite	10(1.2)	9(5.1)	1(0.1)	0.001



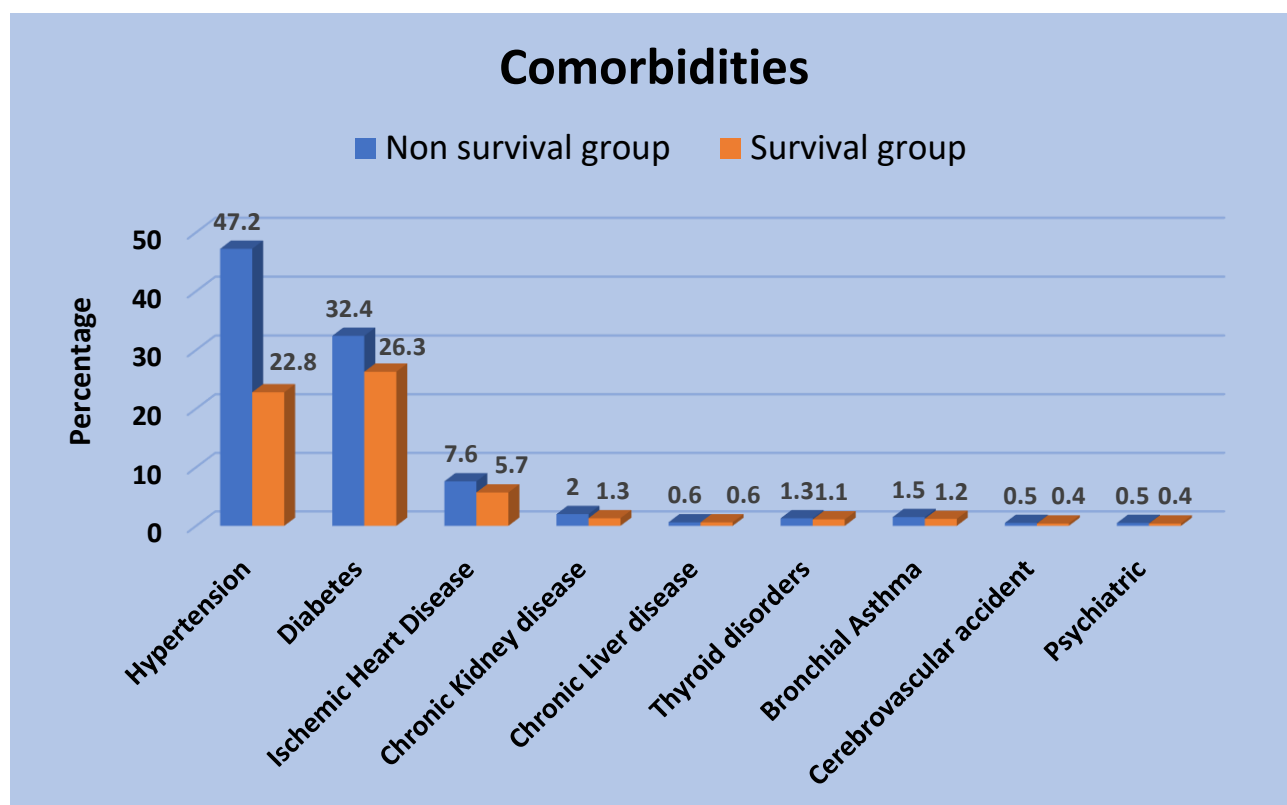
**Graph 6 :Symptoms**

The comparison of symptoms and clinical findings between groups is shown in the above table. Dyspnoea, fever, and cough were the most frequently reported symptoms upon admission; dyspnoea was considerably more common in patients who died, whereas fever, cough, and weakness were more frequent in those who survived.

**Table10:Association of comorbidities in the case and control group**

<b>Comorbidities</b>	<b>Total No (%)</b>	<b>Non survival cases No (%)</b>	<b>Survival case No (%)</b>	<b>P value</b>
Hypertension	238(27.8)	83(47.2)	155(22.8)	0.041
Diabetes mellitus	277(32.4)	98(55.7)	179(26.3)	0.047
Chronic kidney disease	17(2.0)	8(4.5)	9(1.3)	0.012
Chronic liver disease	5(0.6)	1(0.6)	4(0.6)	0.899
Thyroid disorder	11(1.3)	4(2.3)	7(1.1)	0.031
Bronchial asthma	13(1.5)	5(2.8)	8(1.2)	0.019
Ischemic Heart disease	65(7.6)	26(14.8)	39(5.7)	0.022
Cerebrovascular accident	4(0.5)	1(0.6)	3(0.4)	0.231
Psychiatric disorder	4(0.5)	1(0.6)	3(0.4)	0.231

Hypertension, diabetes mellitus and IHD were the most common comorbid conditions present in the patients with covid pneumonia thereby showing its statistically significance in leading to mortality.



Graph 7: Comorbidites

#### CT severity score among the case and control group

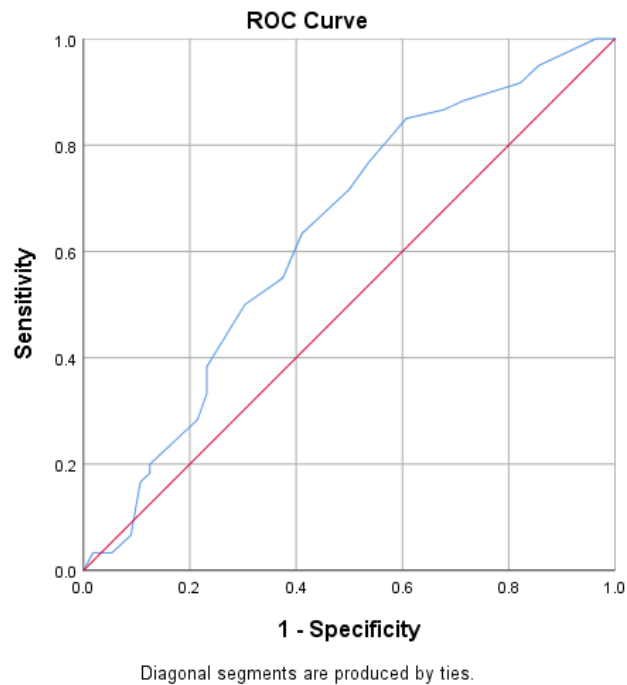
**Table 11: CT severity score among the case and control group**

Variable	Total	Non survival group	Survival group	P value
CT severity score(--/25)	13.6±5.8	14.8±6.1	12.4±5.4	0.025

It was found that CT severity score was have a prognostic significance with higher levels being associated with worst outcomes.

Mean CT severity score in non survival group(14.8±6.1) was higher compared to survival group (12.4±5.4) thereby showing its statistically significance .(P= 0.025).

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**Illustration of the ROC curves with CT severity score****[Graph 8]**

The area under this ROC curve of the test variable: CT severity score is 0.633.

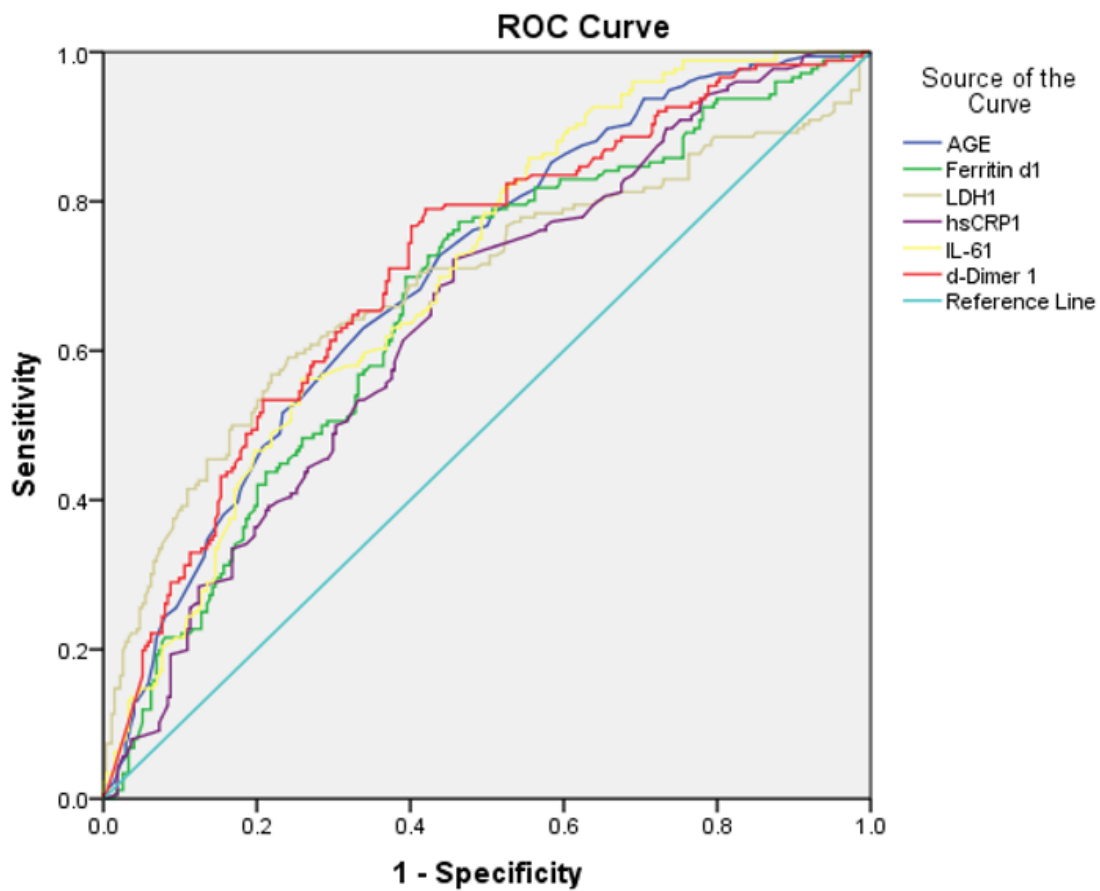
CT severity score shows higher sensitivity and specificity in predicting the mortality of covid patients.

**Table 12: Association of Inflammatory markers among the control and case group**

Variable	Total No(%)	Non survival cases No(%)	Survived cases No(%)	P value
Ferritin	569.6±854.5	1015.3±97.05	448.2±778.1	0.001
LDH	420.6±282.5	678.2±419.1	357.9±191.7	0.001
hsCRP	110.9±224.8	195.9±165.5	76.7±236.6	0.001
IL-6	13.6.1±478.9	341.6±860.7	84.7±299.3	0.006
d-Dimer	942.2±3473.7	1370.6±1569.3	837.6±3790.4	0.025
Urea	44.5±39.8	74.9±57.7	35.4±26.7	<0.001
Creatinine	3.9±45.5	1.9±2.1	4.6±52.0	0.558

The majority of patients had baseline measurements that were consistent with an acute inflammatory response, such as high levels of procalcitonin, CRP, and ferritin; these measurements were all noticeably altered in patients who died.

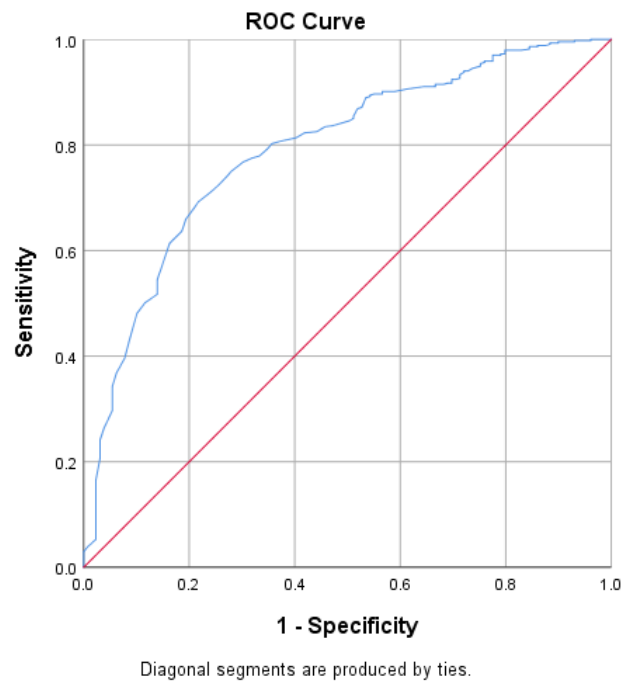
Urea, creatinine, and LDH serum concentrations were all considerably greater in mortality group than in survivor group. Additionally, D dimer, S. ferritin, and IL-6 levels were higher in non-survivors.

**Illustration of the ROC curves with inflammatory markers****[Graph 9]**

Above Fig. shows the ROC for both groups' outcomes of hospitalisation for inflammatory biomarkers, which in turn shows its sensitivity and specificity in predicting the mortality in covid patients.

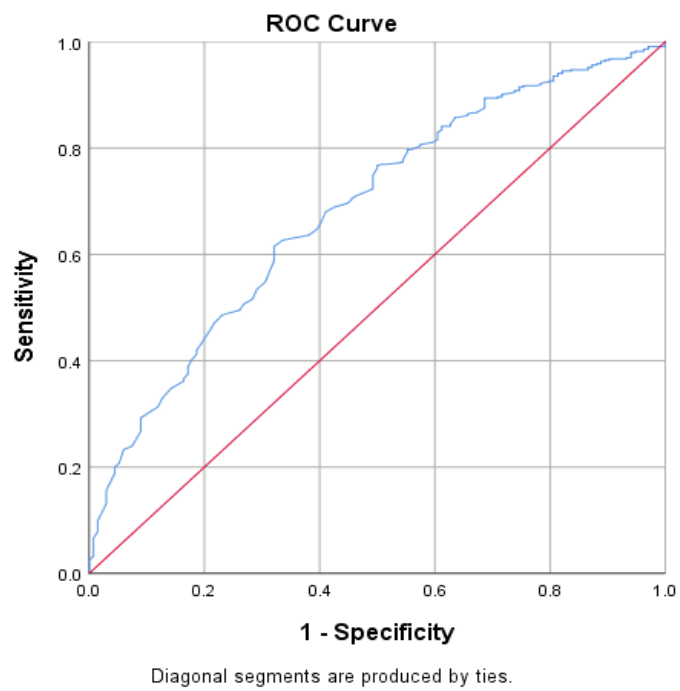
<b>Table 13 :Area under this ROC curve of the following test variable</b>	
Ferritin	0.758
LDH	0.835
Hscrp	0.800
IL-6	0.731
D- dimer	0.747

The area under this ROC curve of the test variable: urea is 0.792.



**Graph 10: ROC curve of serum urea**

The area under this ROC curve of the test variable: creatinine is 0.684.



**Graph 11: ROC curve of serum creatinine**

**Table 14: Association of Treatment among the control and case group**

Variable	Total No (%)	Non survival Cases No(%)	Survival cases No (%)	P value
Remdesvir (No of doses)	5±3	5±3.1	5±2.3	0.911
Tocilizumab (No. of Doses)	2±1	2±1.3	2±1.3	0.894
<b>Type of Steroid used</b>				
Methylprednisolone	576	142(24.6 %)	434( 75.3 %)	<0.001
Dexamethasone	98	9 (9.1 %)	89 (90.8 %)	

Remdesivir injection was relatively safe, and in both the groups no major adverse events were reported.

When intravenous methylprednisolone was given to hospitalised COVID-19 pneumonia patients instead of dexamethasone, it resulted in shorter hospital stays, better clinical outcomes, and higher survival rates.

**Multivariate logistic regression analysis [ Table 15]**

Variable	B	S.E.	p-value	OR	95% C.I.for OR	
					Lower	Upper
Age	-0.066	0.02	0.001	0.936	0.9	0.973
Sex	1.614	0.868	0.063	5.021	0.916	27.524
Admission RR	-0.217	0.05	0.001	0.805	0.73	0.887
Admission spo2	0.058	0.034	0.085	1.06	0.992	1.133
CT severity score(-- /25)	-0.08	0.043	0.061	0.923	0.849	1.004
Ferritin	-0.001	0	0.014	0.999	0.998	1
LDH	-0.007	0.002	0.001	0.993	0.99	0.997
hsCRP	-0.009	0.003	0.005	0.991	0.985	0.997
IL-6	0	0	0.87	1	0.999	1.001
d-Dimer	0	0	0.651	1	1	1
Urea	-0.044	0.007	0.001	0.957	0.945	0.97
Creatinine	0.253	0.148	0.088	1.287	0.963	1.722
Constant	2.925	0.307	0.001	18.628		

Finally, admission respiratory rate, spo2, older age, higher inflammatory markers at admission, and elevated inflammatory markers were found to be independent predictors of mortality in the multivariate Cox's proportional-hazard model.

The other significant indicators of greater mortality in these patients were blood urea, creatinine and CT severity .

# *Discussion*



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## **DISCUSSION**

The primary goal of this observational retrospective study was to evaluate and characterise the key clinical predictors and risk factors for mortality in COVID-19 participants.

A total of 856 COVID-19 patients were enrolled in this observational retrospective case control study. 176 patients who died were included in the case group (non survival group). 676 patients who survived were included in the control group .

Demographic data , oxygen saturation at the time of presentation ,day of onset of symptoms to hospital, laboratory biomarkers(Hscrp,D-dimer,S.PCT,IL6, S.ferritin) comorbidities (HTN/T2DM/ IHD/CKD/CLD/ CVA), mode of respiratory support (IMV, noninvasive mechanical ventilation [NIV], oxygen mask) at the time of admission, medications were recorded.

In this case-control study, older people, male sex , and people with pre existing diabetes and/or hypertension predominated and showed positive correlation for probability of dying from COVID-19.

There were 159 males (90%) and females (10 %) in the mortality group with the mean age of the patients being  $62.1 \pm 13.2$  years.

Whereas in the control/ survivor group, were 524 males(77%) and 156 were females patients(23%)with mean age being  $50.3 \pm 16.7$  years(  $p < 0.001$ )

A study by Nguyen NT et al , revealed that men have a higher respiratory rate , mechanical ventilation, a longer length of hospital stay, and a higher death rate even when compared across age groups, race/ethnicity, and comorbidity.<sup>[59]</sup>

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According to a study by Bart G. Pijls et al, individuals over the age of 70 and men have a higher risk of COVID-19 infection, severe illness, ICU hospitalisation, and mortality. This risk is based on meta-analyses of 59 studies that included 36,470 people.<sup>[60]</sup>

In this study all patient's oxygen saturation levels at the time of admission were noted. When compared to the survival group, which had a mean spo2 of 95.439.3, it was found that the non-survival group's was 85.213.9, demonstrating its statistical significance. (p<0.001)

According to a study by Fernando Mejia et al, oxygen saturation below 90% at entry is a significant predictor of in-hospital mortality in patients with COVID-19.<sup>[61]</sup> Another study by Praveen V. et al it was found that SPO2 < 90% at admission is a reliable indicator of mortality in COVID-19 patients.<sup>[62]</sup>

Before being admitted to our hospital, the average symptom duration was 4.6±3.2 days. However it was found that there was no statically significance in between the two groups in presenting to the hospital since the symptom onset . (p value- 0.215)

One can speculate that some of the patients in the case or control group experienced hypoxemia sooner before being admitted because the median time for symptom onset was similar for both groups. This suggests that we require a more effective, quicker method of identifying hypoxemia in the community.

According to our study, the respiratory rate upon admission was likewise related to a relative risk for mortality. It was found that mean respiratory rate in non survival group was 29.8±8.9 cpm compared to survival group being 20.9±4.2 cpm thereby showing its statistically significance.(p value – 0.001)

In accordance with a study conducted by Yuriy Pya et al<sup>[63]</sup>,

It was discovered that CRP and respiratory rate were separate predictors of mortality.

Respiratory rate being one of the components of systems like CURB65 score (Confusion, Urea, Respiratory Rate, Blood Pressure, Age > 65 years) and APACHE (Acute Physiology and Chronic Health Evaluation-II) score shows its importance.<sup>[64]</sup>

The majority of patients in the control group, which included 429 patients (63%) maintained at room air compared to the 39 patients (22.15%) in the non-survival group. Additionally, it was discovered that the majority of patients on NIV/IMV at the time of admission had a greater death rate, demonstrating the importance of this finding in predicting the mortality of covid patients.

Nearly 50% of patients in the non-survival group were using non-rebreathing masks at the time of admission, compared to only 11% in the control group.

IMV was required more frequently and for a shorter period of time in the patients who died, indicating a more serious respiratory injury.

The early symptoms that people with COVID-19 have experienced symptoms can be moderate or severe tiredness, dyspnea, and fever. The minor symptoms include cough, anorexia, and sore throat.<sup>[65,66]</sup>

In our study, we observed that dyspnea (87%) was much more common in patients who died, but fever(61%), loss of taste, and cough were more common in patients who lived.

These symptoms were most frequently reported upon admission.

It was also found out that major symptom common present in these two groups was cough which was upto 60% in the both groups.

Fever, dry cough, exhaustion, productive cough, and shortness of breath were the most prevalent symptoms in a research by Liang W et al. <sup>[67]</sup>

Similarly a study done by Lan Yang et al showed that fatigue expectoration, hemoptysis, dyspnea, and chest tightness were the independent predictors of death in covid.

In our study we found that both groups had high rates of comorbid Conditions such hypertension, diabetes mellitus with HTN alone contributing upto fifty percentage of the patients in the mortality group. It was also noticed that diabetes were present in 32 % of patients in mortality group and 26 % in survival group. However, in our investigation, having two or more comorbidities was linked to mortality.

Similarly in a study done by Je-Wook Chae et al research, patients with diabetes who also had end-organ damage (51.1%), congestive heart failure (9.9%), coronary artery disease (8.1%), and stroke (6.8%) were more likely to die than those without these conditions.<sup>[69]</sup>

The risk of death from COVID19 is dramatically increased by comorbidities. Patients with COPD and CKD had a greater risk of dying.<sup>[70]</sup>

A meta-analysis of 1389 COVID-19 patients, 19.7% of whom had severe disease, revealed a strong correlation between CKD and severe COVID-19.<sup>[71]</sup>

In one of the study from South Korea, which found that patients with diabetes had a much higher mortality rate than those without it (20.0% vs. 4.8%). Analysis of a study by Mammen JJ et al revealed that the presence of diabetes was not significantly different between survivors and non-survivors (42.5% vs. 49.2%,  $p=0.310$ ).<sup>[72]</sup>

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In this study it was demonstrated that, compared to survivors at admission, non-survivors with confirmed COVID-19 had greater levels of inflammatory markers (such as ferritin, CRP, IL-6, procalcitonin, and d-dimer) thereby showing its significance in predicting the mortality in covid patients .

According to a retrospective study by Aditi Parimoo et al higher levels of inflammatory markers were linked to a worse outcome of 142 patients admitted with COVID 19 .<sup>[73]</sup>

Similarly in a study done by Rahman T et al, Age, Lymphocyte count, D-dimer, CRP and serum creatinine acquired upon hospital admission were revealed as the primary predictors of hospital death.<sup>[74]</sup>

Patients who did not survive showed multi organ involvement, like acute renal failure, an increase in a number of cardiac involvement and procoagulant activity indicators. The majority of patients who experienced acute renal failure received conservative treatment.<sup>[75]</sup>

Numerous studies have been carried out to determine the correlation between these markers and patients with COVID19 overall prognosis.

A severe illness course has been independently related with high blood ferritin concentrations at the time of admission.

One of the main causes of death in patients with severe COVID19 disease has been related to the cytokine storm brought on by the release of proinflammatory factors, which is similar to that observed in other diseases.<sup>[76]</sup>

In this study, the median IL-6 level was 341.6+860.7pg/ml in non-survivors against 84.7+299.3 pg/ml in survivors. Higher IL-6 levels were related to more COVID deaths ( $p = 0.006$ ).

In the absence of a specific treatment for the illness, early detection of key laboratory markers such as C-reactive protein (CRP), urea, creatinine, interleukin-6 (IL-6), D-dimer, ferritin, and CT-severity score for disease severity may help in monitoring and preventing disease

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development towards a severe form. The prognosis and course of the illness are shown to be related to these lab indicators.

In one of the study done by Chaochao Tan et al ,it showed Greater CT severity scores and significant lung involvement were linked to higher CRP levels in the early stages of the disease [77].

Our findings demonstrated that patients with greater CT-Severity score had significantly higher mortality rates. Mean CT severity score in non survival group( $14.8\pm 6.1$ ) was higher compared to survival group ( $12.4\pm 5.4$ ) thereby showing its statistically significance .

Similar findings were reported by Abbasi et al after study being done on 262 patients, discovered that COVID-19 patients with elevated CT-SS had considerably higher death rates. [78]

In another study done by Yilmaz et al on 130 covid patients, serum ferritin and D-dimer levels were found to be elevated and to have a moderately correlation with CT severity. [79]

Similarly a recent study by Akdur G. et al on 655 patients revealed that patients with a higher CT severity score had a significant mortality risk and needed an extended stay in the intensive care unit (ICU) of more than five days thereby correlating with the data of our study showing its significance in predicting the mortality in covid patients. [80]

Temporal variations in chest CT severity scores and characteristics may be useful for detecting severe cases early and ultimately lowering the COVID-19 death rate. [81]

When intravenous methylprednisolone was given to hospitalised COVID-19 pneumonia patients instead of dexamethasone, it resulted in shorter hospital stays, better clinical outcomes, and higher survival rates.

Based on the theory that methylprednisolone has stronger lung penetration, it can operate as a better immunosuppressive agent in the treatment of COVID-19 and in improving respiratory problems.

Our data demonstrated that methylprednisolone had a substantial positive impact on the patient's treatment process resulting in decreased requirement for mechanical ventilation thereby reducing duration of hospital stay .<sup>[82, 83]</sup>

The Randomised Evaluation of COVID-19 Therapy (RECOVERY Trial) is a clinical trial with a sizable enrollment that examines potential therapies for patients in the United Kingdom who have been admitted to the hospital with severe COVID-19 infection.

In this trial consisting of 2104 patients it was found that dexamethasone treatment reduced mortality in patients hospitalised with Covid-19 who were getting invasive mechanical ventilation or oxygen supplementation but not in those individuals maintaining at room air.<sup>[84]</sup>

If taken at the right moment during the course of the disease, glucocorticoid medications are known to be effective in calming the inflammatory storm by inhibiting the expression of pro-inflammatory genes and lowering cytokine levels.<sup>[85]</sup>

A study by Wang et al. found that patients who had taken 1-2 mg/kg/day of methylprednisolone for 5-7 days had shorter hospital stays and need of lesser incidence of mechanical ventilation.<sup>[86]</sup>

In this study also, those who took methylprednisolone had lower fatality rates than those who received dexamethasone in our study. ( $p < 0.001$ )

The Cox regression model was then used to assess each variable that had a significant p-value in the univariate analysis.

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Inflammatory indicators, age, respiratory rate, admission spo2, symptoms, comorbidities, and CT severity all underwent multivariate logistic regression analysis. Age, sex, RR, admission spo2, CT severity score, and inflammatory biomarkers are factors that were statistically significantly linked to a higher risk of mortality in COVID-19 disease.

In a meta analysis done by Mehraeen E et al ,age, hypertension, and diabetes mellitus were found to significantly increase the risk of mortality among COVID-19 patients that included 114 studies and 310,494 patients from throughout the world. Only diabetes mellitus showed an independent connection with higher mortality in the multivariate analysis.<sup>[87]</sup>

In another meta analysis study done by Shi C et al they found 36 observational studies out of which 27 were used . The following significant risk factors were found to be associated with mortality : old age, male sex, preexisting comorbidities (especially chronic kidney, respiratory, and cardio-cerebrovascular diseases), dyspnea symptoms, complications during hospitalisation, corticosteroid therapy, and a severe condition. Furthermore, a number of aberrant laboratory indicators related to renal parameters, inflammation, coagulation were linked to poor outcomes.<sup>[88]</sup>

There were 7106 COVID19 patients in total that were found through a meta-analysis study done by Zakariaee et al. The findings of this study suggest a link between CT-SS and COVID-19 patient death.<sup>[89]</sup>

Our study revealed a number of important variables like age, RR, spo2 at the time of admission comorbidities, investigation which included CT scan and the Covid inflammatory marker, and finally steroid treatment linked to elevated mortality risk which was consistent with all these studies .

These variables can be used as a useful predictor marker to identify high-risk COVID19 patient at an early stage for early disease management.

Lastly , regarding the impact of vaccination in reducing the mortality of covid patients, it was found that COVID19 vaccine has significantly changed the pandemic's trajectory and saved tens of millions of lives worldwide. <sup>[90]</sup>

The effect of vaccination couldn't be determined because the Covid vaccinations hadn't yet been released, and our study was conducted in the group that was affected by the first wave of Covid in 2020.

In the existence of vaccinations, the Case fatality rate depends not only on how well they work to prevent mortality but also on how well they work to identify emerging illnesses. <sup>[91]</sup>

In order to provide early preventative measures for a better outcome, it is crucial to understand sickness severity and outcome predictors.

The risk of death linked with COVID-19 may be greatly decreased by implementing proper protection and interventions for COVID-19 patients in general and in particular male patients with age 50 years who have comorbidities. <sup>[92]</sup>

# *Conclusion*



## **CONCLUSION**

Hypertension, cardiovascular disease, and diabetes were the most common comorbidity in patients death due to COVID-19.

Inflammatory markers have a prognostic significance with higher levels being associated with worst outcomes.

The clinician can manage and treat patients by identifying those who are at risk of death with the aid of COVID19 mortality predictors in a better way.

# *Summary*



## **SUMMARY**

- A total of 856 patients with covid pneumonia were assessed in the study -176 patients in the study group and 680 in the control group.
- Both the groups were well matched with their baseline demographic characteristics.
- There were 159 males (90.3%) and 17 females patients (9.7%) in the study group ,whereas in the control group 524 were males(77.1%) and 156 (22.9%) were females.
- Mean duration of the time to hospital from symptom onset was higher in the case group(4.9±3.5 days), although it was not statistically significant.(p=0.215)
- Dyspnoea, fever, and cough were the most frequently reported symptoms upon admission; dyspnoea was considerably more common in patients who died, whereas fever, cough, and weakness were more frequent in those who survived.
- Diabetes mellitus,Hypertension and IHD were the most common comorbid conditions present in the patients with covid 19 pneumonia.
- There was statistically significant increase in respiratory rate and low spo2 at time of admission as compared to the control group.(p<0.001)
- Mean increase in the level of inflammatory markers and mini renal profile were noted and it was statistically significant as compared to the control group. (p<0.001)
- Mean CT severity score in non survival group(14.8±6.1) was higher compared to survival group (12.4±5.4) thereby showing its statistically significance .(P= 0.025).
- About 142 patients in the study group/non survival group and 434 patients in study group were on injection methylprednisolone when compared 9 patients in study and 89 patients in control group who received injection dexamethasone.
- When intravenous methylprednisolone was given to hospitalised COVID-19 pneumonia patients instead of dexamethasone, it resulted in shorter hospital stays, better clinical outcomes, and higher survival rates.

# *Bibliography*

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**BIBLIOGRAPHY**

1. Gopalan N, Senthil S, Prabakar NL, Senguttuvan T, Bhaskar A, Jagannathan M, et al. Predictors of mortality among hospitalized COVID-19 patients and risk score formulation for prioritizing tertiary care-An experience from South India. *PLoS One* 2022 Feb 3;17(2)
2. Liang W, Liang H, Ou L, Chen B, Chen A, Li C, et al. Development and validation of a clinical risk score to predict the occurrence of critical illness in hospitalized patients with COVID-19. *JAMA Intern Med.* 2020;180(8):1081–9
3. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet* . 2020;395(10229):1054–62
4. Jin Z, Du X, Xu Y, Deng Y, Liu M, Zhao Y, et al. Structure of Mpro from SARS-CoV-2 and discovery of its inhibitors. *Nature* 2020 ;582(7811):289–93
5. Wan Y, Shang J, Graham R, Baric RS, Li F. Receptor recognition by the novel Coronavirus from Wuhan: An analysis based on decade-long structural studies of SARS Coronavirus. *J Virol* . 2020 ;94(7)
6. Li X, Xu S, Yu M, Wang K, Tao Y, Zhou Y, et al. Risk factors for severity and mortality in adult COVID-19 inpatients in Wuhan. *J Allergy Clin Immunol* 2020;146(1):110–8
7. Shang Y, Liu T, Wei Y, Li J, Shao L, Liu M, et al. Scoring systems for predicting mortality for severe patients with COVID-19. *EClinical Medicine* . 2020;24(100426):100426
8. Knight SR, Ho A, Pius R, Buchan I, Carson G, Drake TM, et al. Risk stratification of patients admitted to hospital with covid-19 using the ISARIC WHO Clinical Characterisation Protocol: development and validation of the 4C Mortality Score. *BMJ* . 2020;370:m3339

- 
9. Lansbury LE, Rodrigo C, Leonardi-Bee J, Nguyen-Van-Tam J, Shen Lim W. Corticosteroids as adjunctive therapy in the treatment of influenza: An updated Cochrane systematic review and meta-analysis. *Crit Care Med* 2020 Feb;48(2):e98–106
  10. Edalatifard M, Akhtari M, Salehi M, Naderi Z, Jamshidi A, Mostafaei S, et al. Intravenous methylprednisolone pulse as a treatment for hospitalised severe COVID-19 patients: results from a randomised controlled clinical trial. *Eur Respir J.* 2020;56(6):2002808
  11. Liu L, Qu H, Li JJ, Yang YW, Zeng QX, Gong YW, et al. Effectiveness of methylprednisolone therapy in patients with a high-risk common type of COVID-19 pneumonia: a retrospective cohort study. *Clin Exp Med* 2022 Oct;22(3):487–97
  12. Wang Y, Jiang W, He Q, Wang C, Wang B, Zhou P, et al. A retrospective cohort study of methylprednisolone therapy in severe patients with COVID-19 pneumonia. *Signal Transduct Target Ther* 2020 5(1):57
  13. Corral L, Bahamonde A, Arnaiz delas Revillas F, Gomez-Barquero J, Abadia-Otero J, Garcia-Ibarbia C, et al. GLUCOCOVID: A controlled trial of methylprednisolone in adults hospitalized with COVID-19 pneumonia . 2020 (17).20133579
  14. Braude AC, Rebuck AS. Prednisone and methylprednisolone disposition in the lung. *Lancet* 1983 ;2(8357):995–7
  15. Pijls BG, Jolani S, Atherley A, Derckx RT, Dijkstra JIR, Franssen GHL, et al. Demographic risk factors for COVID-19 infection, severity, ICU admission and death: a meta-analysis of 59 studies. *BMJ Open* 2021 11(1)
  16. Rechtman E, Curtin P, Navarro E, Nirenberg S, Horton MK. Vital signs assessed in initial clinical encounters predict COVID-19 mortality in an NYC hospital system. *Sci Rep* 2020 ;10(1):21545
  17. Pya Y, Bekbossynova M, Gaipov A, Lesbekov T, Kapyshev T, Kuanyshbek A, et al. Mortality predictors of hospitalized patients with COVID-19: Retrospective cohort study from Nur-Sultan, Kazakhstan. *PLoS One* 2021;16(12)
-

18. Mahendra M, Nuchin A, Kumar R, Shreedhar S, Mahesh PA. Predictors of mortality in patients with severe COVID-19 pneumonia - a retrospective study. *Adv Respir Med* 2021;89(2):135–44
19. Alharbi Y, Alqahtani A, Albalawi O, Bakouri M. Epidemiological modeling of COVID-19 in Saudi Arabia: Spread projection, awareness, and impact of treatment. *Appl Sci (Basel)* 2020;10(17):5895
20. Al Shareef K, Bakouri M. Cytokine blood filtration responses in COVID-19. *Blood Purif* 2021;50(2):141–9.
21. Ahmad S, Kumar P, Shekhar S, Saha R, Ranjan A, Pandey S. Epidemiological, clinical, and laboratory predictors of in-hospital mortality among COVID-19 patients admitted in a tertiary COVID dedicated hospital, northern India: A retrospective observational study. *J Prim Care Community Health* 2021 ;12:2(1501):327-21
22. Zhang J, Hao Y, Ou W, Ming F, Liang G, Qian Y, et al. Serum interleukin-6 is an indicator for severity in 901 patients with SARS-CoV-2 infection: a cohort study. *J Transl Med* 2020 ;18(1):406
23. Ai T, Yang Z, Hou H, Zhan C, Chen C, Lv W, et al. Correlation of chest CT and RT-PCR testing for Coronavirus disease 2019 (COVID-19) in China: A report of 1014 cases. *Radiology* . 2020;296(2):E32–40.
24. Galloway JB, Norton S, Barker RD, Brookes A, Carey I, Clarke BD, et al. A clinical risk score to identify patients with COVID-19 at high risk of critical care admission or death: An observational cohort study. *J Infect* 2020 ;81(2):282–8
25. Salunke AA, Warikoo V, Kumar Pathak S, Nandy K, Mujawar J, Mendhe H, et al. A proposed ABCD scoring system for better triage of patients with COVID-19: Use of clinical features and radiopathological findings. *Diabetes Metab Syndr* 2020 ;14(6):1637–40

26. Joshi SR. Indian COVID-19 risk score, comorbidities and mortality. *J Assoc Physicians India* 2020;68(5):11–2
27. Ji D, Zhang D, Xu J, Chen Z, Yang T, Zhao P, et al. Prediction for progression risk in patients with COVID-19 pneumonia: The CALL score. *Clin Infect Dis* 2020;71(6):1393–9
28. Steinberg E, Balakrishna A, Habboushe J, Shawl A, Lee J. Calculated decisions: COVID-19 calculators during extreme resource-limited situations. *Emerg Med Pract* 2020 ;22(4):CD1–5
29. Chauhan NK, Shadrach BJ, Garg MK, Bhatia P, Bhardwaj P, Gupta MK, et al. Predictors of Clinical Outcomes in Adult COVID-19 Patients Admitted to a Tertiary Care Hospital in India: an analytical cross-sectional study. *Acta Biomed* 2021;92(3)
30. Hu B, Guo H, Zhou P, Shi Z-L. Characteristics of SARS-CoV-2 and COVID-19. *Nat Rev Microbiol* 2021 ;19(3):141–54.
31. Ghinai I, McPherson TD, Hunter JC, Kirking HL, Christiansen D, Joshi K, et al. First known person-to-person transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the USA. *Lancet* 2020 ;395(10230):1137–44
32. Shang J, Wan Y, Luo C, Ye G, Geng Q, Auerbach A, et al. Cell entry mechanisms of SARS-CoV-2. *Proc Natl Acad Sci U S A*. 2020;117(21):11727–34
33. Hansell DM, Bankier AA, MacMahon H, McLoud TC, Müller NL, Remy J. Fleischner Society: glossary of terms for thoracic imaging. *Radiology* 2008;246(3):697–722
34. Wang W, Xu Y, Gao R, Lu R, Han K, Wu G, et al. Detection of SARS-CoV-2 in different types of clinical specimens. *JAMA* 2020 ;323(18):1843–4.
35. Ni W, Yang X, Yang D, Bao J, Li R, Xiao Y, et al. Role of angiotensin-converting enzyme 2 (ACE2) in COVID-19. *Crit Care* . 2020;24(1):422.

36. Han H, Luo Q, Mo F, Long L, Zheng W. SARS-CoV-2 RNA more readily detected in induced sputum than in throat swabs of convalescent COVID-19 patients. *Lancet Infect Dis* 2020 ;20(6):655–6
37. Arabi YM, Mandourah Y, Al-Hameed F, Sindi AA, Almekhlafi GA, Hussein MA, et al. Corticosteroid therapy for critically ill patients with Middle East Respiratory Syndrome. *Am J Respir Crit Care Med*. 2018;197(6):757–67
38. Nguyen NT, Chinn J, De Ferrante M, Kirby KA, Hohmann SF, Amin A. Male gender is a predictor of higher mortality in hospitalized adults with COVID-19. *PLoS One* 2021;16(7)
39. Mejía F, Medina C, Cornejo E, Morello E, Vásquez S, Alave J, et al. Oxygen saturation as a predictor of mortality in hospitalized adult patients with COVID-19 in a public hospital in Lima, Peru. *PLoS One*. 2020 ;15(12)
40. Wu Z, McGoogan JM. Characteristics of and important lessons from the Coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72 314 cases from the Chinese center for disease control and prevention: Summary of a report of 72 314 cases from the Chinese center for disease control and prevention. *JAMA* . 2020 ;323(13):1239–42
41. Liang W, Liang H, Ou L, Chen B, Chen A, Li C, et al. Development and validation of a clinical risk score to predict the occurrence of critical illness in hospitalized patients with COVID-19. *JAMA Intern Med*. 2020 ;180(8):1081–9.
42. Mehraeen E, Karimi A, Barzegary A, Vahedi F, Afsahi AM, Dadras O, et al. Predictors of mortality in patients with COVID-19-a systematic review. *Eur J Integr Med* 2020;40(101226):101226.
43. Groff A, Kavanaugh M, Ramgobin D, McClafferty B, Aggarwal CS, Golamari R, et al. Gastrointestinal manifestations of COVID-19: A review of what we know. *Ochsner J* 2021 Summer;21(2):177–80

- 
44. Hermann M, Laxar D, Krall C, Hafner C, Herzog O, Kimberger O, et al. Duration of invasive mechanical ventilation prior to extracorporeal membrane oxygenation is not associated with survival in acute respiratory distress syndrome caused by coronavirus disease 2019. *Ann Intensive Care* 2022 ;12(1):6
  45. Oberfeld B, Achanta A, Carpenter K, Chen P, Gilette NM, Langat P, et al. SnapShot: COVID-19. *Cell* 2020;181(4):954-954.
  46. Rahman T, Al-Ishaq FA, Al-Mohannadi FS, Mubarak RS, Al-Hitmi MH, Islam KR, et al. Mortality prediction utilizing blood biomarkers to predict the severity of COVID-19 using machine learning technique. *Diagnostics (Basel)* 2021 ;11(9):1582
  47. Yang L, Jin J, Luo W, Gan Y, Chen B, Li W. Risk factors for predicting mortality of COVID-19 patients: A systematic review and meta-analysis. *PLoS One* 2020;15(11)
  48. Cueto-Manzano AM, Espinel-Bermúdez MC, Hernández-González SO, Rojas-Campos E, Nava-Zavala AH, Fuentes-Orozco C, et al. Risk factors for mortality of adult patients with COVID-19 hospitalised in an emerging country: a cohort study. *BMJ Open* 2021;11(7)
  49. Henry BM, Lippi G. Chronic kidney disease is associated with severe coronavirus disease 2019 (COVID-19) infection. *Int Urol Nephrol* . 2020 ;52(6):1193–4
  50. Venkata VS, Kiernan G. Covid-19 and copd: Pooled analysis of observational studies. *Chest* 2020 ;158(4):A2469
  51. Francone M, Iafrate F, Masci GM, Coco S, Cilia F, Manganaro L, et al. Chest CT score in COVID-19 patients: correlation with disease severity and short-term prognosis. *Eur Radiol* 2020;30(12):6808–17
  52. Acharya D, Lee K, Lee DS, Lee YS, Moon S-S. Mortality rate and predictors of mortality in hospitalized COVID-19 patients with diabetes. *Healthcare (Basel)* 2020;8(3):338
  53. Parimoo A, Biswas A, Baitha U, Gupta G, Pandey S, Ranjan P, et al. Dynamics of inflammatory markers in predicting mortality in COVID-19. *Cureus* 2021;13(10)
-

- 
54. Chen G, Wu D, Guo W, Cao Y, Huang D, Wang H, et al. Clinical and immunological features of severe and moderate coronavirus disease 2019. *J Clin Invest* 2020 ;130(5):2620–9
  55. Tan C, Huang Y, Shi F, Tan K, Ma Q, Chen Y, et al. C-reactive protein correlates with computed tomographic findings and predicts severe COVID-19 early. *J Med Virol* 2020 ;92(7):856–62
  56. Yilmaz A, Sabirli R, Seyit M, Ozen M, Oskay A, Cakmak V, et al. Association between laboratory parameters and CT severity in patients infected with Covid-19: A retrospective, observational study. *Am J Emerg Med.* 2021 ;42:110–4
  57. Abbasi B, Akhavan R, Ghamari Khameneh A, Zandi B, Farrokh D, Pezeshki Rad M, et al. Evaluation of the relationship between inpatient COVID-19 mortality and chest CT severity score. *Am J Emerg Med* 2021 ;45:458–63.
  58. Akdur G, Daş M, Bardakci O, Akman C, Siddıkoğlu D, Akdur O, et al. Prediction of mortality in COVID-19 through combing CT severity score with NEWS, qSOFA, or peripheral perfusion index. *Am J Emerg Med* 2021 ;50:546–52
  59. Braude AC, Rebuck AS. Prednisone and methylprednisolone disposition in the lung. *Lancet* 1983 ;2(8357):995–7
  60. Meduri GU, Siemieniuk RAC, Ness RA, Seyler SJ. Prolonged low-dose methylprednisolone treatment is highly effective in reducing duration of mechanical ventilation and mortality in patients with ARDS. *J Intensive Care* 2018 ;6(1):53
  61. Darwish I, Mubareka S, Liles WC. Immunomodulatory therapy for severe influenza. *Expert Rev Anti Infect Ther* 2011;9(7):807–22
  62. Cao J, Tu W-J, Cheng W, Yu L, Liu Y-K, Hu X, et al. Clinical features and short-term outcomes of 102 patients with Coronavirus disease 2019 in Wuhan, China. *Clin Infect Dis* 2020 ;71(15):748–55.

- 
63. Corral-Gudino L, Bahamonde A, Arnaiz-Revillas F, Gómez-Barquero J, Abadía-Otero J, García-Ibarbia C, et al. Methylprednisolone in adults hospitalized with COVID-19 pneumonia: An open-label randomized trial (GLUCOCOVID): An open-label randomized trial (GLUCOCOVID). *Wien Klin Wochenschr* . 2021 ;133(7–8):303–11
  64. Del Rio C, Collins LF, Malani P. Long-term health consequences of COVID-19. *JAMA* 2020 ;324(17):1723–4
  65. Kucharski AJ, Russell TW, Diamond C, Liu Y, Edmunds J, Funk S, et al. Early dynamics of transmission and control of COVID-19: a mathematical modelling study. *Lancet Infect Dis* 2020 ;20(5):553–8
  66. Karakike E, Giamarellos-Bourboulis EJ, Kyprianou M, Fleischmann-Struzek C, Pletz MW, Netea MG, et al. Coronavirus disease 2019 as cause of viral sepsis: A systematic review and meta-analysis. *Crit Care Med* 2021 ;Publish Ahead of Print(12):2042–57
  67. Guan W-J, Ni Z-Y, Hu Y, Liang W-H, Ou C-Q, He J-X, et al. Clinical characteristics of Coronavirus disease 2019 in China. *N Engl J Med* . 2020;382(18):1708–20
  68. Zu ZY, Jiang MD, Xu PP, Chen W, Ni QQ, Lu GM, et al. Coronavirus disease 2019 (COVID-19): A perspective from China. *Radiology* 2020;296(2)
  69. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet* 2020 ;395(10229):1054–62
  70. Chae J-W, Song CS, Kim H, Lee K-B, Seo B-S, Kim D-I. Prediction of mortality in patients undergoing maintenance hemodialysis by Charlson Comorbidity Index using ICD-10 database. *Nephron Clin Pract*. 2011;117(4):c379-84.
  71. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet* 2020 ;395(10223):507–13
-

- 
72. Wang W, Xu Y, Gao R, Lu R, Han K, Wu G, et al. Detection of SARS-CoV-2 in different types of clinical specimens. *JAMA* 2020;323(18):1843–4.
  73. Yang Y, Cui X, Wei H, Guo C, Zhang Y. Potential anti-Coronavirus agents and the pharmacologic mechanisms. *Drug Des Devel Ther* 2021;15:1213–23
  74. RECOVERY Collaborative Group, Horby P, Lim WS, Emberson JR, Mafham M, Bell JL, et al. Dexamethasone in hospitalized patients with Covid-19. *N Engl J Med* . 2021 ;384(8):693–704
  75. Watson OJ, Barnsley G, Toor J, Hogan AB, Winskill P, Ghani AC. Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. *Lancet Infect Dis* 2022 ;22(9):1293–302
  76. di Lego V, Sánchez-Romero M, Prskawetz A. The impact of COVID-19 vaccines on the Case Fatality Rate: The importance of monitoring breakthrough infections. *Int J Infect Dis* 2022 ;119:178–83
  77. Mehraeen E, Karimi A, Barzegary A, Vahedi F, Afsahi AM, Dadras O, et al. Predictors of mortality in patients with COVID-19-a systematic review. *Eur J Integr Med* 2020;40(101226):101226.
  78. Shi C, Wang L, Ye J, Gu Z, Wang S, Xia J, et al. Predictors of mortality in patients with coronavirus disease 2019: a systematic review and meta-analysis. *BMC Infect Dis* 2021 ;21(1):663
  79. Biswas M, Rahaman S, Biswas TK, Haque Z, Ibrahim B. Association of sex, age, and comorbidities with mortality in COVID-19 patients: A systematic review and meta-analysis. *Intervirology* 2020 ;64(1):1–12
  80. B Mohitosh, R Shawonur ,K Tapash, Z Haquec ,I Baharudin Association of Sex, Age, and Comorbidities with Mortality in COVID-19 Patients: A Systematic Review and Meta-Analysis *Intervirology* 2021;64:36–47
-

- 
81. Zakariaee SS, Salmanipour H, Naderi N, Kazemi-Arpanahi H, Shanbehzadeh M. Association of chest CT severity score with mortality of COVID-19 patients: a systematic review and meta-analysis. *Clin Transl Imaging* . 2022 ;10(6):663–76
  82. Kumar S, Nyodu R, Maurya VK, Saxena SK. Morphology, genome organization, replication, and pathogenesis of severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2). *Medical Virology: From Pathogenesis to Disease Control*. Springer ; 2020. p. 23–31
  83. Emami A, Javanmardi F, Pirbonyeh N, Akbari A. Prevalence of underlying diseases in hospitalized patients with COVID-19: A systematic review and meta-analysis. *Arch Acad Emerg Med*. 2020;8(1)
  84. Guan W-J, Liang W-H, Zhao Y, Liang H-R, Chen Z-S, Li Y-M, et al. Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis. *Eur Respir J* 2020 ;55(5):2000-547
  85. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020 ;395(10223):497–506
  86. Yang X, Yu Y, Xu J, Shu H, Xia J, Liu H, et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *Lancet Respir Med* 2020;8(5):475–81
  87. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet* 2020 ;35(10):1054–62
  88. Han H, Ma Q, Li C, Liu R, Zhao L, Wang W, et al. Profiling serum cytokines in COVID-19 patients reveals IL-6 and IL-10 are disease severity predictors. *Emerg Microbes Infect* 2020 ;9(1):1123–30.
  89. Liu F, Li L, Xu M, Wu J, Luo D, Zhu Y, et al. Prognostic value of interleukin-6, C-reactive protein, and procalcitonin in patients with COVID-19. *J Clin Virol* 2020;27(3):1043-70
-

90. Zhang J-J, Cao Y-Y, Tan G, Dong X, Wang B-C, Lin J, et al. Clinical, radiological, and laboratory characteristics and risk factors for severity and mortality of 289 hospitalized COVID-19 patients. *Allergy* 2021 ;76(2):533–50
91. Ponti G, Maccaferri M, Ruini C, Tomasi A, Ozben T. Biomarkers associated with COVID-19 disease progression. *Crit Rev Clin Lab Sci* . 2020;57(6):389–99
92. Guan W-J, Ni Z-Y, Hu Y, Liang W-H, Ou C-Q, He J-X, et al. Clinical characteristics of Coronavirus disease 2019 in China. *N Engl J Med* . 2020;382(18):1708–20

# *Annexure-I*



## ANNEXURE I – CONSENT FORM

### Application form for requesting waiver of consent

TO  
INSTITUTIONAL ETHICAL COMMITTEE  
JAWAHARLAL NEHRU MEDICAL COLLEGE  
KLE UNIVERSITY, BELAGAVI.

1. **Principal Investigator's name:**
2. **Department:**

3. **Title of project:** PREDICTORS OF MORTALITY IN COVID 19 PATIENTS  
-A ONE YEAR OBSERVATIONAL STUDY IN KLES Dr PRABHAKAR KORE  
HOSPITAL

4. **Name and designation of Guide :**

Professor and Head, Department of Respiratory Medicine.

J.N. Medical college, KLE University, Belgaum.

**Head of the Department. :**

Professor and Head, Department of Respiratory Medicine.

J.N. Medical college, KLE University, Belgaum.

5. **Request for waiver of informed consent:**

- There is no direct contact between the researcher and participant.
- The proposed research presents no more than minimal risk to participants
- The rights of the participants are not violated
- The Data collected will purely be used only for research purposes and confidentiality of data and privacy of research participant will be respected and protected.

**Principal Investigator's signature with date:**

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**Signature of the Chairperson with Date:**

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**ANNEXURE- II****PROFORMA****PREDICTORS OF MORTALITY IN COVID PATIENTS A ONE YEAR  
OBSERVATIONAL STUDY**

<b>NAME</b>		<b>IP NO</b>	
<b>AGE</b>		<b>SEX</b>	

**CLINICAL PROFILE:**

Chief Complaint:

Past History:

Comorbidities	HTN	Diabetes	CVD	CVA	Chronic liver disease	Chronic kidney disease	Prior lung conditions	Others
Yes/no								
Since								
On treatment								

Drug history:

## DRUGS TAKEN DURATION

INJ REMDES VIR		
INJ METHYLPREDNISOLONE		
INJ DEXAMETHASONE		
TOCLIZUMAB		

## I) General Physical Examination -

Respiratory Rate	
SpO2	

**On Admission:**

Time to Hospital from symptom onset	
Mode of Ventilation	

**HRCT Findings**

Corad Score	
Severity	

**BLOOD INVESTIGATION:****Renal profile****COVID PROFILE**

Urea		S.ferritin	
S.creatinine		HsCRP	
		S .Pct	
		IL 6	
		D Dimer	
		LDH	

## ANNEXURE- III- ETHICAL CLEARANCE LETTER



K.L.E. ACADEMY OF HIGHER EDUCATION AND RESEARCH  
(Deemed – to- be- University)

Accredited 'A' Grade by NAAC (2<sup>nd</sup> Cycle)

Placed in Category 'A' by MHRD (GoI)

**JAWAHARLAL NEHRU MEDICAL COLLEGE,**  
**NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)**

Website: <http://www.jnmc.edu>  
E-Mail : [dome@jnmc.edu](mailto:dome@jnmc.edu)

Phone: (+ 91-(0)831 Office : 2472550  
Principal: 2471701  
Fax No. +91 (0)831 – 2470759

**Ref: MDC/DOME/ 50**

**Date: 25/01/2021**

To,

PG student in Respiratory Medicine,  
J. N. Medical College,  
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled  
**“PREDICTORS OF MORTALITY IN COVID 19 PATIENTS – A ONE YEAR  
OBSERVATIONAL STUDY IN KLES DR PRABHAKAR KORE HOSPITAL”**, is ethical  
and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics  
Committee on Human Subjects Research.

**(Dr. Smita Sonoli)**  
Member Secretary  
JNMC Institutional Ethics Committee  
on Human Subjects Research,  
J.N.Medical College, Belagavi.

**(Dr. Harsha Hegde)**  
Chairman,  
JNMC Institutional Ethics Committee  
on Human Subjects Research,  
J.N.Medical College, Belagavi.

**ANNEXURE IV- KEY TO MASTER CHART**

DM	-	Diabetes Mellitus
HTN	-	Hypertension
CKD	-	chronic Kidney Disease
Il-6	-	Interleukin 6
RR	-	Respiratory rate
Spo2	-	Saturation of oxygen
F	-	Fever
C	-	Cough
B	-	Breathlessness
W	-	Weakness
LO	-	Loss of appetite
LT	-	Loss of Taste
V	-	Vomiting
D	-	Dexamethasone
M	-	Methylprednisolone

**MASTER CHART - Mortality Cases**

DEMOGRAPHY					CLINICAL PARAMETERS AT Admission										r Labs at Admi				TREATMENT				
Sl. No.	IP No	Date of Admission	AGE	Sex	Symptoms (C=cough; F=Fever; B=breathlessness; V:Vomiting, M=Myalgia, Loss of smell=LS; Loss of taste=LT,W:weakness,L O=loose stools,CP: Chest pain,Sore Throat=ST,LAPP: Decreased Appetite)	Time to hospital from symptom onset (Days)	Admission Respiratory rate (RR/min)	Admission SPO2	Admission O2 modalityn (RBM,HFO, NIV, Ventilator)	CO-morbidites(DM-type 2 diabetes mellitus,CLD-chronic liver disease,HTN-hypertension,IH D-ischemic heart Disease,CKD-chronic kidney	CT severity score(--/25)	Ferritin	LDH	hsCRP	IL-6	d-Dimer	Urea	Creatinine	Remdesivir (No. of Doses)	Tocilizumab (No. of Doses)	LMWH (Max Dose in mg)	Type of Steroid used (M-MethylePred ,D-dexa)	Max dose per day used(mg-milligram)
1	1021625	24/08/20	74	M	F,B	7	28	96	RBM	DM	12	1349	701		3950	948	84	1.94	2		40mg	M	1000mg
2	1019401	22/07/20	69	M	F,B,C	6		98	RBM	HTN,IHD		387	386		33.42	572	45	0.93	9	1	40mg	M	40mg
3	1019733	27/07/20	72	F	C,B	3		97	RBM	HTN	22	4583	535	178	214		95	1.89	5	2	40mg	D,M	8mg / 40mg
4	1013634	05/06/20	51	M	C,F,M	4		94	RA	HTN,CKD													
5	1019721	27/07/20	64	M	C,F,M,B	10		95	HFO	DM		421	649		627.8		24	1.13	7	1	40mg	D,M	6mg / 40mg
6	1021469	21/08/20	85	M	B	3		94	RA	DM/HTN								1.67	2		40mg	M	80mg
7	1022318	03/09/2020	66	F	F,M,B,LT	7	28	94	RBM	DM, HTN	18	915	552		1935	1346	117	1.01	8		80mg	M	1000mg
8	1022362	03/09/2020	58	M	F,B			92	RBM	DM	8	106	306		28.9	400	28	0.6	8	1	40mg	M	1000mg
9	1021169	17/8/2020	70	M	M	3		90	RA			810			280	20	0.8	7	1	40 mg	M	500mg	
10	1021530	22/08/2020	57	M	C,B	5		88	RBM	IHD		943	1756		27	>5000	85	1.25			40mg	M	80mg
11	1019598	25/7/2020	60	M	C,F,B		28	90	RA	DM		441.6	377	210	42.89	284	46	0.88	2	1	80mg		
12	1020782	12/08/2020	82	M	C,F,M	5		93	RA	HTN,DM		78.79	342	326.7	286.2	725		0.94	9	2	80mg	M	500mg
13	1021922	28/8/20	58	F	B,F	2		37	NIV	DM, HTN		156	631	71	49.3	723			2		80mg	M	1000mg
14	1020039	31/7/2020	73	M	C,B	3		80	NIV	DM,HTN,OSA									2		40mg	D	6mg
15	1021193	28/8/20	65	M	F,B	7	32	90	RBM	DM	15						216	9.29					
16	1022367	3/9/2020	75	M	F,B,LO,V	3	54	35	RBM				866	192	37.27	676	69	0.86	1		80mg	M	500mg
17	1020295	4/8/2020	59	M	C,B,M,B	2		92	O2M			231	509		198.8	1254		0.73	10	2	40mg	M	1000mg
18	1020750	11/8/20	64	M	C,F	5		100	NIV	DM,HTN,IHD		1014	1113		16.24	5000	18	0.88	4		40mg	M	120mg
19	1022733	8/9/2020	70	M	B,CP			96	RA	HTN,IHD		104	402		11.5	103	31	0.9	3		40mg	M	1000mg
20	1020523	8/8/2020	71	M	C,F,B	2	20	88	RBM	DM,HTN		344		88.5	32.18	290	46	1.45	2		40mg	D	12mg
21	1019616	25/7/2020	83	M	F,B,V	4		100	NIV	IHD		1186		9.3		1043	62	1.57	9	3	40mg	M	1000mg
22	1022407	4/9/20	67	M	C,B,M		30	88	RBM	HTN	18	269			46.8	1320		1.35	5	1	40mg	M	1000mg
23	1021629	24/8/2020	73	F	C,F,B	3		87	RBM	DM,HTN		80.2	394			360	64	1.74	5		40mg	M	500mg
24	1023926	24/9/2020	72	M	F,B	7		94	RBM	DM,HTN		3669	371			419	35	1.25	1		40mg	M	500mg
25	1022264	02/09/20	60	M	C, F, B			82	RBM	BA	23	1013	969		946	1352	65	0.93	2			M	40mg
26	1022671	07/09/2020	39	M	C,B,W	4		70	NIV		6										80mg	M	80mg
27	1023965	24/09/20	70	M	C,F,B			64	RA	DM, HTN		1434	709	169	8.48	644	51	1.71	6			M	40mg
28	1022916	11/09/2020	50	M	C,B	3		93	O2M	DM	22	308	933	649.8	347.1	1392	50	1.01	2		40mg	M	1000 mg
29	1022775	9/9/2020	44	M	M	15		99	RBM	CLD	2	5533			115		154	5.8			40mg	M	80mg
30	1022462	5/9/2020	51	M	B			93	RBM	DM	13	2318	476		113	1349	265		5		40mg	M	500mg
31	1022738	8/9/2020	63	M	C,F,M,B			95	NIV	DM		413	750		26.6	1482	53		2		40mg	M	40mg
32	1019602	25/7/20	68	M	C,F,B	3	28	87	RBM	DM		737.9			97.51	5000	79	1.55	2	6	40mg	M	40mg
33	1020598	08/08/2020	49	M	F,M	8	30	86	RBM	DM		1349	826			937	34	1.01	4	2	80mg	M	500mg
34	1022740	8/9/2020	74	M	B	1		99	NIV	DM,HTN		499	3650		>5000	139	3.52	5		40mg	M	1000mg	
35	5783029	25/7/2020	73	M	C,F,B	4	26	76	RBM	DM,HTN				46					9		40mg	M	80mg
36	1023296	15/09/2020	66	M	C,F,B	7	36	96	RBM	DM,HTN		847.6			222	573	23	0.78	11	1	80mg	M	500mg
37	1023272	15/09/2020	52	M	C,F,B	2		66	RBM	HTN		516.7	819	218.6	22.65	1217	52	1.02	5		80mg	M	1000mg
38	1021459	21/08/2020	56	M	M			84	RBM	DM	1	923	842			765			2		80mg	M	1000mg
39	1021997	29/08/2020	71	M	C,F,B	7		93	NIV	IHD	14	271	854	14	19.57	660	72	0.81	5		80mg	M	1000mg
40	1021081	16/08/2020	66	F	C,F,B	2		94	RBM	DM		82.91	280		164	328		0.85	2		80mg	M	500mg
41	1021843	27/08/2020	84	M	B	11		96		DM,HTN,IHD		385.3	489			898	37	1.06			40mg	M	1000mg
42	1021421	21/08/2020	64	M	C,B	5		94	NIV			1507			7028		1.09			80mg	M	1000mg	
43	1021050	15/08/2020	32	M	C,F,B	20	36	86	RBM			759	579				36	1.01	3	1		M	1000mg
44	1022051	31/08/2020	65	M	C,F,B			56		DM,HTN	22	2000	670		768	346	198	10.8	1			M	
45	1024591	08/10/2020	60	F	B,CP	6	36	88	RBM										1			M	80mg
46	1021386	20/08/2020	36	M	M,B	2		62	RBM	TD					20		89	1.06	7		40mg	M	1000mg
47	1020930	13/08/2020	68	M	F,B,ST			82	RBM	HTN,DM	22	632.4	732				51	1.17	3		80mg	M	120mg
48	1020766	11/08/2020	56	M	B,M			90	RBM	DM,HTN,IHD		229	243		102.8	187	24	1.15				D	
49	1020760	11/08/2020	56	M	B,LO			96	RA	DM,HTN			392		1858	27					80mg	M	80mg
50	1019711	27/07/2020	77	M	C,F,M,B,LT		30				20	1015				431	48	0.78	9	1		M	120mg
51	1021514	22/8/2020	65	F	C,B			77	RBM	DM, HTN	20	432	629			1528	55	0.81	2		40mg	M	1000mg
52	1021972	29/8/2020	69	M	C,B,LAPP	5		83	RA	DM,HTN,CKD		904	415			509	142	11.2			40mg	M	80mg
53	1021262	18/8/20	68	M	W,ST,B,C,LAPP		27	86	RBM		17	2000	855	316.5		>5000	68	2.52	3		120mg	M	40mg
54	1020855	13/08/2020	81	M	C,F,B			42	RA	DM,HTN	21	46.52	527				66	1.32	1		40mg	D	24mg
55	1021636	24/08/2020	61	M	C,F,B		36	82	RA	DM		1341	416			350	41	0.91	5		40mg	M	120mg
56	1021999	29/08/2020	50	M	C,B	5		83	RBM	DM		505			175	770			4		40mg	M	500mg
57	1021950	29/08/2020	58	M	C,F,B	3		98	NIV	DM,HTN		529	683			1327	74	1.03	4		40mg	M	80mg
58	1021326	19/8/2020	57	M	C,M,B	5		86	RBM	IHD	22	1133	538	250	8.69		29	0.79	3		40mg	M	40mg
59	1022949	11/09/2020	84	M	C,F,B	3		88	NIV	HTN		567	885	299		1580	108	1.87	2		40mg	M	1000mg
60	1021523	22/08/2020	52	M	C,B	7		82	NIV	HTN,TB	21	317	820			7500	43	1.16					
61	1023099	13/9/20	81	M	F,B,LAPP	2	27	52	RBM	HTN	17	320.6			127.5	1245	47	2.11	4			M	1000mg
62	1021174	17/8/2020	67	M	C,F,B,LO	2	32	66	RBM	HTN											80mg	M	120mg
63	1022015	30/8/2020	46	M	B,V	1	50	96	RBM												40mg	M	40mg
64	1020115	2/8/20	78	M	B			93	RBM	DM,HTN,IHD													
65	1019681	27/7/2020	75	M	C,F,B,W	3		87	RBM	DM,HTN,IHD	5	2924			23.18	1456		1.46	3		40mg	D	40mg

66	1020763	11/8/20	60	F	C,B,CP	4	30	90	RBM						32	0.66	5	2	80mg	M	500mg			
67	1023505	19/9/20	90	M	B		28	95	RBM		1290	971	88.8	>5000	29		2		40mg	M	500mg			
68	1022988	11/9/20	60	M	F,B,W,LAPP	5	40	31	RA	DM	17	615	613	110	1193	46	1.05	3		80mg	M	1000mg		
69	1022752	8/9/20	38	M	C,F,B,W,LAPP		16	90	NIV			347	1089		1258	65	0.89	3		80mg	M	1000mg		
70	1020910	13/8/20	59	M	C,F,B,W	6	28	95	RBM	DM			442			36	0.91	5	2	80mg	M	1000mg		
71	1021528	22/8/20	70	M	C,F,B	3	12	78	NIV	DM,HTN		2574		49.4	968	149	2.4	5		80mg	M	500mg		
72	1023093	13/9/20	70	M	C, F			93		DM							7.28				M	120mg		
73	1022908	10/9/2020	55	F	F,B	7		93	O2M	TD	20	450	653	42	666	100	0.9	11		40mg	M	500mg		
74	1020525	8/8/20	50	M	B	4	30	70	RBM			3037	140	212.6		66		4		40mg	M	500mg		
75	1020446	6/8/20	46	M	M,B	4		80	O2M	IHD				712			45	1.25						
76	1021029	15/8/20	75	M	C,F,B	3	32	85	RBM			810	765	208.9		>5000		4	1	40mg	M	500mg		
77	1021362	20/8/20	52	M	C,B,W	4		70	O2M			2839	1911			786	77	1.17		80 mg	M	80 mg		
78	1023170	14/9/20	47	M	C,F	3		97	O2M	TB					10.05	1141	42	1.79	7	6	80mg	M	1000mg	
79	1019888	29/7/20	62	M	C,M,F,B		26	92	HFNO	DM,HTN,IHD,CKD		634	59.3	1.5		26	1.04	5		80mg	D	24mg		
80	1023297	15/09/20	49	M	C,F,B	5		86	RBM			758.9	576	301.8	72.29		32	0.92	12	2	80mg	M	500mg	
81	1021203	18/8/20	60	M	C,B	4								228.7		1301	65	1.22			40mg	M,D	1gm, 12mg	
82	1021494	22/08/20	81	M	M,F,B	3		97	RBM	DM		513	476		80.4		0.95	12	2	80mg	M	1000mg		
83	1021238	18/8/20	74	M	M,B	7		86	RBM	DM,HTN,IHD											80mg			
84	1023059	13/9/20	77	M	M,B			94	RBM	DM, IHD	24	387	410	62.9	999	49	0.7	5	1	40mg	M	1000mg		
85	1020214	3/8/2020	74	M	F,B	3	26	83	RBM	DM,HTN,CVA	16	305	511		517						80mg	M	500mg	
86	1020620	9/8/20	54	M	B	3		77	RBM							36	0.91	2	1	40mg	M	500mg		
87	1020695	10/8/20	70	M	C,B	2	24	74	RBM	DM,HTN	20		1478			25	0.96	4		80mg	M	500mg		
88	1023607	20/9/20	63	M	M			99	O2M	HTN		489	126.1			881	42		3		40mg	M	500mg	
89	1022686	08/09/2020	58	M	C,B,W	5	38	80	RBM	DM,HTN	16								1		80mg	M	1000mg	
90	1024925	7/10/20	85	M	B		26	96	RA	DM,HTN,IHD	4	1576	581	56.1	187.7	635	186	2.23	2		80mg	M	80mg	
91	1024541	02/10/2020	80	M	B		42	85	RBM	DM			733		1.52	>5000	185	2.69	1		120mg	M	500mg	
92	1023176	14/9/2020	70	M	C,F,B	14		100	NIV	IHD	15				932		91	1.37	6	2	80mg	M	1000mg	
93	1024729	05/10/2020	80	F	C,B,W			92	RBM	DM,HTN	13	161		772	72.89	655	41	1.37	10		60mg	M	500mg	
94	1024059	26/9/2020	79	M	C,F,B,M		33	92	RBM	DM	18						100							
95	1022971	11/9/2020	57	M	C,F,B	10		91	RBM		19	254			11.96	573	31	1.23	7	1	80mg	M	1000mg	
96	1019824	28/7/2020	58	M	C,F,B		30	85	RA	DM		2254	869	161.5	1237	56	1.18	6	2	80mg	M	80mg		
97	1021994	29/8/2020	70	M	C,M		30	85	RBM	DM		1243			261	884	72	1.01			80mg	M	80mg	
98	1024951	08/10/2020	62	M	B	6		88	RBM										1		80mg	M	80mg	
99	1023084	13/09/2020	48	M	C,B			75	RA	IHD, DM,HTN		383	946			1004	48	1.09	1		80mg	M	500mg	
100	1021702	25/08/2020	63	M	C,F,B,M,CP	2		96	RA	HTN							40	0.78	5		40mg	M	500mg	
101	1021782	26/8/2020	52	M	C,F,B		24	87	HFO	BA					9.6	1442	49	0.8	12		80mg	M	80mg	
102	1023547	19/9/2020	50	M	C,F,B	5		50	RBM		17	624.5		157.2	36.5	791	37	0.75	10		120mg	M	500mg	
103	1024640	04/10/2020	53	M	C,B			86	RBM	DM,TD		448.4	341	99.2	105.9	1541	13		3		80mg	M	40mg	
104	1025352	13/10/2020	75	M	C,B		38		NIV	DM,HTN										1		M	500mg	
105	1019820	28/07/2020	72	M	C,F,B,LO	2		89	RBM	DM,HTN,IHD												80mg	M	12mg
106	1024217	28/09/2020	50	M	C,B	2		86	RBM	DM,HTN	14	134.1		366.9	305.6	646	64	1.9			80mg	M	80mg	
107	1021332	19/08/2020	53	M	C,F,B		20	90	RBM		9	25.8		526	26.8	688	57	1.2	6			M	80mg	
108	1022477	05/09/2020	68	M	C,LT			85	RBM	DM,HTN,P	19	121	1300	295.7	76.62				1		80mg	M	500mg	
109	1022029	30/08/2020	40	M	C,F,B	6		86	RBM	DM		864	752	74.3	115	760			5		80mg	M	500mg	
110	1024348	20/09/2020	70	M	M,B	1		89	NIV	DM,HTN,CKD	15	540	532	209	251		131	6	5					
111	1024624	03/10/2020	63	M	C,F,B	8		97		IHD		827		174.6		431	29	1.08	4		80mg			
112	1024645	04/10/2020	41	M	M,B			94	RBM			1200							6	3		M	250mg	
113	1023808	22/09/2020	56	M	C,F,B	2		60	RA	DM,HTN,BA		1941	403	218.7		571	39	1.39	4	1	80mg	M	500mg	
114	1025470	14/10/2020	26	M	M,F,B			97	RA			2117				3545	200	4.65						
115	1023934	24/09/2020	55	M	C,F,B	7		96	RBM	DM,HTN		1988	459	200	38		32	1.1	6	1	40mg	M	500mg	
116	1022690	08/09/2020	53	M	C,M,F,B	3		96	NIV			961.5	745		66.8	1338	47	1.26	4		80mg	M	1000mg	
117	1022661	07/09/2020	83	M	C,M,B	3		93	RBM	DM,HTN						1331	61	1.93	2		40mg	M	80mg	
118	1021552	23/08/2020	65	M	C,F,B	4		60	RA	DM,HTN,IHD		320.1	347		583.91	1307	46	1.06	1		40mg	M	80mg	
119	1020443	06/08/2020	67	F	C,M,F,B	7		85	RBM	DM,HTN					227	1307			8		40mg	M	120mg	
120	1021989	29/08/2020	58	M	F,B	4	18	92	RA	DM,HTN									3		40mg	M	80mg	
121	1019622	25/07/2020	73	M	B	22	23	89	RBM	DM,HTN		2593	546	46		552			7		40mg	M	80mg	
122	1021177	17/08/2020	70	M	C,F,B			80	RA			496			420	1543	44	1.07	6		40mg	M	40mg	
123	1021936	28/08/2020	59	M	C,F,B	5		94	RA			308	299		67.4	295	34	0.75	8		40mg	M	80mg	
124	1022057	31/08/2020	65	M	C,F,B			56	RA	DM,HTN	22	2000	670		768.8	346	198	10.86	1					
125	1022895	10/09/2020	50	M	B	4				IHD		1571	1147	185.5					2		40mg	M	1000mg	
126	1023903	24/09/2020	43	M	B			95	RBM			106	479			1484	170	5.61	3		40mg	M	80mg	
127	1024601	03/10/2020	60	M	C,B	7		84	RBM	DM,HTN,CKD	13						123	4.83	6			M	500mg	
128	1023569	19/09/2020	43	M	C,B	3		92	NIV		10		485	126				0.97	5	2	120mg	M	500mg	
129	1018945	16/07/2020	61	M	F,B			99	NIV	HTN,IHD		1445	857	173.5			64	1.01						
130	1021758	26/08/2020	88	M	C,M,F,B	7	32	60	RA	HTN		718.5	506	218		7270	161	1.54			80mg	M	80mg	
131	1015945	22/06/2020	56	M	C,F,B	7		90	NIV	DM,HTN							52	0.74			40mg		150mg	
132	1020510	07/08/2020	65	M	M,F,B	5		82	NIV	DM,HTN					17.4		62	1.17	10		40mg	M	500mg	
133	1025672	18/10/2020	72	M	F,B	5		93	RBM	DM	15	773.8	694		57	4439	38	0.7	1		40mg	M	475mg	
134	1019111	18/07/2020	55	M	B,CP			87	RA	DM,HTN,IHD		2442	1227			819	115	1.61			80mg			
135	1021563	23/08/2020	69	M	F,B	3		98	RBM	DM,HTN,CKD	8	500		31.2		84.6			2					
136	1020369	05/08/2020	72	M				90	RA	HTN							21	0.78						
137	1022589	07/09/2020	79	M	F,B	7		80	RBM	HTN	15	357.6	577	35.7		520	48	1.23	8		80mg	M	80mg	
138	1022785	09/09/2020	69	M	C,F,B	6		90	RBM	DM,HTN			718	204.2	260.3	1000	86	2.47	2		80mg	M	80mg	
139	1022551	06/09/2020	65	M	C,F	2		95	RA	DM	3	108.8	243											

148	1024657	04/10/2020	60	M	F,B	2	26	99	NIV	DM,HTN,PD		1468			11.34	419		2.8	10			60mg	M	40mg	
149	1024119	26/09/2020	61	F	B,LAPP	1				DM,HTN,BA		532	645		118.3	1510		1.41	5	1		120mg			
150	1023280	15/09/2020	68	F	C,B	4			83	RBM	DM,HTN,BA	12	481.8		62.1		595	73	0.65	7	1		80mg	M	500mg
151	1024344	30/09/2020	55	M	LAPP	2			97	RA	DM,HTN			344	132.8			232	6.53	4			M	40mg	
152	1023073	13/09/2020	65	M	C,F,B					HTN								28	0.91	5			40mg	M	500mg
153	1026018	22/10/2020	59	M	LAPP,C,ST	2			81	RBM	DM		2731			5000	7673	151	3.95	7			40mg	M	80mg
154	1025663	17/10/2020	74	M	C,LO	7	20		94	RBM	DM,CKD	13		721	89	786	806	245	10.48				M	80mg	
155	1020566	08/08/2020	56	M	C,M,F,B	5			89	RA	DM		586.6	554		184.7	1225	31	0.83	8	4		80mg	M	500mg
156	1021679	25/08/2020	70	M	C,F,B	13			91	RBM		12	516	378	0.6	126	547	67	0.95	12			80mg	M	80mg
157	1021224	18/08/2020	56	M	F,B				86	RA			560	711		43.16	1068	38	1	3					
158	1020524	08/08/2020	34	M	C,F,B,ST				85	RA			455	340		58.81		33	1.05				40mg	M	80mg
159	1025810	19/10/2020	63	F	B	2			84	RA	DM,HTN	2						40	1.29						
160	1021991	29/8/20	27	M	CFB	5			98	RBM					3	1.5		66		7		80mg	M	500mg	
161	1025802	19/10/20	55	M	C,F	15					HTN		1477	724	17	289.9	>5000	233	6.12	1		80mg	M	500mg	
162	1023593	20/09/2020	43	M	W,LT,C		18		96	RA		12	2000	486		494	4316	184	7.27						
163	1022589	7/9/20	79	M	F,B				80	HFO															
164	1027390	7/11/2020	73	M	C, B				60		DM, HTN		1826		242		1402	111	3.33	6			M	40mg	
165	1019584	25/07/20	56	M	C,F,B	7			83	RBM	DM,HTN	20		762	4.8								M	80mg	
166	1025000	8/10/20	77	F	C,F,B	4			98	RBM	DM,HTN,CKD	9	898	337	563	1369		280	5.82	10		80mg	M	80mg	
167	1020217	3/8/20	60	M	F,B	6			96	RBM			328	262			223	43					80mg		
168	1022452	4/9/20	45	M	F,B		54		78		HTN		422	1036		296		40	0.81				80mg	M	500mg
169	1021757	26/08/20	59	M	C,F,B	5			93	RA	HTN,DM				231	27	580		1.31			80 mg	M	500mg	
170	1020836	12/08/20	74	M	M,B	1			27	NIV	HTN,DM		1270	611			4894	21	1.1	2		80mg	M	500mg	
171	1021162	17/08/20	78	M	C,M,F,B,LS		14		70	RA	DM,HTN		651	483		101.8	1103		1.67	10		40mg	D	4mg	
172	1023054	12/09/20	68	M	F,B				57	RA				553				95	1.88				80mg	M	80mg
173	1026323	26/10/20	5	M	F,V								967		167.4	279.4	1379		1			10mg	M	80mg	
174	1019895	29/7/20	41	M	B,CP	2			99	RA						77.6		59	1.02				M	80mg	

## Survived Cases

2					CLINICAL PARAMETERS AT Admission											Other Labs at Admission		TREATMENT					
Sl. No.	IP No	Date of Admission	Age	Sex	Symptoms (C=cough; F=Fever; B=breathlessness; V=Vomiting, M=Myalgia, Loss of	Time to hospital from symptom onset (Days)	Admission Respiratory rate (RR/min)	Admission SPO2	Admission O2 modality (O2 mask, RBM,HFO, NIV, Ventilator)	Co-morbidities (PD- Parkinsons disease,BA- Bronchial asthma,CKD-chronic kidney	CT severity score (--/25)	Ferritin 1	LDH 1	hsCRP (value)	IL-6 1	d-Dimer 1	Urea	Creatinine 1	Remdesivir (No. of Doses)	Tocilizumab (No. of Doses)	LMWH (Max Dose)	Type of Steroid used (M- Methylpred, D-dexa)	Max dose per day used
1	1024932	07/10/20	49	M	C,F	5		85%	o2 mask	BA		651	573	134.7	7.74	>5000					80mg	M	500mg
2	1023058	13/9/20	74	M	C,B,M,F	5		91%	RA			267	240		31.6				5		80mg	M	500mg
3	1021470	21/8/20	48	F	B,F			96%				44.6	232	13.7	26.02					80mg	M	80mg	
4	1024346	30/9/20	78	M	C							1115	792	57				113	7		120mg	M	500mg
5	1024283	29/9/20	72	M	F,B	1		99%	RA	DM	5	316.4		5.4	10.6	1.5	0.76	8		120mg	M	120mg	
6	1023950	24/09/20	55	M	C,F,B	5		96%			15	606	332	18.6			66	1.36	6		80mg	M	500mg
7	1021418	21/08/20	42	M	C,B	2		90%					411								80mg	M	80mg
8	1023907	24/09/20	67	M	C,F,B	2		90%								517	43	1.01	9		80mg	M	80mg
9	1024635	4/10/20	52	M	C,F,B			95%				917	353		73.3	346	22	0.74	2		80mg	M	80mg
10	1020024	31/07/20	60	M	C,F	5		96%	RA			56.86	244		3.79	363	17			40mg	M	80mg	
11	1022622	07/09/20	39	M	C	3	20	96%	RA			74.25			3.79	147	31	1.07	2		80mg	M	80mg
12	1022763	09/09/20	70	M	C	1		85%	O2 MASK								40	1.35	6	1	100mg	M	1000mg
13	1024049	25/09/20	50	M	F,W	7		95%	RA				289		4.54	248	32	86	5		80mg	M	80mg
14	1021264	18/08/20	43	M	F,M		18	96%	RA			777.9	433		20.49		140		7		80mg	D	12mg
15	1022375	04/09/20	30	M	C,F,B		26	92%				27.38					531		6		80mg	M	80mg
16	1021495	22/08/20	75	M	C										1.56	182				80mg	M	80mg	
17	1022667	07/09/20	59	M	C,F,B	3		90%				137	1012		11.32	>5000	123		1		80mg	M	120mg
18	1022797	09/09/20	64	M	W			99%				133	196		1.6		75	2.51			80mg	M	120mg
19	1022395	24/09/20	66	M	C,B			88%				36.2				581			5		80mg	M	80mg
20	1018721	14/07/20	25	M	C,F,M,B,LO			92%	RA			217.6	219				16						
21	1022636	07/09/20	54	M	C,F,B	5				TB,BA			334		58.77	2.06			5		80mg	M	500mg
22	1018431	10/07/20	74	M	C,F,M,B,LO			97%	RA														
23	1021041	15/08/20	33	M	C,F,M,B			96%	RA						6.04	996			5		40mg	M	80mg
24	1019405	22/07/20	24	M	C,F,B	3		99%	RA			88	358				31		5		80mg	M	80mg
25	1023483	18/09/20	57	M	C,F,B	5		93%	RA								36		4		40mg	M	80mg
26	1021292	19/08/20	23	F	LS,LT			97%	RA						12.24	390	30				40mg	D	12mg
27	1024867	07/10/20	60	M	C,M	3		97%					306				17		3		40mg	M	80mg
28	1019869	29/07/20	26	F	C,B	3		94%	RA						120	759					40mg	M	80mg
29	1021570	24/08/20	56	F	C,F,B	8		90%	RA			327	340				19		5		40mg	M	80mg
30	1017889	06/07/20	41	M	C	3		90%	RA						6.04	996					40mg	M	80mg
31	1019413	22/07/20	27	F	C,M,B	3		99%	RA			80	358		6.04	996	31		5		40mg	M	80mg
32	1020943	14/08/20	48	M	C,M,B	3		94%	RA			80	358				31						
33	1021531	23/08/20	54	M	B,CP	1		95%	RA												40mg	D	12mg
34	1025361	13/10/20	61	M	CP			97%	RA						4.02	319	26						
35	1020424	06/08/20	45	F	LS,LT			97%	RA			13.95	176										
36	1024956	08/10/20	60	M	B	2		88%	RA						6.04	996	85		3		40mg	M	80mg
37	1020649	16/08/20	54	F	C,B	3		91%	RA			86	358				31		4		40mg	M	80mg
38	1021443	21/08/20	27	F	C,M,B	3		99%	RA						6.04	996							
39	1023840	29/09/20	26	M	C,B,W	3		95%	RA			996	358			996	31		5		80mg	M	80mg
40	1020811	12/08/20	41	M	B,W	3		95%	RA			80	358			996			5		80mg	M	80mg
41	1019609	25/07/20	24	M	C,B,W	3		99%	RA			80	358				31						
42	1022727	08/09/20	25	M	B,W,LS,LT,W	3		94%	O2mask														
43	1020584	08/08/20	71	M	LS,LT			95%	RA			825	285			829			8	2	80mg	M	500mg
44	1024639	4/10/20	44	F	F	7days		96%	RA			306	404	91.2	105	448	8	6.4			80mg	M	80mg
45	1020488	07/08/20	39	M	C,F		22/min	97%	O2mask														80mg
46	1017707	05/07/20	45	M	F,M,B	7Days		88%	O2	DM							57	1.41					
47	1023711	21/09/20	71	F	C,B	5DAYS		86%	RBM	IHD	6	608.1				338	36	1.11			80mg	M	40mg
48	1021836	27/08/20	59	M	C,F,B			93%	RBM	DM,HTN		542	674			1532			6		40mg	M	1000mg
49	1021845	27/8/20	52	M	B,LS,LT	15Days		95%	RBM	DM	5	210.7	660	11.5	33.51	>5000	59	0.83	6		80mg	M	80mg
50	1023488	18/9/20	64	M	C,F,B			98%	RA	DM,HTN,CKD	15	2000	433		218	775	55		4		80mg	M	
51	1020455	7/8/20	60	M	C,F,B	2 days		96%	RA	DM, HTN		264			46.19	282	22	0.73			80mg	M	
52	1019426	23/7/20	65	M	C,F	5 days		92%	RA	DM, HTN		429			32.45	746	31		4		80mg	D	16mg
53	1023326	16/9/20	85	M	F	2 days		96%	RA	DM, HTN		61.46	251			661		2.32	3		80mg	M	80mg
54	1024174	28/9/20	60	F	F			67%	RA			22.4	397		49.8	472		0.68	4		40mg	M	
55	1021407	28/8/20	20	M	LS,LT	1 day		98%	RA														
56	1022906	10/9/20	78	M	C,B	5 days		94%	RBM	DM							37	0.87	6		80mg	M	1000mg
57	1025516	15/10/20	82	M	B	1 day		95%	RBM	DM, HTN, IHD	16	192.8	368		136.1	864	43	1	3		80mg	M	120mg
58	1020680	10/8/20	70	M	C,B	3 days		92%	RA	DM, HTN							65		7		80mg	D	12mg
59	1024333	29/9/20	26	F	C,B,M	2 days	22/min	96%	RA			151.9	168		15.2	140	17	0.63	4		80mg	M	80mg
60	1023878	23/9/20	72	F	F,B	2 days		96%	O2 MASK	DM, HTN, PD	13	532	504			1451	51		5		40mg	M	80mg
61	1024659	4/10/20	23	F	F	2 days		98%	RA				245			794	10	0.54	2		40mg	M	
62	1024370	30/9/20	54	M	C,F,B	1 day		96%	RA	HTN		125	456		136.6	386			5		40mg	M	80mg
63	1023727	21/9/20	60	M	C,F	5 days		92%	RA		17	1152	573		40.27	> 5000	32		6		40mg	M	80mg
64	1020944	14/8/20	39	M	F,B	8 days		94%	O2 MASK			2000			52.81	437	35	1.13			40mg	D	8mg
65	1021397	20/8/20	56	M	B	5 days		82%	RBM	COPD	19		397		1.54	1519	65	0.9	10		80mg	M	1000mg
66	1020473	11/8/20	33	F	C,F,B	3 days		82%	RA		21	260.4			35.87	427	14		8		80mg	D	8mg
67	1019423	23/7/20	70	M	F,B	10 days		92%	RA	DM, HTN	14	644.9	673				31	0.79			80mg	M	80mg
68	1020361	5/8/20	50	M	LS,LT	2 days		96%	RA								109	1.4					
69	1023886	23/9/20	59	M	M,B	3 days		97%	RA	HTN		359	515			605			7		80mg	M	500mg
70	1023858	23/9/20	66	M	C,F,M,B	4 days		95%	O2 MASK	DM, HTN	16	661				588	35		7		40mg	M	40mg
71	1024081	26/9/20	70	M	F,B,CP	3 days		100%	RA	DM, HTN, IHD	20	640.1	457		6.77	1617	83	1.05	3		80mg	M	500mg
72	1024337	29/9/20	30	M	C,B	3days		95%	RA		1/20	7.09	207		1.15	162	12	0.49	5		80mg	M	80mg
73	1022372	4/9/20	70	M	F	2days		99%	O2	DM, HTN			266		316.5		33	1.27	3				
74	1021314	19/8/20	70	M	C,B	3days		94%	RA										2		80mg	M	80mg
75	1023275	15/9/20	75	M	Fever			90%	RA	DM, HTN		107.8	269			>5000	32	0.96</					

76	1023734	21/9/20	58	F	Myalgia	2days		98%	RA		13	432.8	301		32.74		15	0.55	2			80mg	M	80mg
77	1019966	30/7/2020	36Y	F	F,W	4 days	18	98%				80	339		7	996	31							
78	1019037	17/7/2020	32	M	LS,LT		18	96%					268			102	21	0.94						
79	1021329	19/8/2020	67	M	C,M,B,W	3		65%		DM, HTN		80	358			996		0.88	2			40mg	M	80mg
80	1021013	14/8/2020	25	M	C,F,W	3		96%	RBM	CLD		80	358		6.04		31	0.88	5			80mg	M	80mg
81	1023978	25/9/2020	45	M	C, B	4		88%	RA			323.7	419		16.73	478	23	0.57	6			80mg	M	80mg
82	1022559	6/9/2020	49	M	C,B,W	3		99%	RA	DM		80	358		6.04		31	0.88	5			80mg	M	80mg
83	1024694	8/10/2020	62	M	F, B	4		92%	RBM	HTN		305.3	568	69.9	62.15	534	45		14			80mg	M	80mg
84	1019554	24/7/2020	28	M	B,W	3		99%	RA															
85	1018960	16/7/2020	30	M	LS,LT			98%	RA			278	210			260	21	0.72						
86	1019948	30/7/2020	70	M	F, M			94%		DM, HTN, IHD												40mg	M	80mg
87	1019276	21/7/2020	36	M	C,B,F,LT	7	28	91%	RA			594.3	349		15	242	39	0.94	7			40mg	M	80mg
88	1019504	23/7/2020	22	F	F, M			98%	RA			4	226			390								
89	1019491	23/7/2020	23	M	F		20	98%	RA			21.2	259			2033								
90	1019294	21/7/2020	57	M	F, B		24	97%	RA			454.4	396			388	27	0.98				80mg	M	80mg
91	1019830	29/7/2020	35	M	C, F, B			97%	RA			573				412	17							
92	1019960	30/7/2020	70	M	F, M	3		98%	RA			719.5	671				24	0.73				80mg	M	80mg
93	1025257	12/10/2020	46	F	F,CP	2		20	98%	DM, HTN, IHD							55	1.11						
94	1020431	06/08/2020	27	M	C,M,B	3		99	ROOM AIR			80	358		6.04	996	31	0.88	5			80mg	M	80mg
95	1019553	24/07/2020	35	M	C,F		22	98	ROOM AIR			704	254		516.1	335	17	1						
96	1019794	28/07/2020	42	M	C,F,B		20	96	ROOM AIR		8	139	216		7.01		14	0.91				80mg	M	80mg
97	1018961	16/07/2020	70	M	F,ST					DM,IHD		126.3	201		419	413		1.04	4			80mg	M	80mg
98	1019545	24/07/2020	52	M	M,B			89	ROOM AIR	DM		247			94.6	725	34	1.03				40mg	D	12mg
99	1019047	18/07/2020	65	M	C,B,LO	10		98	O2 MASK			349.4	395			362	27	0.98	7			40mg	D	8mg
100	1019822	29/07/2020	50	M	C,B	3		89	ROOM AIR			1577		76	5.22	321		1.03				40mg		
101	1022187	01/08/2020	47	F	F			94	ROOM AIR														D	4mg
102	1021328	19/08/2020	34Y	M	C,F	8 days	17	66%							8				5			40mg	M	40mg
103	1022620	07/09/2020	65Y	F	C,F		17	89%			17	89.88	340	1.49		322	31		5			40mg	M	40mg
104	1021411	20/08/2020	43Y	M	B	3 days	26	88%				80	358			500	34	0.79	5			40mg	M	40mg
105	1019407	22/07/2020	25Y	M	C,B		16	99%			12	90	359				34	0.81	5			40mg	M	40mg
106	1021522	22/08/2020	40Y	M	C	10 days	21	98%		DM	7	275	280	11.7	18.3	1406		0.8				40mg	M	40mg
107	1021710	25/08/2020	41Y	M	C,B,M	3 days	18	99%		DM, HTN		45	342	35.3		630			7			40mg	M	80mg
108	1019403	22/07/2020	24Y	F	B	3 days	22	99%			16	80	358		6.04		31	0.88	4			40mg	M	40mg
109	1022517	05/09/2020	23Y	F	F		18	98%			11	80			6.04			0.88	5			40mg	M	16mg
110	1021318	19/08/2020	67Y	M	F,W	4 days	22	95%				49.25	207			171						80mg	M	80mg
111	1019404	22/07/2020	24Y	M	C,B,W	3 days	18	99%				80	358		6.04	996	31	0.88						
112	1023957	24/09/2020	47Y	M	C,F	5 days	20	97%		HTN, TD		135.5	507	2.6		1483		6.02	4			80mg	M	80mg
113	1021558	23/08/2020	46Y	M	C,B	1 day	24	96%	RBM			1100	418	8.6	6.15	157	26	0.8	7			80mg	M	80mg
114	1023332	16/09/2020	36Y	M	C,B	3 days	26	92%	RBM			326		179.4	31.6		40	0.96	6	2		80mg	M	80mg
115	1018040	07/07/2020	60Y	M	F	2 days	20	98%		DM, HTN							86	1.72						
116	1022903	10/09/2020	54Y	F	CB		18	92%		DM, HTN		278	612	209	37.2		21	0.7	7	1			M	80mg
117	1018872	15/07/2020	67Y	M	F		20	94%		DM, HTN							34	1.12	5			80mg		
118	1020387	06/08/2020	83Y	M	B,W,LAPP		28	82%									129	7.92				80mg	M	40mg
119	1020626	09/08/2020	50Y	M	C,B,F		22	86%				339				261			4			80mg	M	60mg
120	1022576	06/09/2020	60Y	F	C,B,F		22	94%								660			3	3		80mg	M	80mg
121	1020778	19/8/2020	51	M	B,CP	5		93%		DM, HTN			424		164.7	455	19	0.85	10	1		40mg	M	1000mg
122	1025257	12/10/2020	45	F	CP	2	20	98%		DM, HTN, IHD							55	1.11						
123	1023565	19/9/2020	47	M	F			98%		DM		189.6	280		1.5	214	18	0.91	6			40mg	D	16mg
124	1019515	23/7/2020	41	F	LS	2						177.8	216			126	27	0.87						
125	1019503	23/7/2020	50	M	F		20	97%				104.5	179			142								
126	1020433	06/08/2020	26	M	C,M,B	3		99	ROOM AIR			80	358		6.04	996			4			80mg	M	80mg
127	1019920	30/07/2020	47	M	C,F,B	5		97	ROOM AIR			239.4		152.4		231	22					80mg	D	8mg
128	1018829	15/7/20	67	M	C,F,B	3	20	94	RBM	IHD		297	289			957	22	1.33					M	80mg
129	1023311	16/09/2020	91	M	C,F	7		95	ROOM AIR	DM, HTN		352	280	108	149		40	1.13	8			40mg	M	80mg
130	1021872	28/08/2020	56	M	F	1		94	ROOM AIR	DM,HTN,IHD		214.6		2.3	10	614	21					40mg	M	80mg
131	1021062	15/08/2020	56	M	C,M,F	3		93	ROOM AIR	DM		425	312		54	276						40mg	D	12mg
132	1025502	15/10/2020	82	M	C,B	5		95	RBM	DM,HTN	12	257	291	116.6			18	0.96	8			40mg	M	80mg
133	1021445	21/08/2020	63	F	C,M,F	7		97	ROOM AIR	DM,IHD			187		42.67	442	26	0.97				40mg	M	80mg
134	1024419	30/09/2020	72	F	C,F,B	4	24	60	ROOM AIR	DM,HTN	12	114	444		86.29	291	21	0.79	10	1		40mg	M	500mg
135	1024543	02/10/2020	41	M	F,B	9		84	NIV	DM	5			99.7		1218	91	1.11	10			60mg	M	80mg
136	1019956	30/07/2020	20	M	F	3	20	93	ROOM AIR			218.6	344	198.3		604	15	1.06				80mg	D	80mg
137	1024783	06/10/2020	38	F	F,B,LS,LO	5		97	ROOM AIR	DM	17	246	345	8	1.5	482	29	0.65	3			40mg	M	80mg
138	1019981	31/07/2020	65	F	C,F,W						20	258	620			369							D	6000mg
139	1022841	09/09/2020	65	M	F,M	8		94	ROOM AIR	DM,HTN	11	481	356			432	30	1.25	5			40mg	M	80mg
140	1023552	19/09/2020	25	F	F	3	17	97	ROOM AIR													40mg	M	80mg
141	1024039	25/09/2020	64	M	F	4		98	ROOM AIR	IHD							36	1.04				40mg	M	80mg
142	1021182	17/8/2020	30	F	C,B		18	98	ROOM AIR			44.48	179			264	15	0.62	3					
143	1024828	06/10/2020	54	M	F	3	18	97	ROOM AIR	DM, IHD							79						D	80mg
144	1024109	26/09/2020	85	F	B	2	19	92	ROOM AIR	HTN,IHD		285	327	1.4	3.53	1446	57	2.12	5				M	500mg
145	1023541	19/9/2020	28	F	C,M		20	98	ROOM AIR			17.73	200		63.3	203	25	0.68	3					
146	1024861	06/10/2020	75	M	F	4	18	98	ROOM AIR	DM,HTN,IHD								0.61				40mg	M	80mg
147	1022545	05/09/2020	68	M	C,F,B	10		96	NRBM	HTN,CVA		113.5	518	121	95.28	887	25	0.97	10			80mg	M	80mg
148	1021253	18/8/2020	49	M	C,F		24	89	ROOM AIR			334.4	331						3					



257	1020388	6/8/20	50	M	B		2	26	89	O2 MASK			1080			1.5	630		0.99	5			80mg	M	120mg	
258	1022489	5/9/20	68	M	F,B				81%	O2 MASK	CKD		228	872		107	1305		4.24	1			80mg	M	40mg	
259	1022915	17/9/20	78	M	F,W				96			134			52.35	339		1.77	5			80mg	M	500mg		
260	1021406	20/8/2020	33	M	C,F,B		3	19	92	RA		621	392		577.5			36	0.92	4			80mg	M	500mg	
261	1020631	09/08/20	60	M	C,F			22	97	RA		440				338		49	0.89			80mg	D	16mg		
262	1020624	09/08/20	41	M	F,B			22	94	RA			343			410		28	0.85			80mg	D	12mg		
263	1022272	02/09/20	25	M	F,B				96	RA		46.56	258	6.6		123			0.98			80mg	M	40mg		
264	1024202	28/09/20	82	M	F				97	RA		10.7	207	1.8	40.83	1444		23	0.83	5			80mg	M	80mg	
265	1020439	06/08/20	41	M	B				85	RA								29	1.09			80mg	M	80mg		
266	1024420	30/09/20	66	F	M,B				86	RA											6		80mg	M	500mg	
267	1019947	30/07/20	26	F	M				98	RA		98.53	289		38.15	617		45	1.23							
268	1020219	03/08/20	56	M	C,F				96	RA		1870	180		1.5			11	0.64				40mg	M	80mg	
269	1021759	26/08/20	56	M	C,B				96	RA				155.9	35.9			17	0.65				80mg	M	80mg	
270	1022168	01/09/20	51	M	C,F,B				96	O2 MASK					61.7	559			1.33				80mg	M	80mg	
271	1023888	23/09/20	55	F	C,F				88	RBM		303.9	344			709		29	0.78	10			80mg	M	500mg	
272	1024044	25/09/20	34	M	C,F,M,B				95	RBM		12	1769	555		58.6	407		30	1.06			80mg	M	80mg	
273	1023645	21/09/20	60	M	C,F,M,B				95	RA		15								8			80mg	M	500mg	
274	1024379	30/09/20	54	M	C,F,B				96	RBM		14	31.3	304		66.01			24	0.77			80mg	M	80mg	
275	1023274	15/09/20	50	M	B				94	RA			389.7	376			1421		26		2		40mg	M	1000mg	
276	1022960	11/09/20	30	F	C,F,B				99	RA			9.06	248		1.5	188		15					D	4mg	
277	1022751	08/09/20	31	M	C,F				96	RA				211			608			1.46				D	4mg	
278	1024146	27/09/20	72	M	C,F				92	RA		22	824			153.3	877		49	0.59			40mg	M	40mg	
279	1022520	05/09/20	29	F	C,F				98	RA			39.25	160		5.98			16					D	4mg	
280	1021608	24/08/20	45	M	C,F,B		4		86%	RA			210.5	412		11.25	386		27		5		80mg	M	80mg	
281	1021899	28/08/20	38	M	C,F		8		90%				115.6	240		14.3								M	80mg	
282	1021699	25/08/20	30	M	C,F,B		10		96%	RA											1			40mg	M	40mg
283	1021933	28/08/20	72	F	C,F,B				96%	RA	HTN		20.43	320		29.64	271		23	0.89			40mg	M	40mg	
284	1021094	16/08/20	38	M	C,B		5		92%	RA			450.8	291		33.29	221		20	0.92			80mg	D	8mg	
285	1021588	24/08/20	22	F	M,F		2		98%	RA														D	8mg	
286	1021727	26/08/20	80	M	LS,LT				95%	RA			535	423					22	0.78			80mg	D	8mg	
287	1021818	27/08/20	44	M	C,B		5		99%	RA									27	0.8			80mg	D	8mg	
288	1018883	15/07/20	22 Y	M	C,B		3		99%	RA			116	172					18				80mg	M	80mg	
289	1020850	12/08/20	50	M	C,F,B				92%	RA	DM	10	83.64	181			174		29	0.89			80mg	M	80mg	
290	1020897	13/08/20	70	M	C,F,M				97%	RA	DM HTN		38.8			9.01	121		47	0.75			80mg	M	80mg	
291	1023969	24/09/20	51	M	M,B				90	RA									22					D	4mg	
292	1024507	01/10/20	40	M	F,B				97	RA						61.81	327		46				40mg			
293	1020105	01/08/20	36	M	B		2		98	RA			323	296			185						40mg	D	12mg	
294	1019961	30/07/20	42	M	F,M,LO		4		93	RA							124									
295	1022649	07/09/20	30	M	C,F,B		2	30	96	RBM			246	323			589			0.7				D	8mg	
296	1024098	26/09/20	35	M	F				97	RA			314			1.5	97		19	0.7			80mg	D	8mg	
297	1021418	21/08/20	42	M	C,B				93	O2 MASK			554	411		121	399			1.13			40mg	M	80mg	
298	1023186	14/09/20	42	M	F		2		96				68.11	189		9.62	179		22				40mg	M	80mg	
299	1022926	11/09/20	75	M	M,F,B				88	O2 MASK							1470			0.89			40mg	M	500mg	
300	1023031	12/09/20	66	M	M		2		96	RA			124			16.85			31	1.14			40mg	M	80mg	
301	1022837	09/09/20	67	M	M,F,B				97	RA			152	330		94	1111		31	0.4			80mg	M	80mg	
302	1021775	26/08/20	80	F	C,F,B			28	93	RA			322	330		17.8	876			0.78			40mg	M	80mg	
303	1024314	29/09/20	43	M	F,B				89	RA		22		423		17.7	671		40	0.96			80mg	M	120mg	
304	1023275	15/09/20	75	M	M,F				90	RA			107.8	269			>5000		32	0.6			80mg	M	80mg	
305	1024334	29/09/20	56	M	C,M			20	94	RBM			187	340		35.06	258		22				80mg	M	80mg	
306	1023540	19/09/20	58	M	C,F				90	RA			740.7	525		1.56	>5000						80mg	M	500mg	
307	1024783	06/10/20	38	F	B,LO		5	14	97	RA		17	246	345		1.5	482		29				80mg	M	80mg	
308	1022275	03/09/20	54	M	C,F				96	RA				375		132.7	607						80mg	M	40mg	
309	1024933	07/10/20	40	M	C,F,B				89	RBM	CLD		1918	390		390			25				80mg	M	80mg	
310	1024859	06/10/20	50	M	F			20	96	RA			357	227		3.17	394			0.9				D	8mg	
311	1020591	08/08/20	65	M	C,B				96	RBM			122	257			730		53	1.5			40mg	M	80mg	
312	1022022	30/8/2020	60	M	C,W		7		94	RA				258		19.25			27	0.98			80mg	M	80mg	
313	1022012	30/8/2020	43	M	F				98	O2 MASK											5			80mg	M	500mg
314	1022453	4/9/2020	63	M	C,B		4		95	O2 MASK			95.77	576	112		634		66	1.64			80mg	M	80mg	
315	1021492	22/8/20	40	M	C,F,B		3		92	RA			819	782		75.37	1229		14	0.73			40mg	M	40mg	
316	1021237	18/8/20	60	M	C,F				98	RA									17	0.65			40mg	M	40mg	
317	1021390	20/8/20	23	M	C,B		2	18	97	RA									30	0.88			40mg	D	8mg	
318	1024155	27/09/2020	37	M	C,M		2	19	97	RA			140	228			370		29				40mg	M	40mg	
319	1021016	14/08/2020	58	M	C,F,B				90	RBM			158	612		88	602		16				40mg	M	40mg	
320	1022846	10/28/20	75	M	C,M,F		4	20	93	RBM			91.85	27		118.7			24				80mg	M	80mg	
321	1020723	11/08/20	47	M	C,F				97%	RA						56.66	136							D	16mg	
322	1020366	5/8/20	62	M	C,F,B				96%	RA	HTN, CVA		644	727			1378			1.08			80mg	D	16mg	
323	1020416	06/08/20	30	M	LS,LT																					
324	1020936	13/08/20	68	F	C,F,B		7	20	95%	RA	DM		306.1	265		80.11	524				4			80mg	D	8mg
325	1020845	12/08/20	45	F	F,B		10	20	94%	RA	DM		673.2	308			1033		32	0.76						
326	1020953	14/08/20	43	F	B		4	27	89%	RBM		5											40mg	D	24mg	
327	1020595	08/08/20	47	M	F,B		6	20	925	F,B	HTN		613	398		64.6	537		24	0.94				M	80mg	
328	1020676	10/08/20	37	M	F,B,C				90%	RA	DM			301			239		17	0.67			80mg	D	12mg	
329	1020922	13/8/08/20	45	F	C,F,B				97%	RA			85.54	204			194		11	0.54			40mg	D	16mg	
330	1020609	09/08/20	48	F	F				86%																	

348	1020799	12/08/20	55	M	C,F,B			94		DM		455	305			25	1.02	8		80mg	M	120mg		
349	1020309	04/08/20	44	M	C,F,B			96		HTN,TB		277	288	13.4	13.06		0.85	5		40mg	M	160mg		
350	1020867	13/08/20	73	M	C,F,B			95		DM, HTN		289	253							80mg	D	8mg		
351	1020314	04/08/20	55	M	F		24	88													D	12mg		
352	1020448	06/08/20	64	M	C,B			65		RBM	DM, HTN	872	432				1399	34	1.18	80mg	M	80mg		
353	1024077	26/09/20	69	M	B			97		RBM	HTN	345.8	78.4	78.4	17.2			24	0.76		M	24mg		
354	1021835	27/08/20	65	M	C,F			97				188.8	169	1.7	10.4	1254	17	0.96	8	80mg	M	80mg		
355	1020144	02/08/20	48	F	C,F		2								64.2	109	28	0.75	7	80mg	M	40mg		
356	1020928	13/08/20	72	M	C,B		5	95		RA	DM, HTN, IHD	1182	381			260	39	0.85	2	40mg	M	80mg		
357	1020823	12/08/20	31	F	C,F			91		RA		233			4.17		17	0.65						
358	1020784	12/08/20	58	M	C,B		7	95		RBM	HTN	911.6	716		64.65	483			2	40mg	M	40mg		
359	1020770	11/08/20	75	M	C,F,B,W		7	95		RA			642		237.8	3305			6	80mg	M	80mg		
360	1020919	13/08/20	45	M	C,M		4	95		RA		131.2	270		11.69	276	18	1.05		80mg	D	12mg		
361	1020485	07/08/20	65	M	F,B		5	93		RA	DM	2647	653		201.8	692	19	0.73	5	80mg	M	120mg		
362	1021932	28/08/20	71	F	F,M		2	99%												80mg	M	80mg		
363	1021038	15/08/20	58	M	F,B		3	96		RA									5	80mg	D	8mg		
364	1023579	19/09/20	46	M	LS,LT		2	97				2050	419		40.3	630				80mg	M	80mg		
365	1020182	02/08/20	78	M	C,F,B					HTN			312		112				5	80mg	M	40mg		
366	1018671	14/07/21	25	M	LS,LT			97		RA														
367	1020518	07/08/20	60	M	F			91		RA		426.6			47.91					80mg	M	80mg		
368	1019650	26/07/20	59	M	F			94		RA		1544.4	484			326	71	3.22		40mg	D	6mg		
369	1024630	04/10/20	20	M	C,B		3	95		RBM		10223	2120		5.2	>5000	190	9.88	4		M	80mg		
370	1024843	06/10/20	60	M	C,F,B		15	86		RBM	DM,HTN,IHD	473.2	726		26.26	5000	42	0.9	11	60mg	M	40mg		
371	1023086	13/09/20	39	F	B		8	95		RA		381	523		147.3	1433	70	1.02	10	80mg	M	40mg		
372	1024075	26/09/20	50	M	C,F,B		3	98		RBM	DM	110.1			212.3		48	0.92	7	80mg	M	500mg		
373	1022365	03/09/20	55	M	C,B			90		RA		466.2	401		26.97	252	31	0.76	8	40mg	M	40mg		
374	1020384	08/08/20		F	C,F		3	95		RA		256	285			829			12	40mg	M	400mg		
375	1022198	02/09/20	67	F	B			94		O2 MASK		897	961		5.31	2463	55	0.73	3	40mg	M	125mg		
376	1022165	17/08/20	71	M	C,F		5	88		NBM		129.3	324		47.5	387		0.75	10	40mg	M	80mg		
377	1019921	30/07/20	49	F	F,B		3	22	91% on IOL o2	NRBM	DM,HTN	180	280		1	460	23	0.58		40mg	D	12mg		
378	1022963	11/9/20	56	F	C,M,B		2				DM,HTN		406		84.45	333	21	6.76	1	40mg	M	500mg		
379	1021549	23/08/20	65	M	C,F		5	23	90%	NRBM	DM	199.1	150		29.25	357	30	0.84		40mg	D	24mg		
380	1019857	29/07/20	55	F	M,F,B		4		93% on RA		DM	650.2	200		4.72	111	38	0.52	1	40mg	M	500mg		
381	1022918	11/9/20	61	M	C,B		3	23	74%	NRBM	DM,HTN	36.24	300	46	5.55	387	57	1.11	2	40mg	M	500mg		
382	1022043	30/08/20	64	M	B		2	92			DM,HTN,IHD	155.8	316		69.42	193	43	0.79	1	40 mg	M	120 mg		
383	1019604	25/7/20	51	M	C,B		5		92%@6L o2	NRMB	DM,HTN	214	230		11.99	455	18	0.93	10	40mg	M	500mg		
384	1022942	11/9/20	61	F	C		40		96%@RA		DM,HTN	15.56	314		1.86	120	101	0.8	1	40mg	M	80mg		
385	1019238	21/7/20	61	M	C,B,CP		3		94%@RA		DM	860	820		19	400	56	1.86		60mg	M	500mg		
386	1022919	11/9/20	60	F	C,B		4	84%			DM,HTN,IHD	85.2			9.95	475	16	0.9	1	60mg	M	500mg		
387	1022577	6/9/20	45	M	C,B,CP		2	44	93		RBM	DM	31.24	400		25.86	301	30	1.27	1	40mg	M	80mg	
388	1020458	7/8/20	66	M	C,F		10		98		RBM	DM,HTN,IHD	667	250		518	1267	50	1.02	7	80mg	M	80mg	
389	1020384	5/8/20	58	F	B		3	22	89		DM	888.6	450		5.19	303	27	0.97		80mg	M	80mg		
390	1022114	31/8/20	56	f	M,B		20		89%		DM	327.6	350		10.1	759	40	1.1	1	80mg	M			
391	1022674	7/9/20	52	M	C,F,B		28		93%		DM	203	286		1.5	950	38	0.95	7	80mg	M	80mg		
392	1022465	5/9/20	75	M	M,F,B				88%		RA	DM,HTN,IHD	216.4	255		59.7	1290	90	8.71	1				
393	1021312	19/8/20	59	M	F,M		4		90%		RA	DM	186.5	425		10	1093	40	1.3	7	40mg	M	80mg	
394	1022208	02/09/20	68	M	C,F,M		7	20	87%		DM,HTN	1051	260	227.3	63.08	629	28	0.84	4	120mg	M	80 mg		
395	1022549	06/09/20	70	M	LS,LT		20		93%on RA		DM,HTN	102	233	173.2	119.2	1495	26	1.2	5	80mg	M	120mg		
396	1022197	02/09/20	45	F	C,F,B,LO		4		88%		RBM	DM	2059	6.6	60	10.1	434	14	0.58	7	120mg	M	80mg	
397	1022045	31/8/20	65	M	C,F		5		97		RA	DM,HTN	1087	280	183	33.05	136	60	1.6	10	one dose	M		
398	1021278	19/8/20	52	M	C,F,B		8		98		DM,HTN	222	236	20	33.5	289	46	1.3	5	40mg	M	80mg		
399	1021278	16/8/20	55	F	F,B		4		97		F,B	DM	243	494	3.33	243	247	29	0.45		40mg	M	80mg	
400	1021918	28/8/20	72	F	F,B		1		35		DM,HTN	800	591	49			82	1.98	5	80mg	M	500mg		
401	1021484	22/8/20	58	M	C,M,F		7		96		HTN,DM	2647	188	2.4	5.83	175	20	0.61	7	80mg	M	1000mg		
402	1021495	22/08/20	75	F	C,CP		4	18	96% on RA		RBM	HTN	783	210	12	1.5	180	90	0.91	8	40mg	D	24mg	
403	1018791	15/8/20	45	M	LS,LT,LO		3		95%@RA		IHD,CKD													
404	1023066	13/9/20	60	M	B		12		Pso2 96		RBM	CKD								1		M	1000mg	
405	1021285	19/8/20	38	M	C,F,B		5		94		10L	HTN		502		93.52					80mg	D	12mg	
406	1023072	13/9/20	36	M	C,B,W		18		94		1ltr		151	316		27.03		0.53	4	80mg	M	80mg		
407	1023298	15/09/20	85	M	C,B		18									560.2	600			4	1	80mg	M	3000mg
408	1022984	11/9/20	42	M	C,B		20		95		RA		281	472		2.06			0.78	5	80	M	80mg	
409	1021036	15/8/20	63	M	C,F		3		96		RA	DM,HTN	700			600	99	1.45	10	40mg	M	500mg		
410	1022848	10/9/20	40	M	F						DM	240	575		4.3	506	57	0.95		80mg	M			
411	1022958	11/9/20	70	M	LS,LT,W		20		93												80mg	M	80mg	
412	1021321	19/8/20	66	m	F		2		87		RA	IHD								7		M	80mg	
413	1022199	2/9/20	57	M	C,F,B		22		98		RBM		996	477			1171			3	40mg	M	80mg	
414	1022657	7/9/29	59	M	C,F		15																	
415	1023415	17/9/28	67	M	F,B				96		RA										80mg	M	80mg	
416	1019488	23/07/20	33	F	F				96		RA		35.39	219			2581							
417	1019497	23/7/20	56	F	F,M,B				98		RA	DM, HTN,IHD	849	274			372	13	0.79		D	10mg		
418	1019489	23/07/20	23	F	LT				96		RA		32.9	298			142							
419	1020928	13/08/20	72	M	B				95		RA	DM,HTN	1182	381			260	39	0.85		80mg	M	80mg	
420	1020316	04/08/20	24	F	F,ST				97		RA		215		3.82	421	18	0.59						
421	1020616	09/08/20	42	M	C,M,LO				91		RA			259		38.7	140	20	1.076		40mg			
422	1020109	01/08/20	58	M	C,F,B				97		RA		100.3	285		23.6	164	33	0.86	100mg in 100ml	40mg	M	5mg	
423	1020506	07/08/20	54	F	M,F,B				95		RA	DM,HTN	240.9					38	0.42					

439	1023030	12/9/20	54	M	LO,F					IHD		13.75	415		7.06	295	21	1.19			80mg	M	80mg
440	1023098	13/9/20	93	M	LS,LT			98		HTN		316	270		65.3	279		1.76	4		40mg	M	80mg
441	1022576	6/9/20	64	M	C,F,B	10		95		RBM		228	732		251.8	1575			7		80mg	M	80mg
442	1022291	3/9/20	38	M	C,B	4		77		RA		544			6.83	7.7			1		80mg	M	
443	1024104	26/9/20	59	F	C,F,B	3		97				371			1.5			0.69	3		80mg	M	80mg
444	1019412	22/7/20	24	F	C,B			99		Room air		80	358				31		5		40mg	M	40mg
445	1019809	28/7	32	F	M,B,W			99					358		6.04	996	32		5		40mg	M	40mg
446	1023722	21/9/20	62	M	B,F	1	28	40		HFO		911			262	791			5	2	80mg	M	500mg
447	1021693	25/8/20	68	M	C,F													0.65			40mg	M	40mg
448	1021074	10/8/20	60	M	M			98%				667.4				456			3		40mg	M	400mg
449	1020929	13/8/20	25	M	C,B	3							358		6.04	996		0.88					
450	102048	6/8/20	52	M	F,B	2		87%		RA	HTN	659				5263		1.66	7		80mg	M	160mg
451	1022732	8/9/20	50	F	LS,LT	5		99%		RA			326										
452	1022995	12/9/20	63M	M	F	5		93		RA		171.6	266	7	6.28	471		1.29	3		80mg	M	100mg
453	1022086	31/8/20	74	M	C,F,B	4		98		RA		528.8			257	154		1.13	3		80mg	M	80mg
454	1020694	10/8/20	60	F	C,M	3	18	97		RA									5		40mg	D	16mg
455	1024619	3/10/20	48	M	C,F,B	8		94		RA	HTN	1107	385		6.24	443	80	1.17	5		80mg	M	80mg
456	1021303	19/8/20	68	M	C,F	4		96		RA		969.7		174.9	49.16				7		80mg	M	80mg
457	1020136	2/8/20	48	M	C,F	8		88		RA		1150	684		166.2	1237	19	0.75	7	7	80mg		
458	1024646	4/10/20	23	F	F,B		20	97				24	196	1.2	1.5	163	22	0.69					
459	1023909	29/4/20	51	M	C,LT,LS		22	98				33	192		1.4	132	22	0.7					
460	1021563	21/8/20	49	M	C,B	2		99		RA				56.4			28	1.37			40mg	D	8mg
461	1024050	25/9/20	45	M	C,F,M	3		95		RBM		1582		2699	17.7	1071			5		80mg	M	80mg
462	1021172	17/8/20	68	M	M	7		97		RA	HTN		402			304		1.2	3		80mg	M	80mg
463	1028512	19/11/20	50	F	LS,LT	2		96		RA							24	0.66			80mg		
464	1026814	1/11/20	55	F	F			84									19	0.53			80mg	M	80mg
465	1025585	16/10/20	55	M	B	3		95		RA	HTN						129	6.38					
466	1020524	08/08/2020	34	M	C,B,F,ST			85		RA		455	340		58.81		33	1.05			40mg	M	80mg
467	1020218	03/08/2020	33	M	C,F	7		94		RA			591		18	431		1.01	7		80mg	M	80mg
468	1023425	17/09/2020	44	M	F			96		RA		4624	390	37.7	24.66	463	41	0.66	7		80mg	M	80mg
469	1023106	14/09/2020	34	M	C,F,B			92		RA		320.4	295		16.33	440			5		80mg		
470	1026783	1/11/2020	25	M	F			97		RA			227		1.5	111	20	0.98	5		40mg	M	80mg
471	1025268	12/10/2020	23	M	C,M			96		RA		4.7			1.56		12	0.67	5		80mg		
472	1023932	24/09/2020	60	F	C,F,B			96		RA		158.6	258		106.1	1013	18	0.55	5		80mg	M	80mg
473	1022722	8/9/2020	55	M	F,M			97		RA	HTN, DM	236	282	35.5	96.39	193		1			40mg	M	80mg
474	1020487	7/8/20	64	F	C,F,B			100		RBM		235			140	1098	24		5		80mg	M	80mg
475	1021325	19/8/20	58	M	B			85		RA	HTN	94.44	264			514	46	1.11			80mg	M	120mg
476	1022117	31/8/20	30	M	C,F	4		94		RA	DM,HTN	138.4	312	9.2	50.3	358	30	1.35	7		80mg	M	120mg
477	1021488	22/8/20	54	M	C,F,B	7		87		RA	HTN	314	497			532	27	0.97	5		80mg	M	80mg
478	1021286	19/8/20	73	M	C,B	2		86		RA		836			58.2	547	37	1.07			80mg	M	80mg
479	1025129	10/10/20	51	F	C,B	5		96		RBM	HP	96	184		14.7	138							
480	1026447	28/10/2020	51	M	F,C	7		94		RBM						1424	76	0.74					
481	1023265	15/9/2020	53	M	F,M,B	4		96		RA		250	258	68	21.8						80mg	M	80mg
482	1021419	21/8/20	69	M	F,M	1		92		RBM	DM	312			54.5	1399	76	3.46	8		80mg	M	80mg
483	1021604	24/8/20	47	M	C,F	5		92		RBM		834	507		5.54	952	37	0.72	6		40mg	M	1000mg
484	1023043	12/9/20	64	M	B			91		RA	DM,HTN	126.9	271		23.99	597	0.66		7		80mg	M	80mg
485	1020497	7/8/20			C,M,F,B	3		91		RBM		800	469	94.5	80.93	1454	36	1.35	7		80mg	D	12000mg
486	1026252	24/10/20	48	M	C,F,B	2		91		RBM	CLD	953.7	408	44.4	820	1410	43	1.46	1		80mg	M	80mg
487	1020297	4/8/2020	58	M	F	7		95		RA						307	12	0.63			40mg	D	80mg
488	1021724	25/8/20	60	M	B	2		84		RBM	HTN,DM	1459	796		297.1	5000	73	0.96	4		80mg	M	80mg
489	1025455	14/10/20	43	M	C,B			96		RA		72.6		7.7	1.5			0.75			40mg	M	40mg
490	1024118	26/9/20	55	M	F,M			90		RA		730			1.5	563	26	0.99			60mg	M	40mg
491	1022668	7/9/2020	55	F	F,B			85		RA		136	591		71.21	620	25	0.71					
492	1020483	7/8/20	71	M	C,F			94		RA			415	32.2	23.42	345	33	0.58			40mg	M	80mg
493	1022664	7/9/20	35	F	F,W			98		RA							27	0.87					
494	1023024	12/9/20	62	F	C,M,F			94		RA		561.2	864	73.3	81.1	23000	49	1.02					
495	1013501	4/6/20	61	M	F,W							87.34	388			525	16	0.66					
496	1023428	17/9/20	48	M	B			98					1623		182.8	1463	54	1.09					
497	1022117	31/8/2020	71	M	LS,LT			97			DM	138.4	312	9.2	50.32		30	1.35					
498	1025149	11/10/20	60	M	F			95									36	0.86			80mg	M	80mg
499	1020393	6/8/20	30	M	B,W			92		RBM		613.9	398		64.6	537	24	0.94			80mg	D	40mg
500	1019932	30/7/20	42	M	C,F									77							40mg		
501	1020932	13/8/20	53	M	F,B,W	5		97		RA		336	465	91.2		515	31	1.5	7		40mg	M	80mg
502	1024289	29/9/20	29	M	C,B,W			99		RA		107.7	184	4.1	1.5		21	1.06			80mg	M	80mg
503	1024235	28/9/20	72	M	F,B			98			DM,HTN	425			11.86	1030	52	10.3			80mg		
504	1023083	13/9/20	40	M	B	10		90		RA	DM	559.3	310	5.7		861	18	0.75					
505	1023257	15/9/20	57	M	C,M,F	7		96		RBM			356				26	0.7	4		80mg	M	80mg
506	1023561	19/9/20	88	M	M,W			96		RA	DM,HTN,IHD	1183	230		46	294	80		6		80mg	M	80mg
507	1024608	3/10/20	20	F	LS,LT			99		RA		36	487	12.8	119	1335							
508	1024885	7/10/20	24	F	C,M,B	3		98		RA		80	358	6.1	6.04	996		0.88	5		80mg	M	80mg
509	1024282	29/9/20	50	M	C,B,W			98		RA		210.2	231			134	16						
510	1024883	7/10/2020	23	M	B,W			99		RA		22.54	220	1.7	2.98	120	18				80mg	D	8mg
511	1024888	7/10/20	24	F	C,M,B	3		99		RA		29	225	15.6	2.09	218	17	0.82			80mg	M	80mg
512	1021244	18/8/20	36	M	C,F,M			93		RBM			617		17.74	298		0.6			40mg	M	80mg
513	1021634	24/8/20	38	M	C,F,B			88		RA		1175	458		59	381			4		40mg	M	80mg
514	1021245	18/8/20	62	F	C,CP,W,M	7		84		RA	HTN	371.4	368						8		40mg	M	80mg
515	1019902	30/7/20	68	M	F			95		RA	HTN	327											

530	1015136	16/6/20	42	M	C			97	NIV	DM		95.15				952	21	0.16			40mg	M	80mg
531	1019566	25/7/20	69	M	C,F	7		96	RA	DM				113	15.4						80mg	M	120mg
532	1021988	29/8/20	69	M	C			99	RBM	DM,HTN,IHD							229	3.34	3		80mg	M	80mg
533	1020036	31/7/20	49	M	F,B			83	RA	DM,HTN		561				328	63	1.28			80mg	M	80mg
534	1026262	25/10/20	76	M	B,W	5		93	RA	DM,HTN,CKD		548.1	470	122.7	487.81	1298	110	4.06	3			D	80mg
535	1025578	16/10/20	55	F	M,F			99	RBM	DM, TD							47	1.02	6		80mg	M	80mg
536	1022364	3/9/20	53	F	B,F			94	RA	DM		238	281	127.1	64.4	499	20	0.54	4		80mg	M	120mg
537	1023190	14/9/20	35	M	C,M,W			97	RA	DM,HTN		6.84	176	1.8	1.83	165	33	0.7			80mg	M	80mg
538	1020038	31/7/20	75	M	C,F			90	RA	DM		637	442	376		243	38	1.15			80mg	D	12mg
539	1020702	10/8/20	62	M	M,F	4		95	RA	DM,HTN		512			23.16	279	28	0.85			80mg	D	8mg
540	1022005	30/8/20	36	M	C,W	5		94	RA	DM,HTN		185.4	205		9.62	170	22	0.9	5		80mg	M	80mg
541	1021569	24/8/20	58	M	C,B	2				DM,HTN,CKD		4526	384		1169	1252			5		40mg	D	8mg
542	1019892	29/7/20	58	M	C,B	5		100	RBM	DM	12						26	1.04	5		40mg	M	40mg
543	1024673	5/10/2020	28	M	F,W			98	RA			32.56	209	0.7	1.5	135	16	0.57			80mg	D	8mg
544	1024706	5/10/2020	27	M	C,B	3		99	RA			88.38	207	9	3.8		13	0.64					
545	1020762	11/8/20	26	F	C,CP			98	RA				241				18	0.59					
546	1022713	8/9/2020	70	M	B,W			93	RA						1.5	251	37					D	16mg
547	1024607	31/10/2020	31	F	C,CP			99	RA			216.3	377	56	27.82								
548	1024334	29/9/2020	56	M	C,M,W			94	RA	HTN		187.8	340	17.5	33.06	258	22	0.66			40mg	M	80mg
549	1021098	16/8/2020	40	M	C,F,B	10		90	RA				622		155.8	533	30	0.95			40mg	D	80mg
550	1020927	13/8/2020	57	F	C,B	5						259.7	194		8.89	804					80mg	M	80mg
551	1024770	5/10/2020	58	M	C,FM			97	RA	HTN		485.8	804			1520	23	0.75	5		120mg		
552	1029510	24/8/20	27	F	C,M,F			96	RA													D	80mg
553	1025945	21/10/2020	27	M	CP			82	RA			565	370		843.6	382	25	0.7			40mg		
554	1022108	31/8/2020	58	M	C,F,B			90	RA			1059	528	104.6	34.2	741	39	0.9	5		80mg	M	1mg
555	1024491		45	M	C	4		92	RA	HTN, HIV +		680	205	17.9	24.9	205	23	0.72	6		40mg	M	2mg
556	1020434	6/8/2020	26	F	C,M,B	3		100	RA												80mg	M	1mg
557	1021312	20/8/2020	32	M	F,C	4		97	RA					1.4			14	0.86			80mg	M	80mg
558	1020638	10/8/2020	64	M	F,C	4		92	O2MASK 7L/MIN	BA								1.29			80mg	M	80mg
559	1020136	2/8/2020	48	M	F,C	8		88	RA		10/25	1150	684	173.9	166.2	1237	19		7	2	40mg	M	3mg
560	1024721	5/10/2020	56	F	F,C	7		95	RA										5		40mg	M	3mg
561	1023556	19/9/2020	64	M	F,C,W	4	22	97	O2MASK 6L/MIN		12/25	1045	307	95.3	18.65	504			1		80mg	M	80mg
562	1023472	18/9/2020		M	C,F,B,W			99	RA				207		50.16		28	0.81				M	40mg
563	1020516	7/8/2020	30	M	F,W	1		98	RA				154		5.21	119	19				80mg	M	80mg
564	1024885	7/10/2020	23	M	B,W	3		99	RA			22.54	220	1.7	2.98	120	18	0.66			80mg	D	8mg
565	1019840	29/07/2020	32	M	C,F,B			95	10L O2/min				340								80mg	M	80mg
566	1022836	09/09/2020	67	M	C			95	RA	HTN		208.2	354		40.47	240	38	1.19	5		80mg	M	80mg
567	1019496	23/07/2020	34	M	C,F,B,ST	2		96	RA	DM				36			23	0.8	6			D	4mg
568	1018929	16/07/2020	58	F	C,F	5		97	RA	DM		41.2	216	60	1.2	210	10	0.65	6		80mg		
569	1019878	29/07/2020	75	M	C,F,B			92	RA	DM,HTN		667	249				47	1.2			80mg		
570	1017909	06/07/2020	71	F	C,B			96	RA	DM							10	0.56	6		120mg		6mg
571	1019223	20/07/2020	57	F	C,M	3		96	RA	DM		112			2.1	400	11	0.4			40mg	D	6mg
572	1020036	31/07/2020	49	F	F,B,W	4		83	RA	DM,HTN		928.6	561	42	20.6	328	63	1.28			80mg	M	50mg
573	1024532	02/10/2020	26	F	C,B,W			99	RA			80	358		6.05	996	31	0.8			40mg	M	40mg
574	1025463	14/10/2020	28	F	F,W			98	RA				220			695	11	0.7					
575	1024529	2/10/2020	22	M	C,B,W			99	RA							142					40mg	M	40mg
576	1023615	20/09/2020	52	F	F,ST	2		94	RA	DM,BA		81.61	217	8.6	10.2	195			5			M	80mg
577	1024707	5/10/2020	28	F	C,B,W			99	RA			80	358		6.04	996	31	0.88				D	40mg
578	1023713	21/09/2020	59	F	F,B,W	7				DM		334	284		16.35		13	0.71	7			M	80mg
579	1020988	14/08/2020	44	F	ST	7		94	RA	DM			269		7.19						80mg	M	80mg
580	1020163	02/08/2020	55	F	C,F			98	RA	DM		249.3	317		48.98	308	34	1					
581	1020374	05/08/2020	82	M	C,F	5		95	RA	DM,HTN					12	131	25	0.84					
582	1027075	4/11/2020	55	F	W	20	20cpm	70	CPAP	DM							94	2.07					
583	1020299	4/8/2020	65	M	F	8		93	RA	DM,HTN	15	712	226		46	310	36	1.1					
584	1025471	15/10/20	37	M	W,F	1		90	RA								96	1.71					
585	1025865	20/10/20	23	F	F		20	99							4.57	190	14	0.76					
586	1021592	24/8/20	23	F	C,F,M,B		20	97	RA			75		0.8	1.5	80							
587	1024528	2/10/20	23	M	LT,LS		20	95	RA			78.59	200	0.8	1.5	79							
588	1024913	7/10/20	26	M	C,F,M,B		20	99	RA			57.14	148		0.4	1.5	102	24	0.97			M	
589	1021638	24/8/20	46	M	F,B			96	RA					62.3		654			3			M	32mg
590	1021552	23/8/20	36	M	C,B			98	RA					14.7						3			
591	1027471	9/11/20	54	M	B,V			85		HTN							14	0.98					
592	1021773	26/8/20	42	M	C,F			93	RA						89.4	399		1.01	2		80mg	M	80mg
593	1020423	6/8/20	71	M	B,W			86											1		80mg	M	80mg
594	1020367	5/8/20	62	M	C,F			94	RA			427	514			251						M	80mg
595	1020990	14/8/20	54	F	C							99.72	148			158	22	0.78					
596	1022506	05/09/2020	39	M	C,F,B,M	3		98	RA	TD		58.91	395		236.8	417	30	1.26	5		80mg	M	80mg
597	1022675	07/09/2020	42	M	C,F,B	10		84	RA	DM	22	212	555		4.46			0.75	10		80mg	M	500mg
598	1025372	14/10/2020	55	M	CP	1		98	RA										5		80mg	M	80mg
599	1021702	25/08/2020	73	M	W	3		93	RA	DM,HTN,IHD		146.6	202		2.08	270	44	1.93	2		80mg	M	80mg
600	1023295	15/09/2020	50	M	C,F,B	4		96	RA			36.8	252			494	28	0.78	4		40mg	M	80mg
601	1021462	21/08/2020	38	M	C,F	2		98	RA			577			50.55		30	0.74			40mg	M	80mg
602	1023896	24/09/2020	70	M	C,B,W	2		90	RA	DM,HTN	21						89	1.48	1		80mg	M	80mg
603	1022452	4/9/20	45	M	F, B	3	30	78%		HTN		422	1036		296		40	0.81	1		80mg	M	50mg
604	1021590	24/8/20	27	F	C,F,M,B	1		94	RA	DM, HTN												M	40mg
605	1021715	25/8/20	41	M	F	2		98	ROOM AIR				225	7.6	8.87				7		80mg	M	80mg
606	1020940	13/8/20	58	M	W,F			98	RA	HT													

