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ASOCIACION LATINOAMERICANA PARA EL ESTUDIO DEL HIGADO

COVID-19 AND THE LIVER IN THE AMERICAS

MAY 28, 2020, 6-7PM ET

Presenters:

Manuel Mendizabal, MD

Marco Arrese, MD, FACP, FAASLD

Guadalupe Garcia-Tsao, MD, FAASLD

Wellington Andraus, MD, PhD

Moderators:

Marcelo Silva, MD

Hugo E. Vargas, MD, FAASLD

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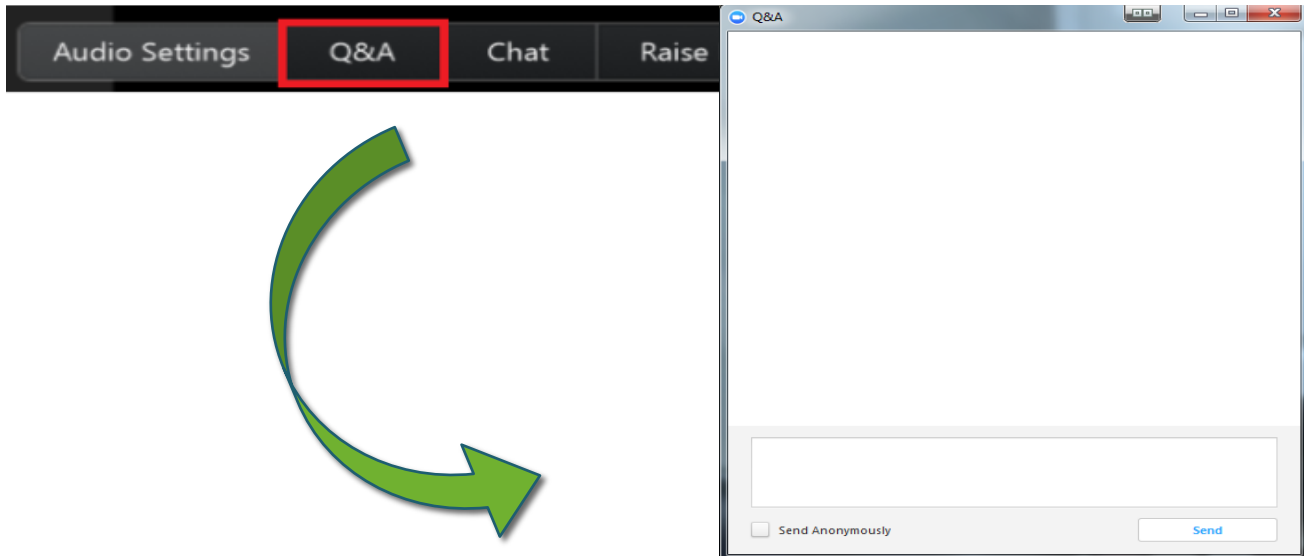

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For resources and updates on COVID-19 and the liver, visit aasld.org/about-aasld/covid-19-and-liver

Join the COVID-19 Discussion Community on Engage
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COVID-19 and Liver Disease

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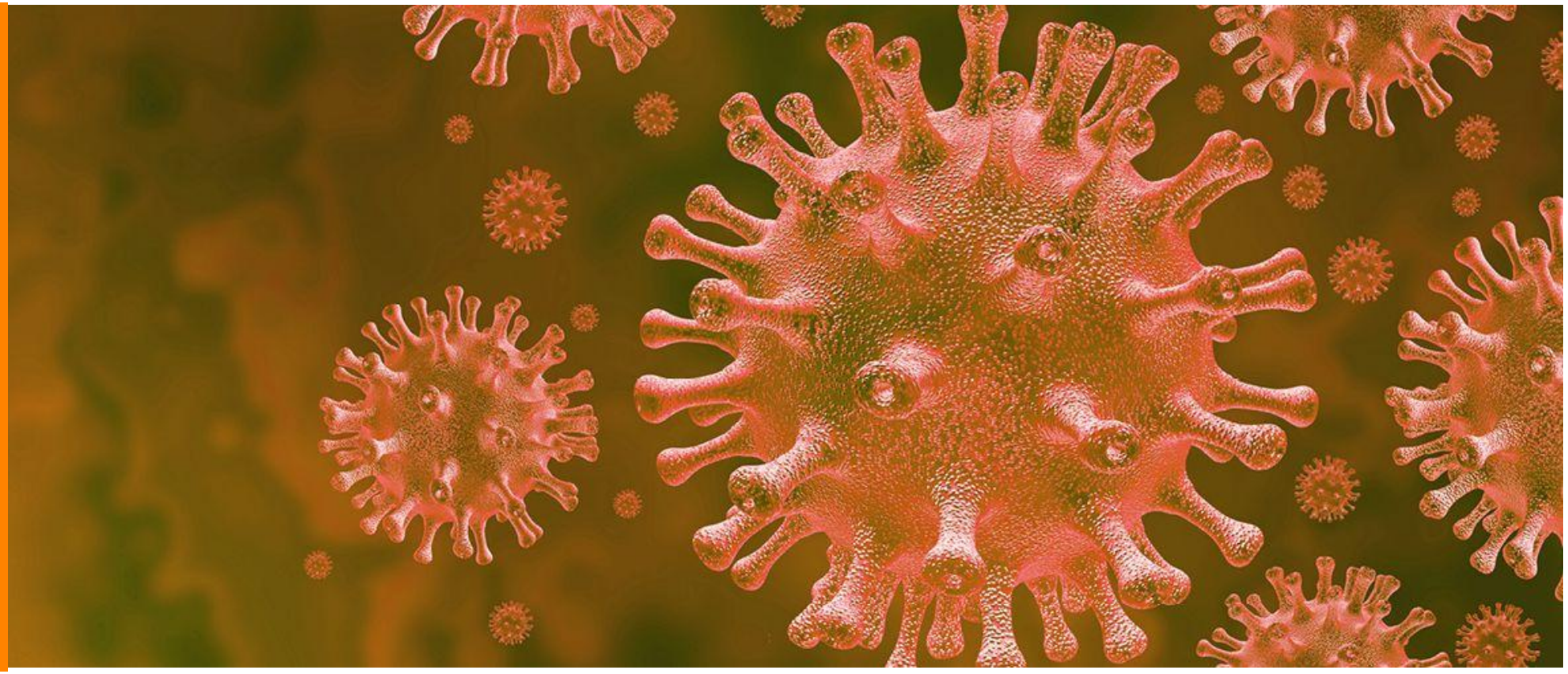
WEBINAR: COVID-19 & THE LIVER: TELEMEDICINE DURING THE COVID-19 PANDEMIC AND BEYOND



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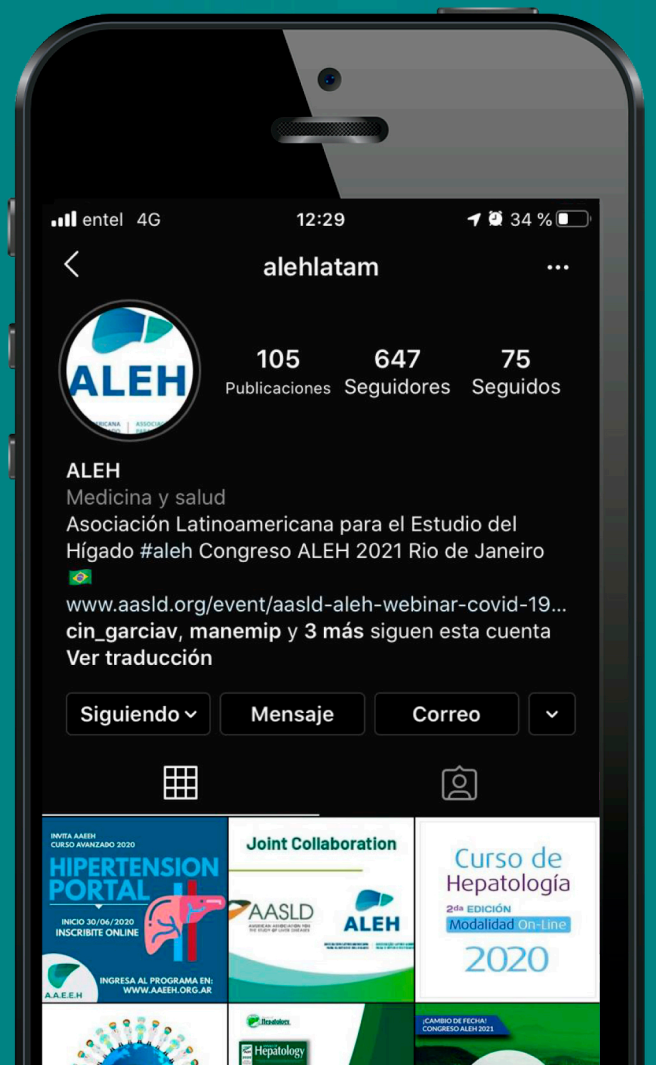

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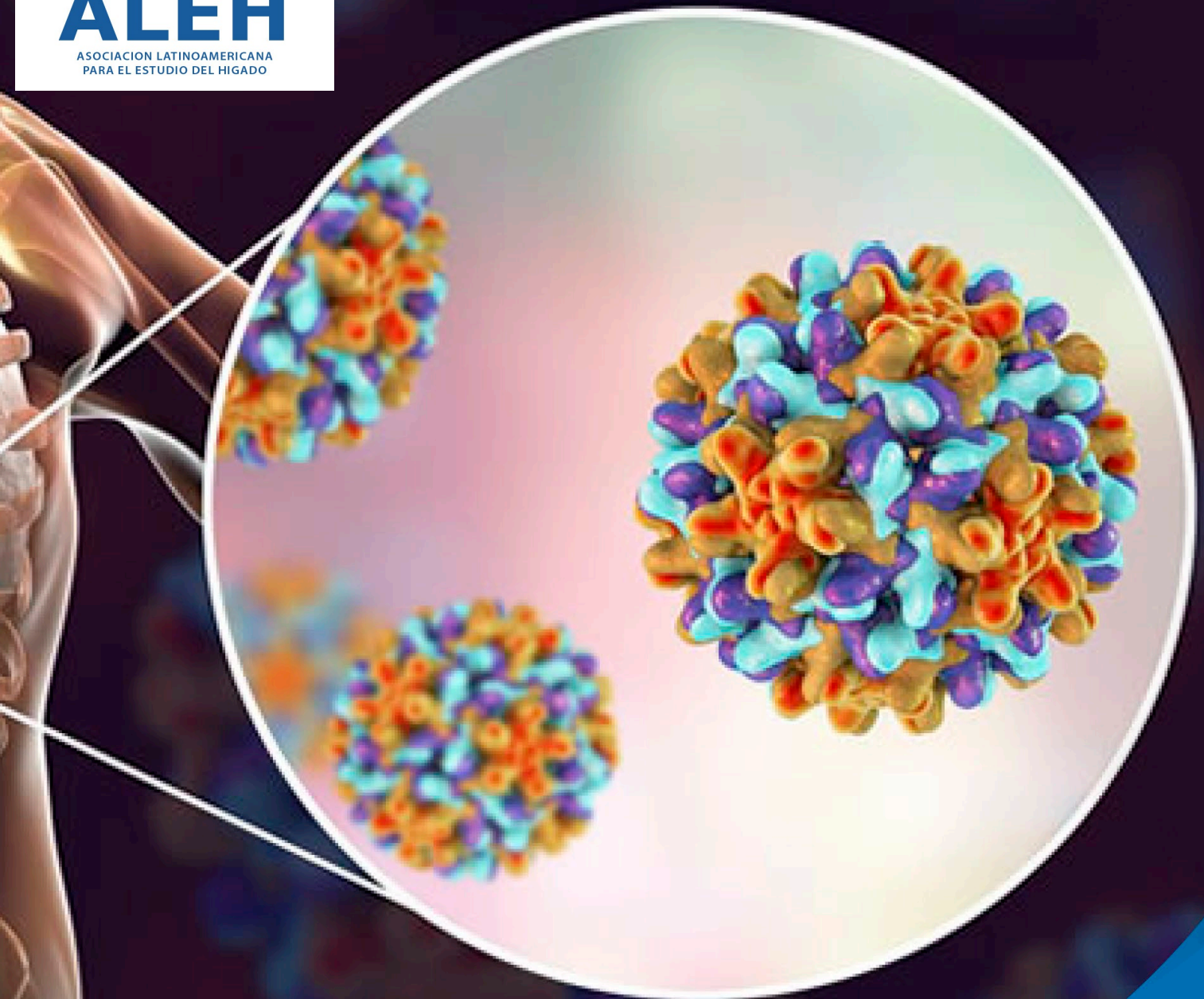

HEPATITIS VIRALES / COVID - 19

LOS COORDINADORES DEL GRUPO DE INTERÉS DE HEPATITIS VIRALES TE INVITAN A SER PARTE ACTIVA DE LAS SIGUIENTES INICIATIVAS RELACIONADAS CON EL COVID - 19

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AGENDA

WELCOME AND INTRODUCTION

Marcelo Silva and Hugo Vargas

THE IMPACT OF COVID-19 ON THE LIVER IN LATIN AMERICA – THE ALEH REGISTRY

Manuel Mendizabal

AASLD CLINICAL INSIGHTS CONSENSUS DOCUMENT DEBRIEF

Marco Arrese

RE-ENTRY AND REOPENING STRATEGIES OF CLINICS FOR LIVER DISEASE PATIENTS

Guadalupe Garcia-Tsao

CASE PRESENTATION: MANAGING THE PATIENT WITH AUTOIMMUNE HEPATITIS AND COVID-19

Wellington Andraus

Q&A

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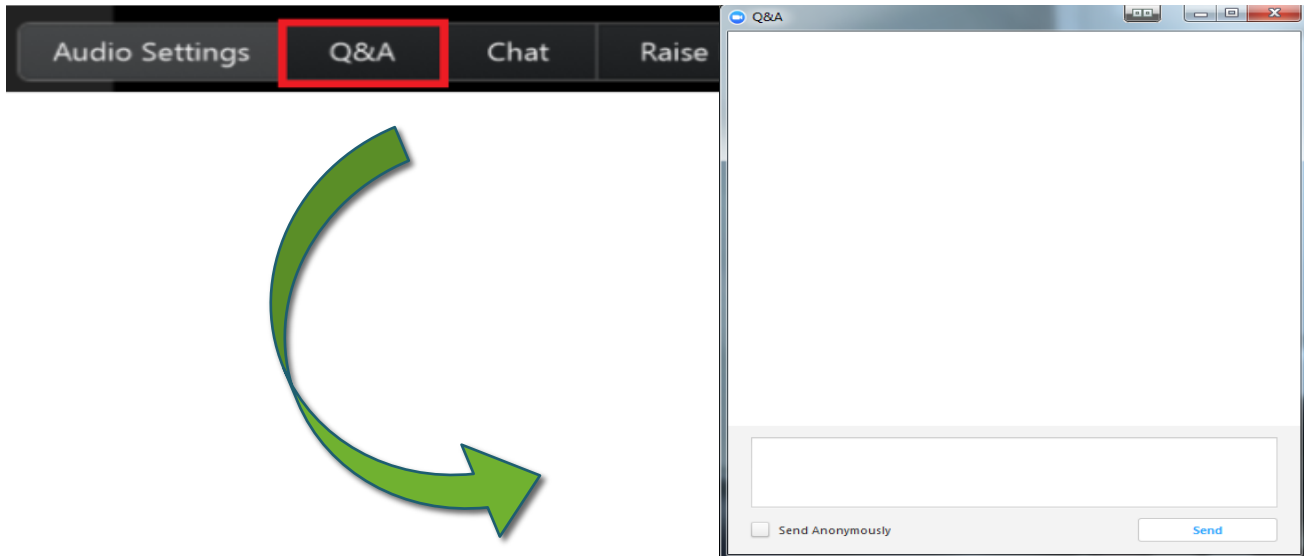

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Impacto hepático del COVID-19 en Latinoamérica – Registro ALEH

DR. MANUEL MENDIZABAL
UNIDAD DE HIGADO Y TRASPLANTE HEPATICO
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La **Sociedad Chilena de Medicina Intensiva** (Sochimi) informó que en la última jornada se registra un aumento de la demanda por camas críticas de pacientes por coronavirus, llegando a un nivel de ocupación, en promedio, de un 95% en Santiago.

Alberto Fernández anunció la extensión de la cuarentena hasta el siete de junio: "Va a durar lo que tenga que durar"

FOLHA DE S.PAULO - EQUILÍBRIO E SAÚDE

América Latina é o epicentro da pandemia, e Brasil é o país mais preocupante, diz OMS

A **OMS** apoia o uso de cloroquina apenas em estudos clínicos em hospital, e sob acompanhamento médico. ...

El registro de decesos por covid-19 en Quito pasó de 50 a 243 en un mes

Mundo EL PAIS

AVANCE DEL CORONAVIRUS

América del Sur, el nuevo epicentro de la pandemia del COVID-19

Nuevos contagios superan los 3,000 casos diarios en México

Menú | El Comercio | Coronavirus en Perú: subió a 3.456 la cifra de fallecidos por...

Coronavirus en Perú: subió a 3.456 la cifra de fallecidos por COVID-19

Hasta el sábado eran 3.373 casos. El Ministerio de Salud también informó que hay 119.959 contagiados a nivel nacional

Numero de casos y muertes asociadas a COVID-19 en la región

#	Country, Other	Total Cases	Deaths/ 1M pop
1	Brazil	363,211	107
2	Peru	119,959	105
3	Chile	69,102	38
4	Ecuador	36,756	176
5	Colombia	21,175	14
6	Argentina	11,353	10
7	Bolivia	5,915	21
8	Venezuela	1,121	0.4
9	Paraguay	862	2
10	Uruguay	769	6

#	Country, Other	Total Cases	Deaths/ 1M pop
3	Mexico	65,856	56
4	Dominican Republic	14,801	42
5	Panama	10,577	69
6	Honduras	3,743	18
7	Guatemala	3,054	3
8	Cuba	1,941	7
9	El Salvador	1,915	5
10	Costa Rica	930	2

Total de Infectados: 736.875
Muertes: 39.860

https://worldometers.info/coronavirus/ (Acceso: 24 de mayo)

¿Cuánto afecta el COVID-19 en el hígado?

- 5.700 pacientes internados en 12 hospitales de Nueva York.
- Sólo 19 pacientes (0,4%) cirróticos
- 55 pacientes (1%) trasplantados
- Afección hepática en la admisión:
  - TGO (AST) >40 UI/L: 58.4%
  - TGP (ALT) >60 UI/L: 39.0%

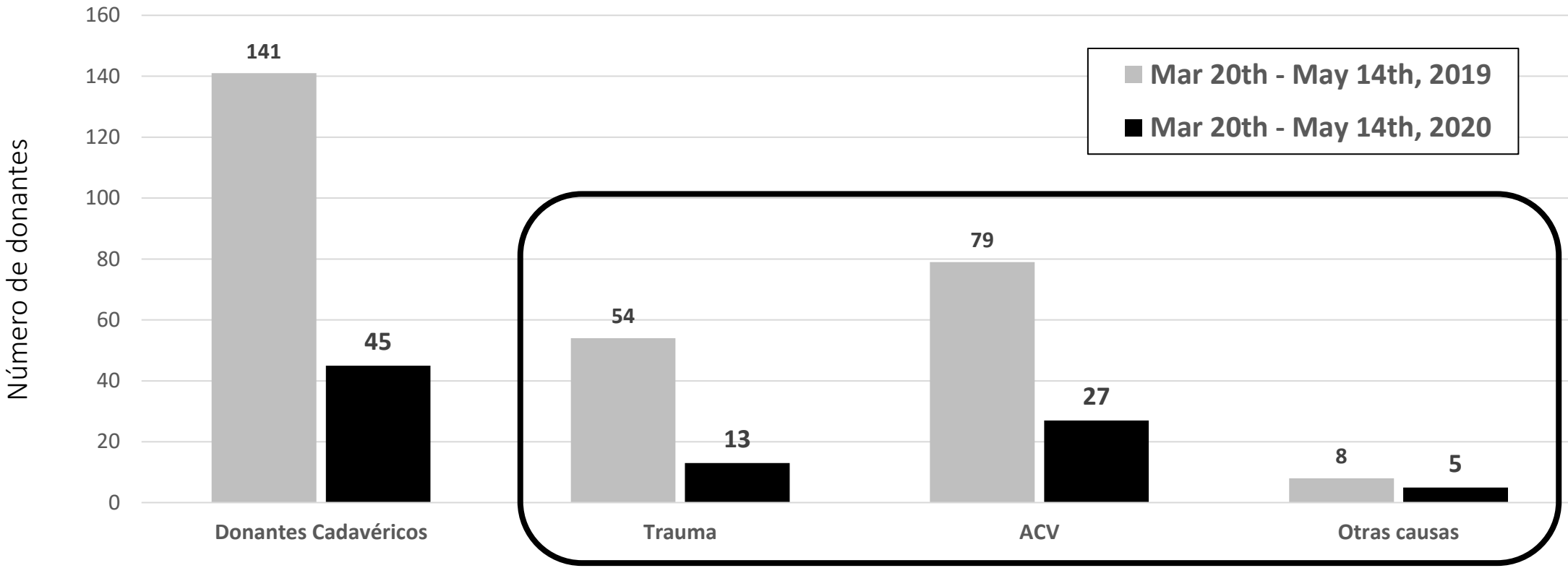
Richardson S y col. JAMA 2020. doi:10.1001/jama.2020.6775

Daño colateral de la pandemia
Comparación interanual de prestaciones
(abril 2019 vs. abril 2020)

Prestación	Abr-19	Abr-20	Variación
Consultas totales por emergencia	213.947	54.952	-74%
Sme coronarios agudos ingresados por guardia	687	258	-62%
ACV/TIA ingresados	381	204	-46%
Intervenciones percutáneas totales	1.850	651	-65%
Endoscopías digestivas	7.137	1.412	-80%
% ocupación en internación general	83%	55%	-28%
% ocupación en área crítica	77%	48%	-29%

Fuente: www.adecra.org.ar

Caída drástica del número de **donantes**



Ruf A y Dirchwolf M (en revisión)

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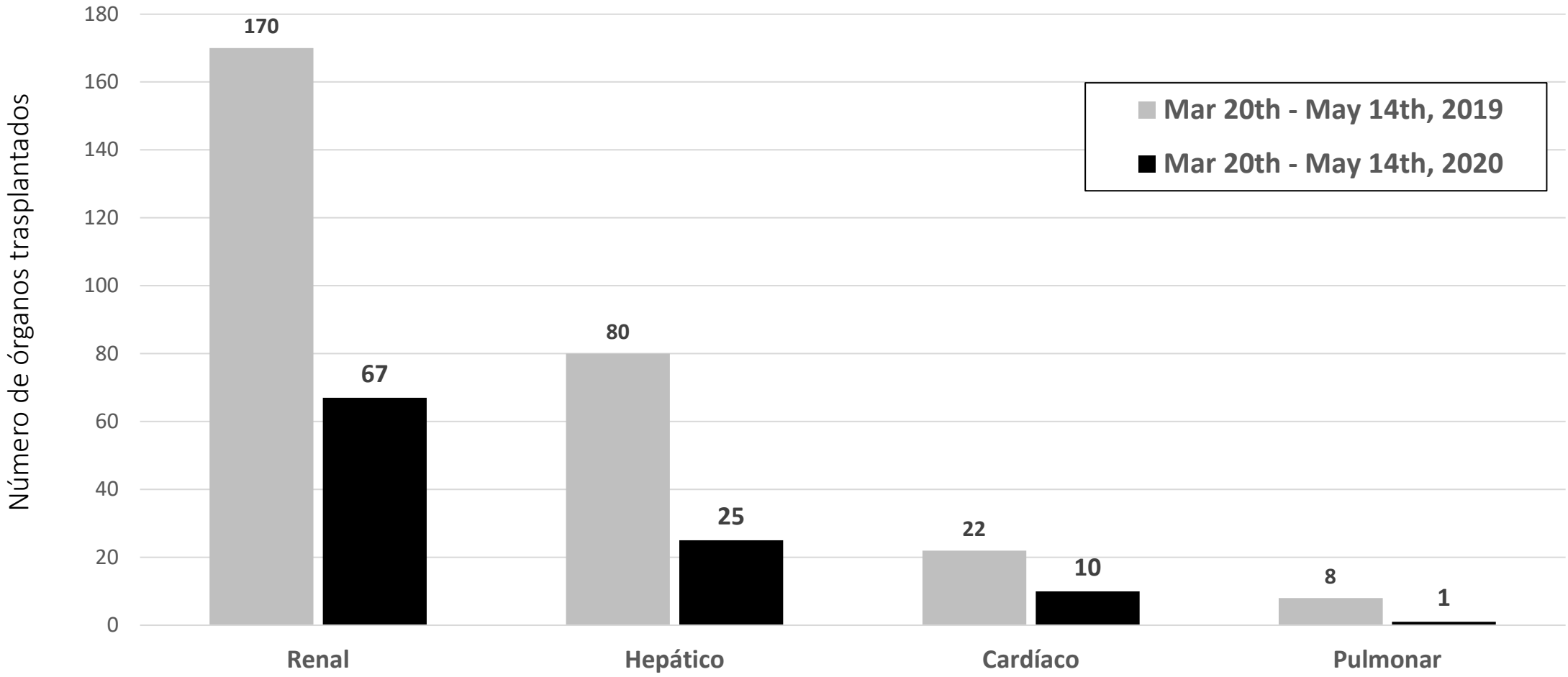

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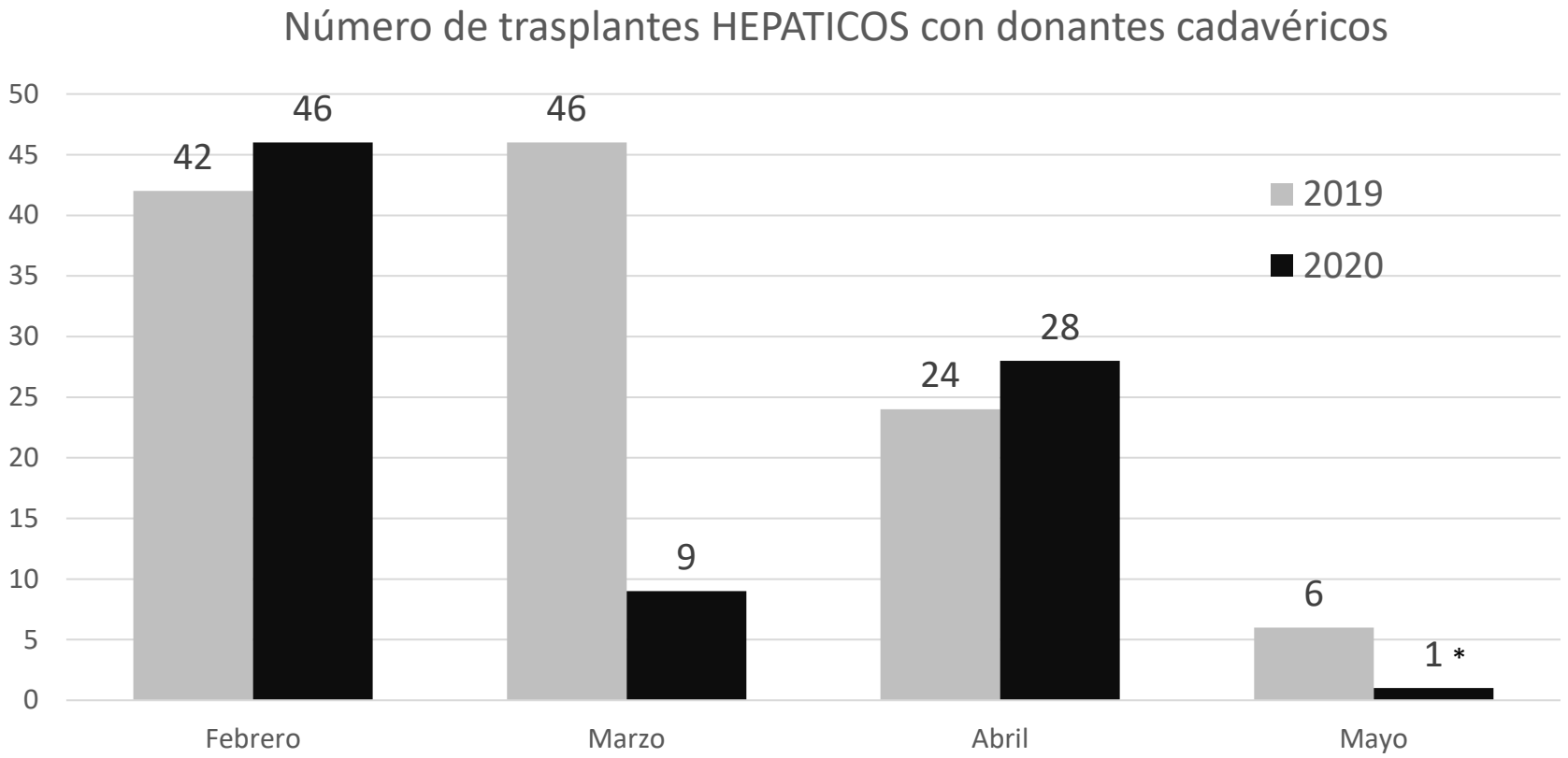


* Hasta 20/05/20

Gentileza Dr. A Urzúa y Dr. JP Arab

¿Porqué es importante realizar un registro de COVID-19 e hígado en LATAM?

- Para comprender mejor el impacto de esta enfermedad en nuestra región.
- Para indentificar características únicas de nuestros pacientes.
- Para evaluar variables asociadas con peor pronóstico.
- Para entender mejor la evolución de esta infección en pacientes con hepatopatías previas.
- Para conocer los diferentes esquemas terapéuticos utilizados.

Compromiso hepático en pacientes hospitalizados por el virus SARS-CoV-2 en Latinoamérica: características clínicas y factores pronósticos (I)

Objetivo primario:

- Estimar la prevalencia de complicaciones hepáticas en pacientes hospitalizados por SARS-CoV-2

Objetivos secundarios:

- Describir las características clínicas de los pacientes hospitalizados por SARS-CoV-2.
- Identificar factores de riesgo asociados con mal pronóstico.

Compromiso hepático en pacientes hospitalizados por el virus SARS-CoV-2 en Latinoamérica: características clínicas y factores pronósticos (II)

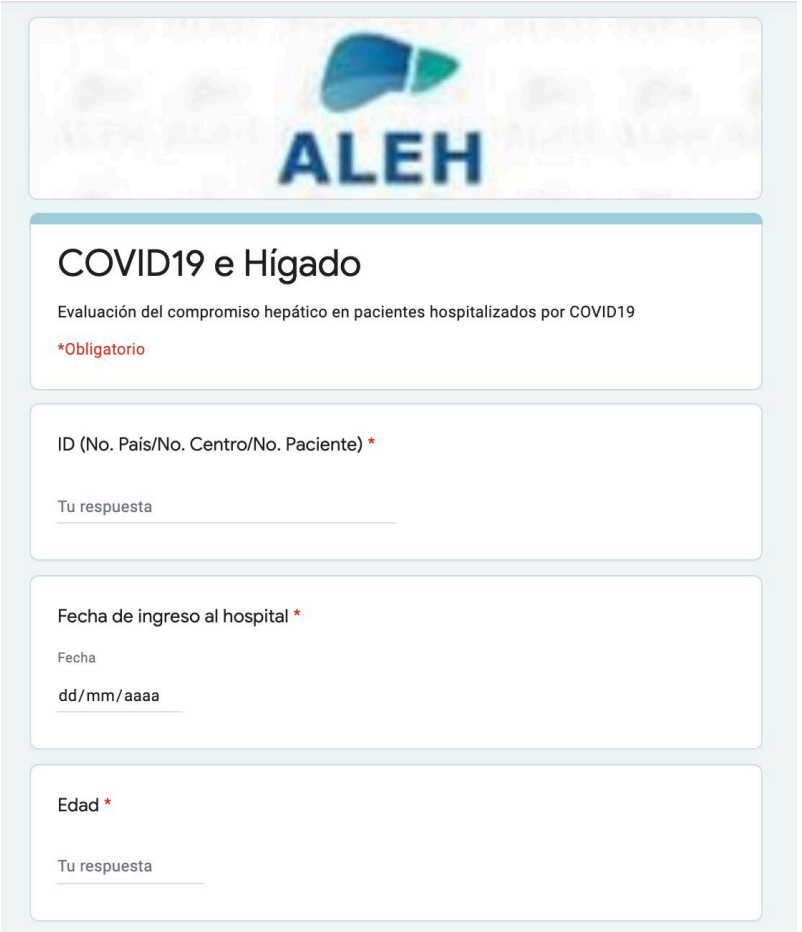
Diseño:

- Estudio observacional de corte transversal

Criterios de Inclusión:

- Pacientes >17 años
- Pacientes con diagnóstico de SARS-CoV-2
- Pacientes hospitalizados

ClinicalTrails.gov NCT04358380



Representación **inicial** de países y centros de Latinoamérica

Investigadores: 93
Centros de salud: 67
Países: 11

Resultados preliminares (N=113)

Datos Demográficos	
Hombres, n (%)	59 (52.2)
Antecedentes, n (%)	
HTA	22 (19.5)
DM	9 (7.9)
EPOC/Asma	7 (6.2)
Cáncer	6 (5.3)
IMC >30	8 (7.1)
TBQ (actual o pasado)	24 (21.2)
Hepatopatías, n (%)	
NASH/NAFLD	4 (3.5)
HCV	1 (0.9)
Cirrosis	2 (1.8)
Tx Hepático	1 (0.9)

Síntomas	
Fiebre, n (%)	86 (76.1)
Tos, n (%)	73 (64.6)
Disnea, n (%)	21 (18.6)
Fatiga, n (%)	9 (7.9)
Odinofagia, n (%)	42 (37.2)
Cefalea, n (%)	27 (23.9)
Diarrea, n (%)	18 (15.9)
Mialgias, n (%)	35 (31)
Anosmia, n (%)	13 (11.5)
Ageusia, n (%)	12 (10.6)

Datos al 25/05/20

Resultados preliminares (N=113)

Evolución	
Alt. Hepatograma, n (%)	32 (28.3)
Neumonía, n (%)	48 (42.5)
UTIM/UTI, n (%)	24 (21.2)
SDRA, n (%)	19 (16.8)
FMO, n (%)	11 (9.7)
Muerte, n (%)	9 (7.9)

Datos al 25/05/20

Webinar ALEH-AASLD

AASLD Clinical Insights Consensus Document Debrief

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Released: May 14, 2020

CLINICAL BEST PRACTICE ADVICE FOR HEPATOLOGY AND LIVER TRANSPLANT PROVIDERS DURING THE COVID-19 PANDEMIC: AASLD EXPERT PANEL CONSENSUS STATEMENT

This is a "living" document that will continue to evolve and will be updated as new information becomes available.

NOTE: Document is available in English, Spanish, and Portuguese

https://www.aasld.org/about-aasld/covid-19-and-liver
https://www.aasld.org/sites/default/files/2020-04/COVID19-ClinicalInsightsUpdates-4162020.pdf

Topics Covered in the Document

1. Effects of SARS-CoV-2 on the Liver and Evaluation of COVID-19 Patients with Elevated Liver Biochemistries
2. Diagnosis of SARS-CoV-2 Infection
3. Stable Outpatients with Liver Disease and/or Hepatocellular Carcinoma
4. Patients with Decompensated Cirrhosis, Liver Transplant Evaluations, and Patients on the Liver Transplant Waiting List
5. Liver Transplantation, Resource Utilization, and Ethical Considerations
6. Challenging Issues in Liver Transplantation During the COVID-19 Pandemic
7. Post-Liver-Transplant Patients and Management of Patients on Immunosuppressive Agents
8. Medication Management of Patients with COVID-19 and Potential Drug-Drug Interactions
9. Procedures/Research/Trainees
10. Protecting Healthcare Workers and Workforce Utilization
11. Reentry and Return to a Pre-Pandemic State

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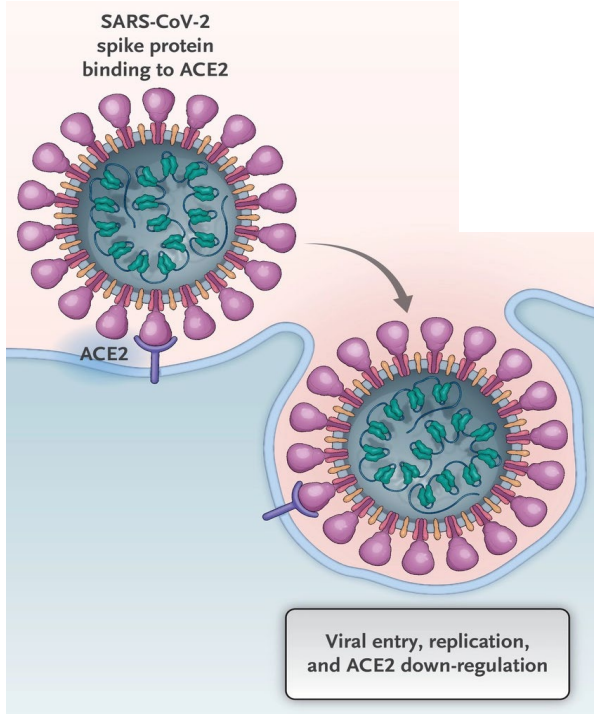
11. **Reentry and Return to a Pre-Pandemic State**

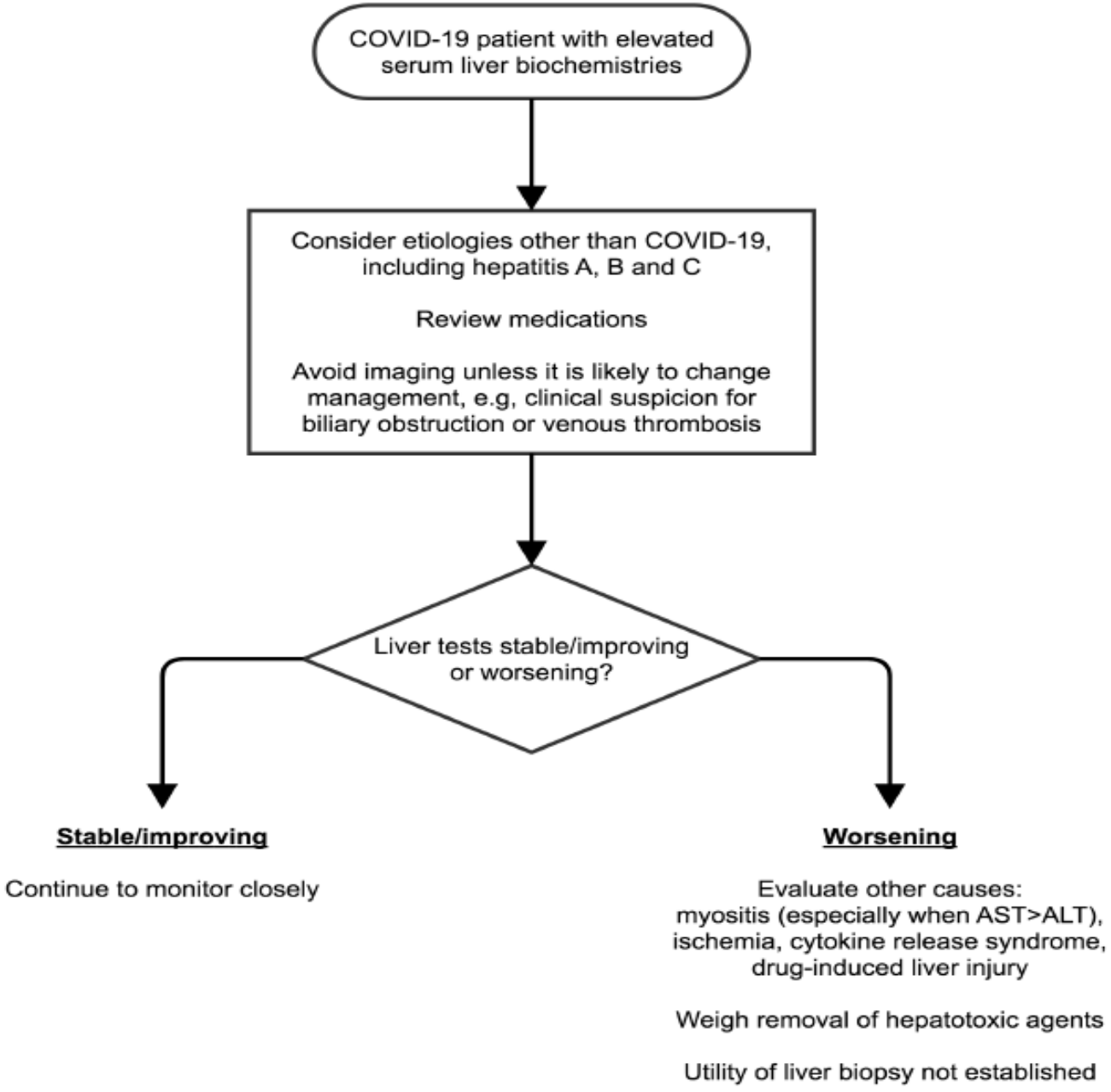
Effects of SARS-CoV-2 on the Liver and Evaluation of COVID-19 Patients with Elevated Liver Biochemistries

- SARS-CoV-2 binds to and is internalized into target cells through angiotensin-converting enzyme 2 (ACE2)
- ACE2 is present in biliary and liver epithelial cells; therefore, the liver is a potential target for infection
- The incidence of elevated serum liver biochemistries in hospitalized patients with COVID-19 ranges from 14% to 53%. AST and ALT 1-2 times the upper limit of normal. Bilirubin usually normal. Low-albumin is common.
- Abnormalities usually transient and mild.
- May be of prognostic importance[1]



1.- J Med Virol 2020 May 23

Approach to COVID-19 Patients with Elevated Liver Biochemistries



- Consider other etiologies **unrelated** to COVID-19 and drug-induced liver injury when assessing patients with COVID-19 and elevated liver biochemistries.
- Consider other **non-liver causes** of elevated liver biochemistries, including myositis (particularly when AST>ALT), cardiac injury, ischemia, and cytokine release syndrome.
- Avoid unnecessary transport of patients with COVID-19
- AST or ALT levels >5x ULN may exclude patients from consideration of some investigational agents.
- Monitor LFTs in those under treatment
- COVID-19 is not commonly associated with abnormal liver biochemistries in children.

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COVID-19 and Chronic Liver Disease (CLD): Considerations

- **Outpatients with Liver Disease and/or Hepatocellular Carcinoma**
  - ✓ Data is limited.
  - ✓ No evidence for increased susceptibility in acquiring the infection
  - ✓ Some studies show that cirrhosis and CLD are a risk factors for higher mortality from COVID-19
  - ✓ No data regarding HCC on treatment

- **Patients with Decompensated Cirrhosis, Liver Transplant Evaluations, and Patients on the Liver Transplant Waiting List**
  - ✓ Mortality due to COVID-19 appears higher in patients
  - ✓ Transplantation decisions are challenging at present time, with low organ donation rates
  - ✓ Permanent evaluation of the ongoing situation

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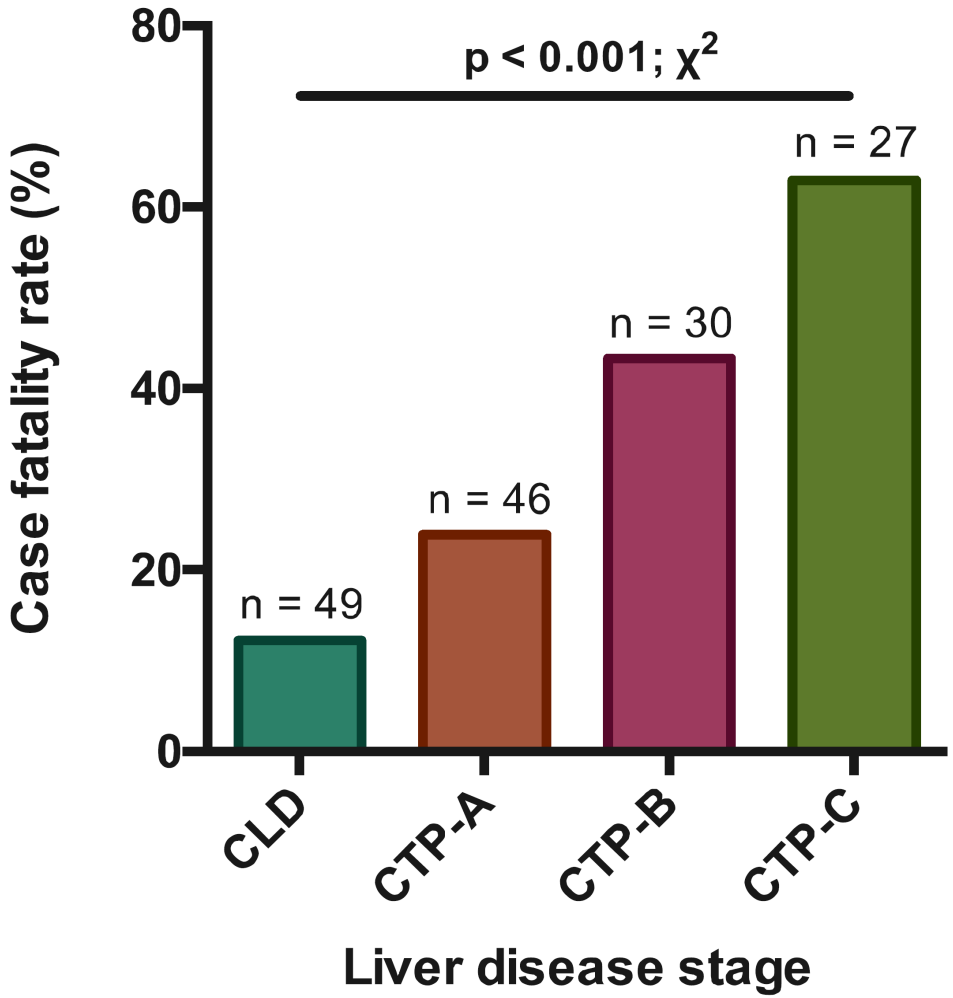
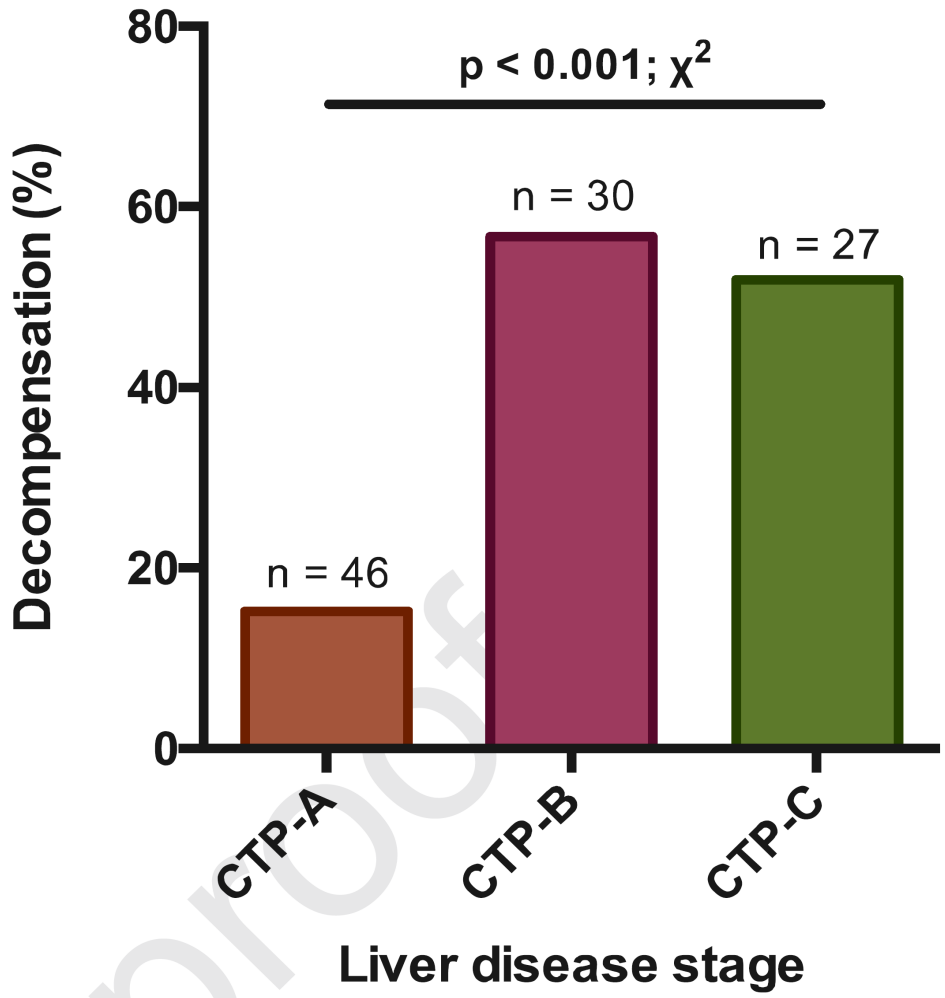
A Case fatality rates in patients with chronic liver disease and COVID-19



B New hepatic decompensation in patients with cirrhosis and COVID-19



proof

COVID-19 and Chronic Liver Disease (CLD): Recommendations

- Limit in-person visits (i.e. urgent issues)/maximize use of telemedicine
- Define policies to see patients in person and ensure use of PPE
- ***Low thresholds*** for testing or admission if COVID-19 is suspected or diagnosed
- HCC surveillance can be delayed 2 months, proceed with treatment as usual If possible
- No contraindication to start HBV/HCV treatment if ***no*** COVID-19; in those ***with*** COVID-19 defer HCV, initiate HBV if needed

COVID-19 and Chronic Liver Disease (CLD): Recommendations (cont')

- Local policies for scheduling, screening and triage of patients at entry points
- Ensure medications availability
- Advise no travelling unless urgent
- Consider a COVID-19-minimal pathways to see these patients
- Inform patients about potential delays in their treatment due the pandemic

Issues in Liver Transplantation During COVID-19 Pandemic

- **To transplant or not?** Only ***urgent*** cases with anticipated high mortality
- Dynamic evaluation of local resources
- Consider risk of nosocomial transmission
- Test ***all recipients and donors*** for SARS-CoV-2 before transplantation
- Consider backup receptor
- Stop liver donor programs
- Ethical consultation if needed

Immunosuppression in Liver Patients

- **In patients *without* COVID-19**:

  Do not make anticipatory adjustments to current immunosuppressive drugs or dosages.

  Initiate immunosuppressive therapy in patients with liver disease with or without COVID-19 who have strong indications for treatment (e.g., autoimmune hepatitis, graft rejection)

- **In patients *with* COVID-19**:

  Consider minimizing the dosage of high-dose prednisone but maintain a sufficient dosage to avoid adrenal insufficiency.

  Consider reducing azathioprine or mycophenolate dosages, especially in the setting of lymphopenia fever, or worsening pneumonia attributed to COVID-19

Reentry and Return to a Pre-Pandemic State

- It will depend of local situation
- Must be gradually and according to pertaining guidelines
- Prioritize patients according clinical status (e.g., MELD, recent decompensation, etc.)
- Consider the risk of a **“second wave”** or resurge of COVID-19 and establish criteria for reentering the mitigation phase if necessary/quality of care will likely be affected
- Continue to develop a telemedicine program to reduce contact between patients and healthcare workers during the reentry phase and consider the role of telemedicine in patient care beyond the COVID-19 pandemic

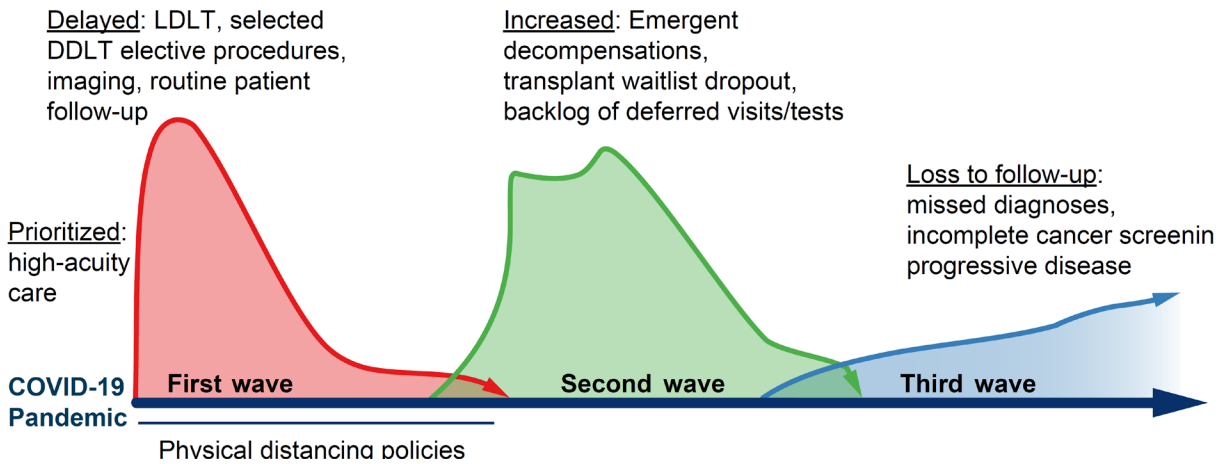
Reentry and Return to a Pre-Pandemic State?

Expert Opinion

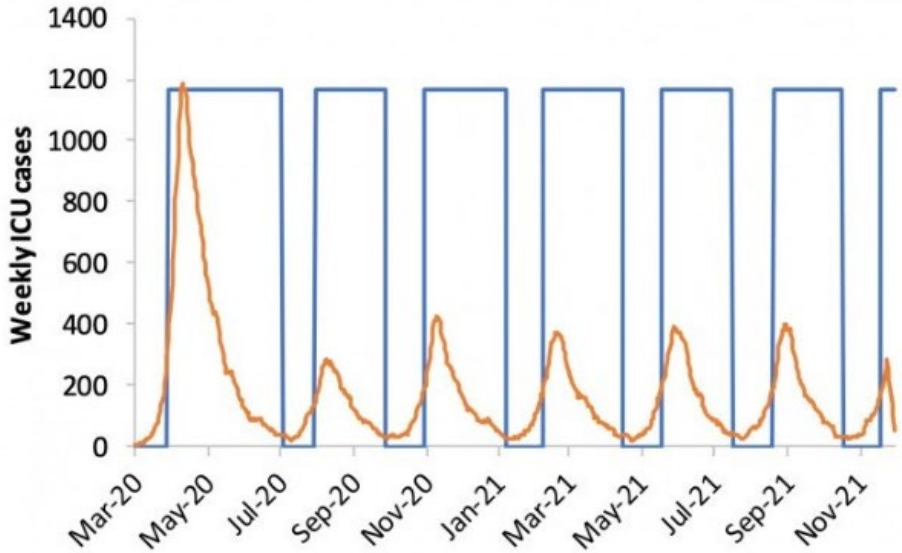
JOURNAL OF HEPATOLOGY

The COVID-19 pandemic will have a long-lasting impact on the quality of cirrhosis care

Elliot B. Tapper[1,2,*], Sumeet K. Asrani[3]



Navigating a world reshaped by covid-19



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Reentry & Reopening Strategies of Clinics for Liver Disease Patients

Estrategias para la Re-Apertura de los Espacios Clínicos para Pacientes con Enfermedades Hepáticas

GUADALUPE GARCÍA-TSAO, M.D., FAASLD

PROFESORA DE MEDICINA, YALE UNIVERSITY

JEFA DE GASTROENTEROLOGÍA, VA-CT HEALTHCARE SYSTEM

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The Present: What are we doing now in Liver Clinic?

- For over 2 months, most of our patients with liver diseases have been “seen” in clinic by video (telehealth) or by phone

- The majority have chosen to do the visit over **the phone**
- Although they may have come in for labs, they have not been coming to get imaging studies or endoscopy
- New consults have decreased markedly

We are desperate to return to **The Past**, but we cannot return to pre-COVID status

- In settings where the number of patients with COVID-19 is declining, strategies should be implemented to prepare for a safe reopening and phased ramp-up of clinical operations
- The key elements of this strategy are:
  - **Patient prioritization**
  - **Prioritization of ancillary studies**
  - **Safety**
  - **Capacity management**

Patient Prioritization

Priority 1: Visit (ideally in person) and/or lab tests and imaging done **as soon as possible**

Priority 2: Visit (in person or telehealth), lab tests and imaging can be postponed **2-3 months**.

Priority 3: Visit (telehealth), lab tests, and imaging can be postponed **3-6 months**

Priority 4: No need to see in person. Visit (telehealth), lab tests and imaging can be postponed for 6-9 months

Patient prioritization by disease entity (I)

	Priority 1 As soon as possible	Priority 2 2-3 months	Priority 3 3-6 months	Priority 4 6-9 months
Acute liver injury (not in hospital or just discharged)	- If was associated with liver dysfunction (INR, encephalopathy)	-If not associated with liver dysfunction (at least get labs)	-Minimal abnormalities in liver enzymes	- Abnormalities resolved → discharge
HCV/HBV (antiviral treatment)	-On antiviral treatment (at least labs)	Compensated cirrhosis, (could be followed by telehealth)	No cirrhosis, abnormal liver enzymes	No cirrhosis, normal liver enzymes, wants treatment
NAFLD/NASH workup (r/o cirrhosis)	If any clinical evidence of cirrhosis and liver insufficiency (low albumin, low platelet count) and abnormal liver enzymes	If some evidence of cirrhosis (low platelets) but normal albumin	Abnormal liver enzymes, no evidence of cirrhosis	Normal liver enzymes, function and PLT. Steatosis on imaging only

Adapted from the Office of Veterans Access to Care (OVAC) and the Office of Community Care (OCC)'s "Prioritization for Reopening Outpatient Consultations, Procedures, and Appointments"

Patient prioritization by disease entity (II)

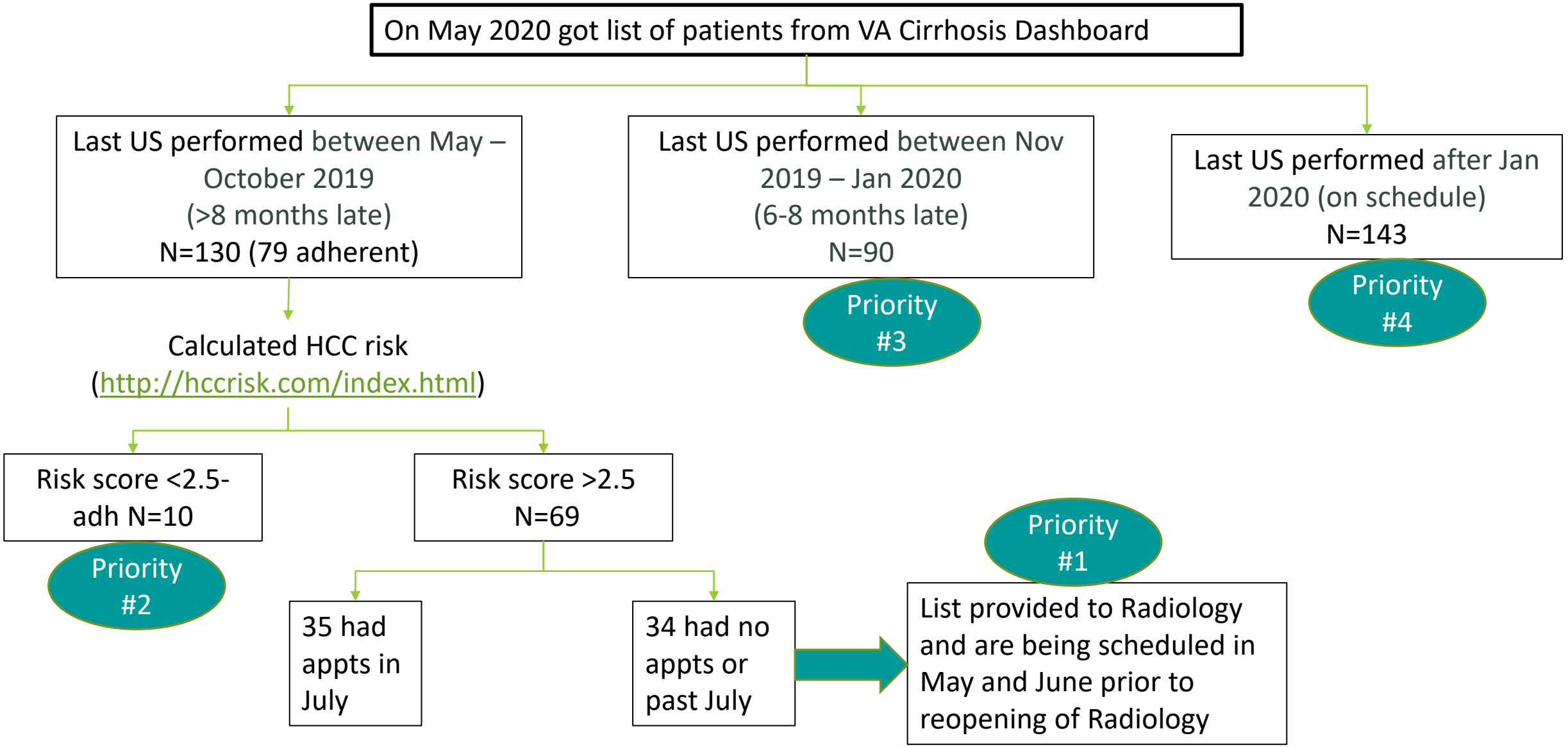
	Priority 1 As soon as possible	Priority 2 2-3 months	Priority 3 3-6 months	Priority 4 6-9 months
Cirrhosis	-Decompensated cirrhosis receiving medications (e.g., diuretics, lactulose) that require adjustment and/or requires LVP -Compensated cirrhosis with recent ACLF (e.g. alcoholic hepatitis)	-Decompensated, on stable doses of meds (e.g., diuretics, lactulose, rifaximin, SBP prophylaxis, NSBB) and no ongoing significant liver injury	-Compensated cirrhosis, with ongoing liver injury (HBV-DNA elevated, ALD with alcohol use).	- Compensated cirrhosis, stable (SVR, not drinking, losing weight)
HCC	- Evaluation for surgical resection - On chemotherapy - Undergoing LT evaluation or on LT - Imaging suggestive of possible/probable HCC	Last loco-regional therapy 6-12 months ago and no viable tumor on last surveillance image	Last loco-regional therapy 12 -24 months ago and no viable tumor on imaging on last surveillance image	Last loco-regional therapy >24 months ago and no viable tumor on imaging on the last surveillance image.
Liver transplant (evaluation, post-LT)	-MELD >24 -Living donor available	MELD 20-24	MELD 12-20	MELD <12

Adapted from the Office of Veterans Access to Care (OVAC) and the Office of Community Care (OCC)'s "Prioritization for Reopening Outpatient Consultations, Procedures, and Appointments"

Prioritization of ancillary studies

	Priority 1 ASAP	Priority 2 2-3 months	Priority 3 3-6 months	Priority 4 6-9 months
Screening for HCC	-HCC screening >12 months late	-Compensated cirrhosis (adherent) with HCC screening >8 months late	- Compensated cirrhosis (adherent) HCC screening 6-8 months before	Compensated cirrhosis, seen within 6 months prior to COVID and up to date with surveillance
HCC imaging	Known HCC with Last loco-regional therapy (e.g., TACE, RFA, SBRT, etc.) within prior 6 months	-Last loco-regional therapy 6-12 months ago and no viable tumor on last surveillance image.	-Last loco-regional therapy 12 -24 months ago and no viable tumor on imaging on last surveillance image	-Last loco-regional therapy >24 months ago and no viable tumor on imaging on the last surveillance image
Staging of chronic liver disease	If any clinical evidence of cirrhosis and liver insufficiency (low albumin, low platelet count) and abnormal liver enzymes. Get Fibroscan	If some evidence of cirrhosis (low platelets) but normal albumin. Get Fibroscan	Abnormal liver enzymes, no evidence of cirrhosis. Get Fibroscan	Normal liver enzymes, function and PLT. Steatosis on imaging only. Get Fibroscan
Endoscopy for varices	In the presence of hematemesis or melena	If recent variceal hemorrhage		

Radiology closed – planning on opening in July



Prioritization of ancillary studies

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Staging of chronic liver disease	If strong evidence of cirrhosis and liver insufficiency (low albumin, low platelet count). **Get Fibroscan**	If some evidence of cirrhosis (low platelets) but normal albumin. **Get Fibroscan**	Abnormal liver enzymes, no evidence of cirrhosis. **Get Fibroscan**	Normal liver enzymes, function and PLT. Steatosis on imaging only. **Get Fibroscan**
Screening endoscopy for varices	Newly diagnosed compensated cirrhosis	**Do we need to do endoscopy? High-risk aerosol-associated proced**		

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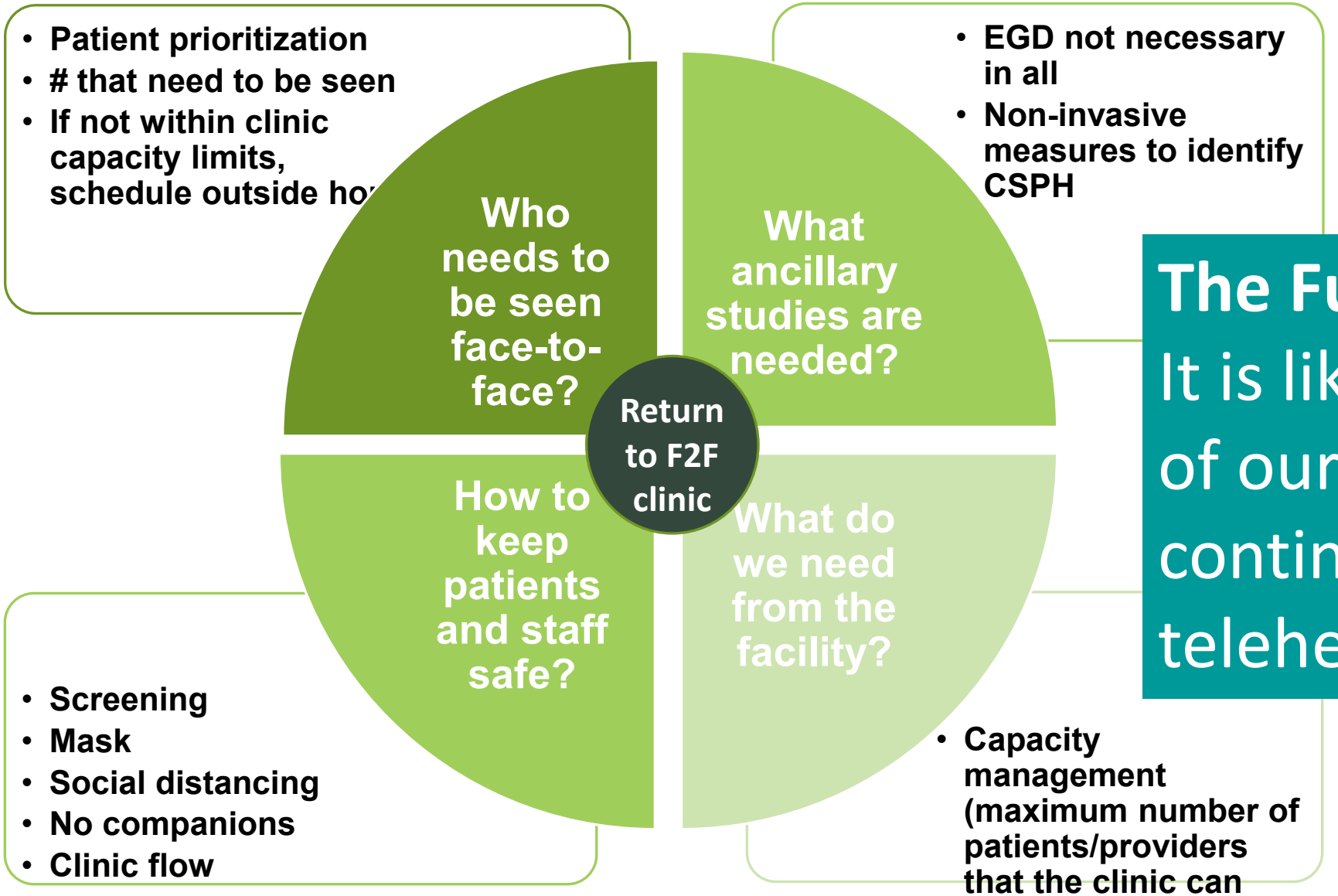
In compensated cirrhosis, the objective is to prevent decompensation, not variceal hemorrhage

- NSBB prevent variceal hemorrhage in patients with varices
- NSBB prevent clinical decompensation (ascites, variceal hemorrhage and/or encephalopathy) in patients with clinically significant portal hypertension (CSPH)
  - *Villanueva et al. Lancet 2019.*
- NSBB are indicated in patients with CSPH

- Although the presence of varices is evidence of CSPH, there are less invasive methods to diagnose CSPH:
  - **Liver stiffness >20-25 kPa and platelet count <150/mm^3**

    or
  - **Collaterals on cross- sectional imaging**
- These should be preferred to endoscopy (particularly now)



The Future:

It is likely that 20-30% of our patients will continue to be seen via telehealth

Wellington Andraus
Universidade de São Paulo

AASLD-ALEH COVID-19 in the Americas

WELLINGTON ANDRAUS, MD, PHD
DIGESTIVE TRANSPLANT UNIT COORDINATOR
GASTROENTEROLOGY DEPARTMENT - HC FMUSP
SÃO PAULO UNIVERSITY SCHOOL OF MEDICINE
SÃO PAULO, BRAZIL

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Universidade de São Paulo

Caso Clínico

Trasplante de Hígado x COVID

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Universidade de São Paulo

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Universidade de São Paulo

Paciente sexo femenino, 69 años

- **Peso:** 77kg **Altura:** 1,46 m **IMC:** 36,1
- **Diagnósticos:** Cirrosis por Hepatitis C sin tratamiento **MELD-Na** 7

Carcinoma Hepatocelular (3 Nódulos en segmentos V, VI e VIII)

Hipertensión pulmonar

Enfermedad coronaria

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Universidade de São Paulo

Donante: sexo femenino, 45 años

- **Peso:** 70kg **Altura:** 1,66 m **IMC:** 25,4
- **Diagnósticos:** AVCH

3 dias de UCI, drogas vasoactivas

(0,3mcg/kg/min)

Hb	14,2	TGO	84
Leuc	30.700	TGP	32
Plaq	132.000	FA	63
U	67	GGT	25
Cr	**3,6**	BT	0,6
Na	148	pH	**7,2**

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FMRP-USP
RIBEIRÃO PRETO

Hospital das Clínicas da Faculdade de Medicina de Ribeirão Preto - USP

Av. Bandeirantes, 3.900 - Campus Universitário Monte Alegre
Ribeirão Preto – SP - CEP: 14.048-900 - Fone:(16)3602-1000

RESULTADOS DE EXAMES

ORGANIZAÇÃO DE PROCURA DE ORGÃOS - RIBEIRAO PRETO

1785916

DE ANDRADE, ANA CLAUDIA DA SILVA

NASCIMENTO: 21/09/1974

PESQUISA DE CORONAVIRUS
METODO: RT-PCR

MATERIAL:ASPIRADO ENDOTRAQUEAL

ELEMENTO
CORONAVIRUS... NEGATIVO

LIBERADO POR.....: DIEGO VILLA CLE - CRM: 116340
COORDENADOR.....: APARECIDA YULIE YAMAMOTO - CRM: 49769
RESPONSÁVEL TÉCNICO: RODRIGO DO TOCANTINS CALADO DE SALOMA RODRIGUES - CRM: 91683
LABORATÓRIO DE VIROLOGIA - EXAME NUMERO:40222003

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Trasplante hepático (donante cadáver)

- **Cirugía** 4hs 45min
- **Isquemia total**: 9hs 45min
- Glóbulos rojos -; Crio - ; Plasma- ; Plaquetas - ; Fibrinógeno:-
- **Cristaloides 3500 mL**
- **Drogas vasoactivas**: Dosis máx de Noradrenalina : 0,3mcg/kg/min
- **Lactato:** inicial 8: -> Post reperfusión: 50 -> Final de la cirugía: 46

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- Admitida en UCI - noradrenalina 0,06 mcg/kg/min
- 1er dia post op - extubada y con disminución de drogas vasoactivas
- Insuficiencia renal aguda - hemodiálisis a demanda
- Fibrilación auricular con respuesta alta - respondió a amiodarona
- 7mo día post operatorio recibe alta de la UCI y es trasladada a sala de internados, estable

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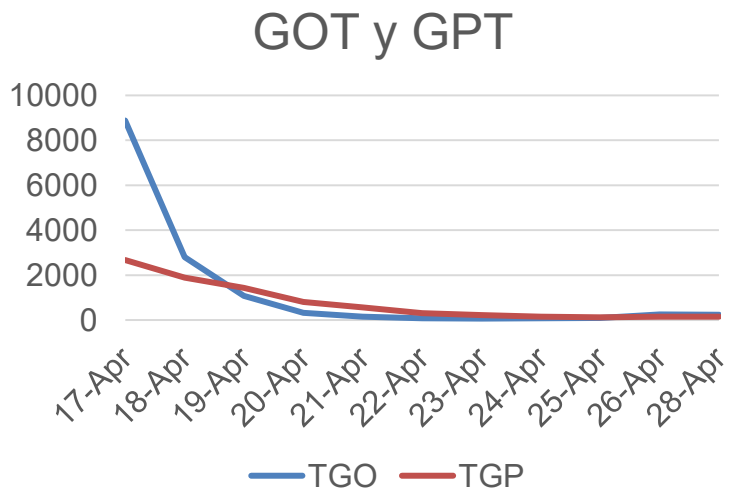

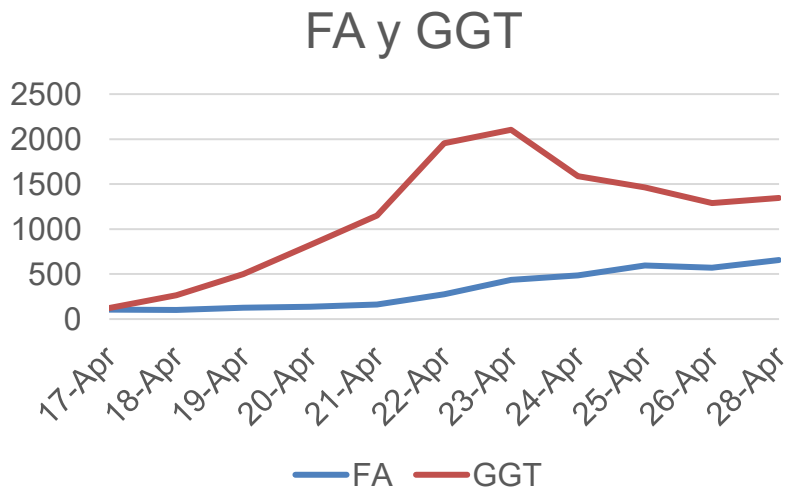

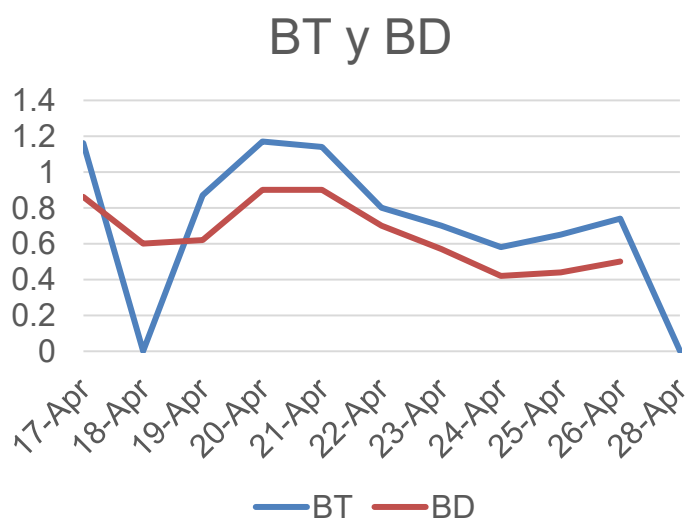

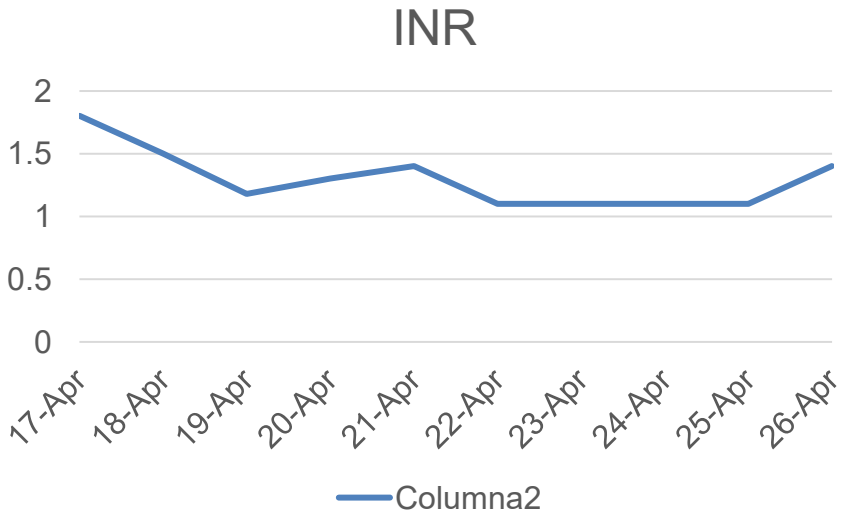

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- 8vo dia post op - confusa, agitada, taquipneica, desaturando en aire ambiente, con requerimiento de O2 por mascarilla
- Diarrea
- Leucocitosis y aumento de PCR
- Meropenem empírico

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TOMOGRAFIA COMPUTADORIZADA DE TORAX

Múltiplas opacidades pulmonares em vidro fosco, por vezes associadas a espessamento de septos interlobulares e fino reticulado de permeio, apresentando distribuição multifocal bilateral. Embora não sejam específicos, tais achados são consistentes com pneumonia viral, devendo-se incluir a possibilidade de COVID-19 entre os diagnósticos diferenciais.

A extensão estimada do envolvimento pulmonar na tomografia é de cerca de 50% (análise visual).

Leve espessamento difuso das paredes brônquicas.

Diminutos nódulos pulmonares menores que 0,4 cm esparsos e bilaterais, dois deles calcificados (provavelmente sequelares) e outros sem calcificações evidentes, incaracterísticos ao método.

Pequeno derrame pleural à direita, com atelectasia restritiva do parênquima pulmonar adjacente.

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- 9no día post op - necesidad de O2 por mascarilla y VNI, hipotensión y febril, trasladada a la UCI en área especial de aislamiento
- Azitromicina
- 10mo día post op - intubación oro traqueal por Insuficiencia respiratoria

  RT-PCR positivo para COVID-19
- Noradrenalina 0.6mcg/Kg/min y Vasopresina 0,06 UI/min

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- 11ro día post op - drogas vasoactivas en ascenso, acidosis metabólica, anuria, inestabilidad hemodinámica y bradicardia

- evoluciona a óbito

	10^0 día	**11^0 día**
D-Dimero	8477	
LDH	895	1327
Troponina I	201	236

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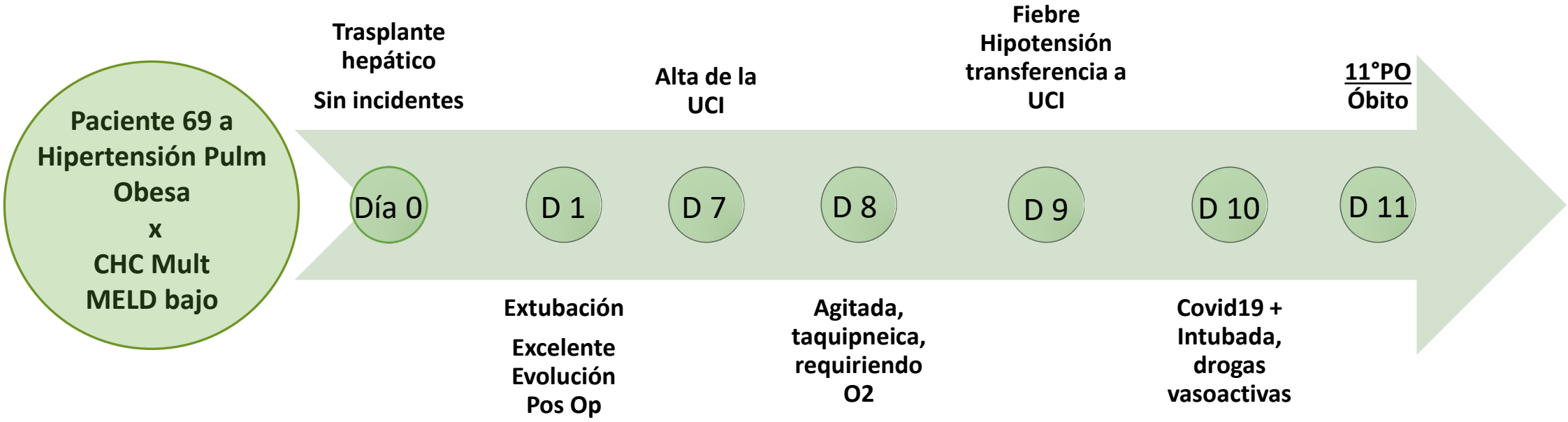

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Nuestras preguntas:

- ¿Podría el paciente haberse infectado desde su casa? (tenía tomografía de tórax normal)
- ¿Podría el donante haber transmitido incluso con PCR negativa a COVID?
- Otras posibilidades de transmisión: personal del hospital; otros pacientes; visitas familiares?
- ¿Fue inexorable la mala evolución?
- ¿Qué podemos hacer para evitar un próximo caso?

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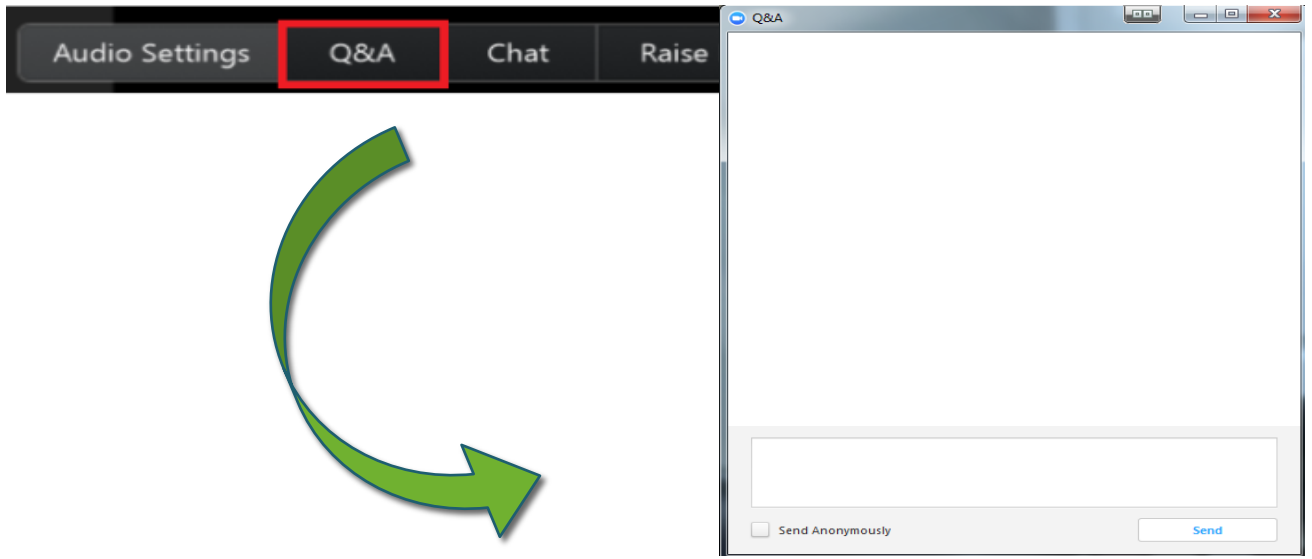
Discusión

Submit your questions in the Q&A box at the top or bottom of your screen.

Envíe sus preguntas en el cuadro de preguntas y respuestas en la parte superior o inferior de su pantalla.

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mahalo
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shukran tänan köszönöm grazie
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