

SECURE-Liver

Aims of SECURE-Liver (previously SECURE-Cirrhosis): Understand outcomes of COVID-19 in patients with chronic liver disease and prior-liver transplantation with additional questions to better understand:

1. COVID-19 in under-served/safety net populations
2. Effect of alcohol use on COVID-19
3. Vaccine receipt and response
4. COVID-19 therapies in CLD/post-LT patients

Inclusion Criteria:

- 1) Chronic liver disease or post-liver transplant AND
- 2) Confirmed positive SARS-CoV-2 PCR

It is important that we capture all important outcomes from COVID-19. Contributors should delay submitting the form until the patient has had COVID 19 for a long enough duration to experience recovery from COVID-19 or death.

If you have any questions, please reach out to COVID.Cirrhosis@unc.edu

Was this COVID-19 confirmed by a positive SARS-CoV-2 PCR?

- Yes
 No
 Unknown

Reporter Information

Name of reporter

Email address of reporter

Name of lead physician providing care for liver disease/post-liver transplant

Name of center providing care for liver disease/post-liver transplant

Name of hospital where patient received care for COVID-19 (enter 'NA' if patient not hospitalized)

Patient Information

Is the patient ≥ 90 years of age?

- Yes
- No

Age

- 89
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Country of residence

- Not in this country list ---
- Åland Islands
- Afghanistan
- Albania
- Algeria
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia, Plurinational State of
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- Brunei Darussalam
- Bulgaria
- Burkina Faso
- Burundi
- Côte d'Ivoire
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Congo, the Democratic Republic of the
- Cook Islands
- Costa Rica
- Croatia
- Cuba
- Cyprus
- Czech Republic
- Denmark
- Djibouti
- Dominica
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Ethiopia

- Falkland Islands (Malvinas)
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern Territories
- Gabon
- Gambia
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Holy See (Vatican City State)
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran, Islamic Republic of
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Korea, Democratic Peoples Republic of
- Korea, Republic of
- Kuwait
- Kyrgyzstan
- Lao Peoples Democratic Republic
- Latvia
- Lebanon
- Lesotho
- Liberia
- Libyan Arab Jamahiriya
- Liechtenstein
- Lithuania
- Luxembourg
- Macao
- Macedonia, the former Yugoslav Republic of
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte

- Mexico
- Micronesia, Federated States of
- Moldova, Republic of
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar
- Namibia
- Nauru
- Nepal
- Netherlands
- Netherlands Antilles
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- Norway
- Oman
- Pakistan
- Palau
- Palestinian Territory, Occupied
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn
- Poland
- Portugal
- Qatar
- Ré union
- Romania
- Russian Federation
- Rwanda
- Saint Barthélemy
- Saint Helena, Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- Saint Martin (French part)
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- Sao Tome and Principe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Swaziland
- Sweden
- Switzerland

- Syrian Arab Republic
- Taiwan, Province of China
- Tajikistan
- Tanzania, United Republic of
- Thailand
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- Uruguay
- Uzbekistan
- Vanuatu
- Venezuela, Bolivarian Republic of
- Vietnam
- Virgin Islands, British
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

State of residence

- ALABAMA ALASKA
 AMERICAN SAMOA ARIZONA
 ARKANSAS CALIFORNIA
 COLORADO CONNECTICUT
 DELAWARE DISTRICT OF COLUMBIA
 FLORIDA GEORGIA
 GUAM HAWAII IDAHO
 ILLINOIS INDIANA
 IOWA KANSAS KENTUCKY
 LOUISIANA MAINE
 MARYLAND MASSACHUSETTS
 MICHIGAN MINNESOTA
 MISSISSIPPI MISSOURI
 MONTANA NEBRASKA
 NEVADA NEW HAMPSHIRE
 NEW JERSEY NEW MEXICO
 NEW YORK NORTH CAROLINA
 NORTH DAKOTA OHIO
 OKLAHOMA OREGON
 PENNSYLVANIA PUERTO RICO
 RHODE ISLAND SOUTH CAROLINA
 SOUTH DAKOTA TENNESSEE
 TEXAS UTAH VERMONT
 VIRGIN ISLANDS VIRGINIA
 WASHINGTON WEST VIRGINIA
 WISCONSIN WYOMING

Gender

- Female
 Male
 Other

Race/Ethnicity (may check more than one)

- White
 Black or African American
 American Indian / Native Alaskan
 East Asian (incl. Chinese, Japanese, Korean)
 South / South-East Asian (incl. Bangladeshi, Indian, Pakistani, Sri Lankan)
 Native Hawaiian / Pacific Islander
 Arabic
 Other
 Unknown

Other race/ethnicity

Hispanic ethnicity

- Hispanic/Latino
 Not Hispanic/Latino
 Unknown

At the time of hospitalization, what type of employment does the patient have?

- Full-time employment at a job
 Part-time employment at a job
 Casual employment
 Unemployed/Disability
 Retired
 Unknown

What type of health insurance does the patient have (may check more than one)?

- Private insurance
- Medicare
- Medicaid
- Military health care (e.g. VA)
- Indian health service
- No insurance/self-pay
- Unknown

Prior to COVID-19, where was the patient living?

- Mobile home or trailer
- Single-family house
- Multi-family house
- Apartment
- Long-term care facility/skilled nursing facility
- Shelter
- Street
- Unknown

In the last two weeks has the patient had any face-to-face interaction with anyone other than family members of the same household or at-home caretakers?

- Yes
- No
- Unknown

Patient BMI category (in kg/m²)

- < 18.5 (Underweight)
- 18.5-24.9 (Normal weight)
- 25.0-29.9 (Pre-obesity)
- 30.0-34.9 (Obesity class I)
- 35.0-39.9 (Obesity class II)
- >39.9 (Obesity class III)
- Unknown

Liver transplantation questions

Has the patient had a liver transplant?

- Yes
- No

What year was the liver transplant performed?

- Unknown
- 2021
- 2020
- 2019
- 2018
- 2017
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- 1965

Indication for liver transplant (select all that apply)

- Decompensated cirrhosis
- Hepatocellular carcinoma
- Acute liver failure
- Other

Other indication for liver transplantation

Underlying etiology of liver disease (select all that apply)

- Non-alcoholic fatty liver disease (NAFLD)
 - Alcohol-related liver disease (ALD)
 - Hepatitis C virus (HCV)
 - Hepatitis B virus (HBV)
 - Autoimmune hepatitis (AIH)
 - IgG4-related disease
 - Primary biliary cholangitis (PBC)
 - Primary sclerosing cholangitis (PSC)
 - Hemochromatosis
 - Wilson's disease
 - Other
-

Other etiology

Has the patient developed recurrent hepatocellular carcinoma after liver transplant?

- Yes
 - No
 - Unknown
-

What treatment(s) for recurrent hepatocellular carcinoma has the patient received (i.e. treatment after transplantation)?

- Hepatic resection
 - Locoregional therapy (thermal ablation, TACE, TARE)
 - Systemic therapy (sorafenib, immunotherapy)
 - Unknown
-

At the time of COVID-19 diagnosis, does the patient have residual or viable hepatocellular carcinoma?

- Yes
 - No
 - Unknown
-

What is the current stage of hepatocellular carcinoma?

- Single nodule ≤ 2 cm
 - 1-3 nodules all ≤ 3 cm
 - >3 nodules or nodule(s) >3 cm
 - Portal vein invasion or extrahepatic spread
 - Unknown
-

Immunosuppression regimen at time of COVID-19 diagnosis (select all that apply)

- Prednisone
 - Tacrolimus
 - Sirolimus
 - Everolimus
 - Cyclosporine
 - Mycophenolate mofetil (MMF)
 - Azathioprine
 - Cyclophosphamide
 - Other
 - Unknown
-

What other immunosuppression medication was used at the time of COVID-19?

During COVID-19 disease course, how was the prednisone dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the tacrolimus dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the sirolimus dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the everolimus dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the cyclosporine dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the mycophenolate dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the azathioprine dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the cyclophosphamide dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

During COVID-19 disease course, how was the [med_other] dose changed?

- Unchanged
- Increased
- Decreased
- Held/Discontinued
- Unknown

Does the patient have any of the following comorbidities (check all that apply)?

- Cardiovascular disease (e.g. coronary artery disease, heart failure, arrhythmia)
- Type 2 diabetes
- Asthma
- Chronic obstructive pulmonary disease (COPD)
- Other Chronic Lung Disease (NOT asthma/COPD)
- Hypertension
- Non-HCC cancer
- History of stroke
- Chronic renal disease (CKD)
- Human immunodeficiency virus (HIV) infection
- Current cigarette smoker
- Current user of tobacco products other than cigarettes (e.g. vaping)
- History of illicit drug use including injectable drugs or inhaled crack/cocaine but excluding marijuana

Chronic liver disease questions

Etiology of liver disease (select all that apply)

- Non-alcoholic fatty liver disease (NAFLD)
- Alcohol-related liver disease (ALD)
- Hepatitis C virus (HCV)
- Hepatitis B virus (HBV)
- Autoimmune hepatitis (AIH)
- IgG4-related disease
- Primary biliary cholangitis (PBC)
- Primary sclerosing cholangitis (PSC)
- Hemochromatosis
- Wilson's disease
- Other

Other etiology

Does the patient have cirrhosis?

- Yes
- No
- Unknown

Child Pugh grade prior to COVID-19 diagnosis?

- A
- B
- C
- Unknown

Did the patient have ascites prior to COVID-19 diagnosis?

- None
- Mild/moderate (diuretic responsive)
- Severe (diuretic refractory)
- Unknown

What was the worst grade of hepatic encephalopathy patient developed prior to COVID-19 diagnosis?

- None
- Grade 1 (trivial lack of awareness, shortened attention span)
- Grade 2 (lethargy, minimal disorientation, subtle personality change)
- Grade 3 (somnolence to semi-stupor but responsive to verbal stimuli, gross disorientation)
- Grade 4 (coma - unresponsive to verbal or noxious stimuli)
- Unknown

In the month prior to admission for COVID-19, how often did the patient have a drink containing alcohol?

- Never
- Monthly or less
- 2-4 times per month
- 2-3 times a week
- 4 or more times a week
- Unknown

Prior to hospitalization, how many standard drinks containing alcohol did the patient have on a typical day?

- 1 or 2
- 3 to 4
- 5 to 6
- 7 to 9
- 10 or more
- Unknown

How often does the patient have six or more drinks on one occasion?

- Daily or almost daily
- Weekly
- Monthly
- Less than monthly
- Never
- Unknown

Has the patient ever had hepatocellular carcinoma?

- Yes
- No
- Unknown

What treatment(s) for HCC has the patient received?

- Hepatic resection
- Locoregional therapy (thermal ablation, TACE, TARE)
- Systemic therapy (sorafenib, immunotherapy)
- Unknown

At the time of COVID-19 diagnosis, does the patient have residual or viable hepatocellular carcinoma?

- Yes
- No
- Unknown

What is the current stage of hepatocellular carcinoma?

- Single nodule ≤ 2 cm
- 1-3 nodules all ≤ 3 cm
- >3 nodules or nodule(s) >3 cm
- Portal vein invasion or extrahepatic spread
- Unknown

What immunosuppression was the patient taking for IgG4-related disease at time of COVID-19 diagnosis (may check more than one)?

- None
- Corticosteroids
- Azathioprine
- Rituximab
- Other
- Unknown

Other immunosuppression for IgG4-related disease

Has the patient received steroids for alcoholic hepatitis recently (within 4 weeks of COVID-19 diagnosis)?

- Yes
- No
- Unknown

Treatment for primary biliary cholangitis (PBC) at time of COVID-19 diagnosis

- Ursodeoxycholic acid
- Obeticholic acid
- Fibrate
- Other
- No treatment
- Unknown

Other PBC treatments

Does the patient have inflammatory bowel disease (IBD)?

- Yes
- No
- Unknown

Immunosuppression medication(s) patient was taking for IBD at time of COVID-19 diagnosis

- Prednisone
- Budesonide
- Azathioprine
- Methotrexate
- Mycophenolate
- Infliximab
- Adalimumab
- Ustekinumab
- Vedolizumab
- Other
- None
- Unknown

Other immunosuppression for IBD

Treatment for autoimmune hepatitis (AIH) at time of COVID-19 diagnosis

- Prednisone/prednisolone
- Budesonide
- Azathioprine
- Mycophenolate
- Tacrolimus
- Other
- None
- Unknown

Other treatment for AIH

Hepatitis B surface antigen (HBsAg) positive

- Yes
- No
- Unknown

Treatment for HBV at the time of COVID-19 diagnosis

- Tenofovir
- Entecavir
- Interferon
- None
- Unknown

Did the patient have detectable hepatitis C virus (HCV) RNA at the time of or prior to COVID-19 diagnosis?

- Yes
- No
- Unknown

HCV genotype

1
 2
 3
 4
 5
 6
 7
 Unknown

Active treatment for HCV at the time of COVID-19 diagnosis

Yes
 No
 Unknown

Does the patient have any of the following comorbidities (check all that apply)?

Cardiovascular disease (e.g. coronary artery disease, heart failure, arrhythmia)
 Type 2 diabetes
 Asthma
 Chronic obstructive pulmonary disease (COPD)
 Other Chronic Lung Disease (NOT asthma/COPD)
 Hypertension
 Non-HCC cancer
 History of stroke
 Chronic renal disease (CKD)
 Human immunodeficiency virus (HIV) infection
 Current cigarette smoker
 Current user of tobacco products other than cigarettes (e.g. vaping)
 History of illicit drug use including injectable drugs or inhaled crack/cocaine but excluding marijuana

Laboratory data (leave fields blank if unknown)

If COVID-19 suspected at presentation/admission then use recent pre-admission laboratory values as baseline

If hospital acquired COVID-19 suspected then please use first laboratory values obtained during hospitalization as baseline

Baseline serum sodium (mmol/L)

(Before COVID-19 diagnosis)

Creatinine units

$\mu\text{mol/L}$ mg/dl

Baseline serum creatinine

(Before COVID-19 diagnosis)

Baseline prothrombin time (sec)

(Before COVID-19 diagnosis)

Albumin units

g/dl g/liter

Baseline albumin

(Before COVID-19 diagnosis)

Total bilirubin units

$\mu\text{mol/L}$ mg/dl

Baseline total bilirubin

(Before COVID-19 diagnosis)

COVID-19 questions

Do you know the strain of COVID-19?

Yes
 No

What was the strain of COVID-19?

Was the COVID-19 nosocomial (i.e. patient was infected while admitted to the hospital)?

Yes
 No
 Unknown

Has the patient had a previous positive SARS-CoV-2 test (i.e. has the patient been re-infected with SARS-CoV-2)?

Yes
 No
 Unknown

How many months between the first positive SARS-CoV-2 PCR and the second positive SARS-CoV-2 PCR?

Did the patient receive at least one dose of COVID-19 vaccination prior to the lab-confirmed COVID-19 (positive SARS-CoV-2 PCR)?

Yes
 No
 Unknown

How many doses of COVID-19 vaccine (of any type) did the patient receive prior to the positive SARS-CoV-2 PCR test?

1
 2
 3
 4
 Unknown

How many weeks between the first vaccination dose and the positive SARS-CoV-2 PCR?

What type of COVID-19 vaccination did the patient receive for their first (prime) vaccination?

Pfizer-BioNTech
 Moderna
 Oxford-AstraZeneca
 Janssen
 Novavax
 Other

What type of vaccine did the patient receive for their first dose?

How many weeks between the second vaccination dose and the positive SARS-CoV-2 PCR?

What type of COVID-19 vaccination did the patient receive for their second (boost) vaccination?

- Pfizer-BioNTech
- Moderna
- Oxford-AstraZeneca
- Janssen
- Novavax
- Other

What type of vaccine did the patient receive for their second dose?

How many weeks between the third vaccination dose and the positive SARS-CoV-2 PCR?

What type of COVID-19 vaccination did the patient receive for their third (boost) vaccination?

- Pfizer-BioNTech
- Moderna
- Oxford-AstraZeneca
- Janssen
- Novavax
- Other

What type of vaccine did the patient receive for their third dose?

How many weeks between the fourth vaccination dose and the positive SARS-CoV-2 PCR?

What type of COVID-19 vaccination did the patient receive for their fourth (boost) vaccination?

- Pfizer-BioNTech
- Moderna
- Oxford-AstraZeneca
- Janssen
- Novavax
- Other

What type of vaccine did the patient receive for their fourth dose?

What symptoms did the patient have at the time of COVID-19 diagnosis?

- GI symptoms (abdominal pain, diarrhea, nausea, vomiting)
- Respiratory symptoms (shortness of breath, cough)
- Both GI and respiratory symptoms
- Neither GI or respiratory symptoms
- Unknown

Which of the following complications of severe or critical COVID-19 did the patient develop?

- Severe pneumonia - pneumonia (fever, cough, dyspnea, fast breathing) plus one of the following: respiratory rate > 30 breaths/min; severe respiratory distress; or SpO₂ < 90% on room air
- Acute respiratory distress syndrome - within 1 week of clinical insult, bilateral opacities (not explained by volume overload/lobar collapse/nodules) with PaO₂/FiO₂ ≤ 300 mmHg (with PEEP or CPAP ≥ 5 cmH₂O)
- Sepsis - life-threatening organ dysfunction caused by a dysregulated host response with signs of organ dysfunction (eg altered mental status, reduced urine output, cold extremities, coagulopathy, acidosis, high lactate)
- Septic shock - persistent hypotension despite volume resuscitation, requiring vasopressors to maintain MAP ≥ 65 mmHg or serum lactate level > 2 mmol/L
- Unknown

What complications did the patient develop during COVID-19?

- Hypotension requiring vasopressor agents
- New or worsening ascites
- Spontaneous bacterial peritonitis
- Hepatic encephalopathy
- Non-variceal upper GI bleeding
- Variceal upper GI bleeding
- New requirement for renal replacement therapy (e.g. hemodialysis)
- Deep vein thrombosis
- Pulmonary embolism
- Myocardial infarction
- Cerebrovascular accident (i.e. stroke)
- Other

Other complications of COVID-19

What was the grade of ascites during COVID-19?

- Mild/moderate
- Severe
- Unknown

What was the worst grade of hepatic encephalopathy during COVID-19 (based on West Haven Criteria)?

- Grade 1 (trivial lack of awareness, shortened attention span)
- Grade 2 (lethargy, minimal disorientation, subtle personality change)
- Grade 3 (somnolence to semi-stupor but responsive to verbal stimuli, gross disorientation)
- Grade 4 (coma - unresponsive to verbal or noxious stimuli)
- Unknown

Did the patient have alcohol-related hepatitis at the time of their COVID-19?

- Yes
- No
- Unknown

Prothrombin time (sec) at the time of COVID-19 (first lab check after positive SARS-CoV-2 PCR)

(Before COVID-19 diagnosis)

Total bilirubin at the time of COVID-19 (first lab check after positive SARS-CoV-2 PCR)

(Before COVID-19 diagnosis)

Which of the following anticoagulation agent(s) did the patient receive during their course of COVID-19?

- Venous thromboembolism prophylactic dose [e.g. subcutaneous heparin or low molecular weight heparin (LMWH)/fondaparinux]
- Venous thromboembolism treatment dose (e.g. intravenous heparin or high dose LMWH/fondaparinux)
- Warfarin/coumadin
- Direct oral anticoagulant (e.g. dabigatran, rivaroxaban, apixaban, edoxaban)
- Unknown

Did the patient receive specific antiviral treatment for COVID-19?

- Yes
- No
- Unknown

Which of the following treatment(s) did patient receive for COVID-19 (select all that apply)?

- Remdesivir
- Dexamethasone
- Convalescent plasma
- Bamlanivimab (LY-CoV555)
- Casirivimab and imdevimab (REG-COV2)
- Tocilizumab
- Siltuximab
- Sarilumab
- Other monoclonal antibody treatment
- Chloroquine/hydroxychloroquine
- Azithromycin
- Kinase inhibitor (e.g. acalabrutinib, baricitinib, ruxolitinib, tofacitinib)
- Lopinovir/ritonavir
- Ivermectin
- Ribavirin
- Interferon-alpha
- Other
- Unknown

Other type of antiviral treatment(s) received for COVID-19

Did the patient develop any adverse effects of any COVID-19 therapy they received?

- Yes
- No
- Unknown

List all drug adverse events as a reaction (therapy) separated by a semi-colon [for example: "rash (therapy 1); respiratory distress (therapy 2)"]:

Did the most serious drug reaction: (1) result in death, (2) result in a potentially life-threatening reaction, (3) require hospitalization or result in prolongation of existing hospitalization, or (4) result in persistent or significant disability/incapacity?

- Yes
- No
- Unknown

What was the reason the patient did not receive COVID-19 antiviral treatment (select all that apply)?

- Elevated liver enzymes
- Underlying liver fibrosis/cirrhosis
- Other contraindication (eg AKI)
- Treatment not available
- Other
- Unknown

What was the reason the patient did not receive COVID-19 antiviral treatment?

Did the patient die?

- Yes
- No
- Unknown

What was the primary cause of death?

- Liver-related complications
- COVID-19-related lung disease
- Cardiogenic shock
- Other

Other cause of death

How many days between the positive SARS-CoV-2 PCR and death?

Has the patient been hospitalized?

- Yes
- No
- Unknown

Has the patient been discharged from the hospital?

- Yes
- No
- Unknown

What was the length of hospital stay (days)?

How many days between the positive SARS CoV-2 PCR and discharge?

Did patient require invasive ventilation?

- Yes
- No
- Unknown

Did patient require non-invasive ventilation?

- Yes
- No
- Unknown

Did patient require admission to an intensive care unit?

- Yes
- No
- Unknown

Why was the patient not admitted to an intensive care unit?

- Disease not severe enough
- Disease was severe enough but limited availability of intensive care unit
- Disease was severe enough but escalation to intensive care unit not felt to be appropriate
- Unknown

What was the reason that escalation to the intensive care unit was not felt to be appropriate?

How many days between positive SARS-CoV-2 PCR and last contact with patient (e.g. death, discharge, last follow-up)?
