

The logo features the word "Hello" in a blue, sans-serif font, and "humankindness" in a multi-colored, sans-serif font where each letter is a different color (purple, blue, green, yellow, orange, red). A registered trademark symbol (®) is at the end. The logo is centered in a white rectangular box.

Hello
humankindness®

Hepatitis C for Primary Care

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11/8/2024

Financial Disclosures

I am the PI of a FOCUS Grant

FOCUS is funded by Gilead Sciences
Gilead Sciences produces many antivirals
including Epclusa, Biktarvy, and Truvada

I receive 0.05 FTE to lead the team



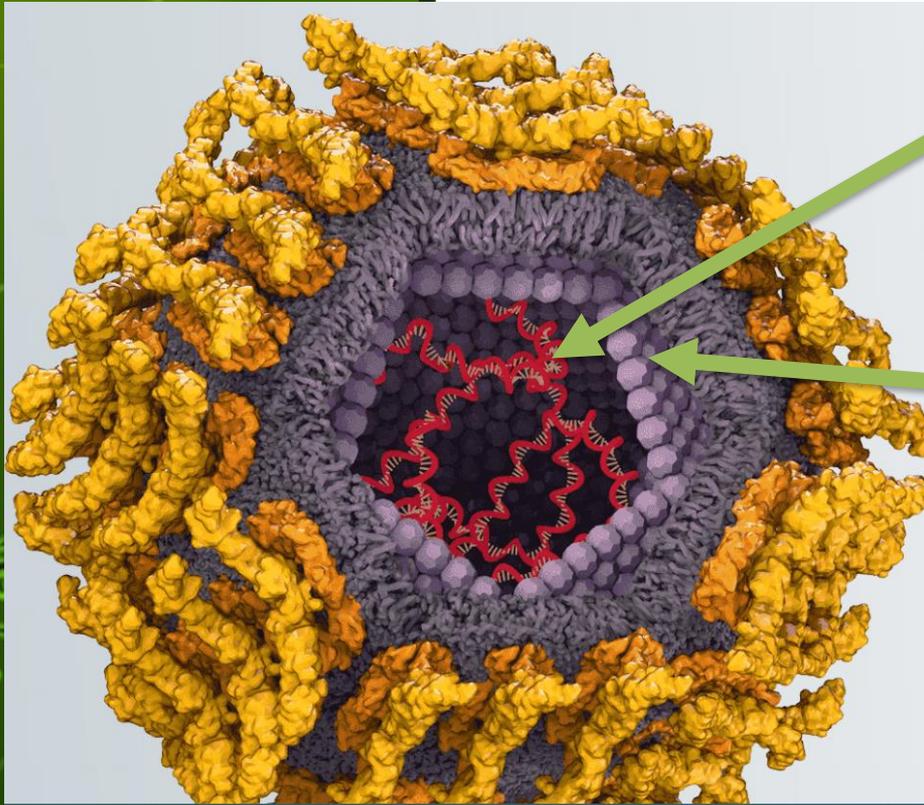
Agenda Setting

- Epidemiology/Pathology
- Why Primary Care?
- AASLD Guidelines
- Common Problems
- Pearls



"Mum, how long has that patient been waiting?"

Epidemiology/Pathology

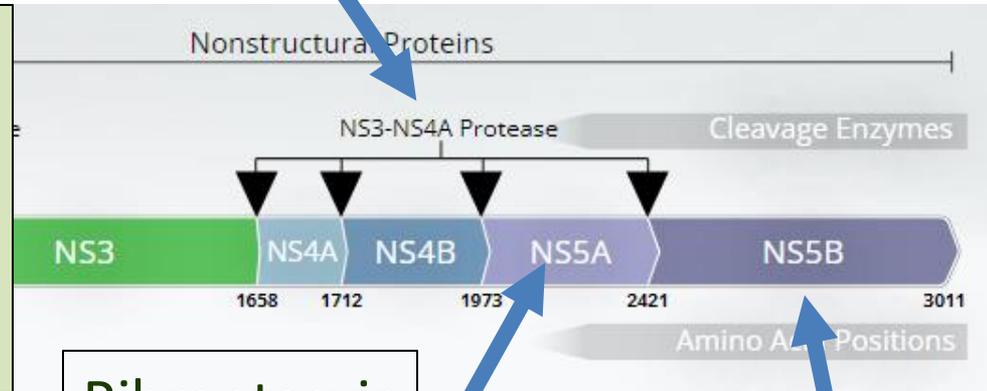
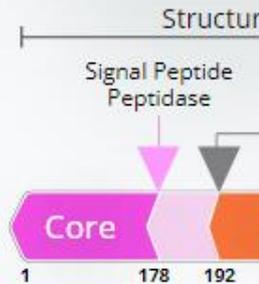


- Single Strand RNA Virus
- Surrounded by Capsid
(Core)
- This is what triggers HepC
Antibody

Epidemiology/Pathology

Glecaprivir
Voxilaprevir

Glec/Pib = Mavyret
Sof/Vel = Epclusa
Sof/Led = Harvoni
Sof/Vel/Vox = Vosevi



Pibrentasvir
Velpatasvir
Ledipasvir

Sofosbuvir



Epidemiology/Pathology

1975: First description of "non-A, non-B" Hepatitis

2003: First Project ECHO initiated

2016: WHO sets goal of eliminating viral hepatitis by 2030

1986: First report of treatment with interferon- α

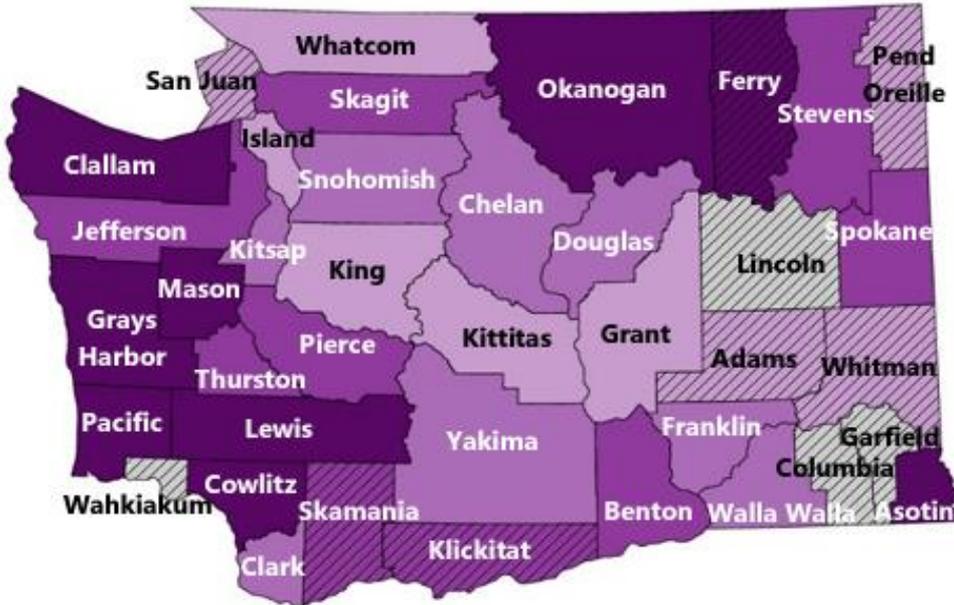
2010: First DAA discovered

2020: AASLD introduces simplified guidelines for treating treatment-naïve, uncomplicated patients

Why Primary Care?

Figure 5. Rate of Chronic Hepatitis C Infections Mapped by County, 2021

Cases/100,000 Population ● 17-38 ● 39-48 ● 49-74
● 75-158 ● Rate suppressed ● Not reliable rate (NR)



- ~2.2 Million HCV RNA+ People in U.S. (~60K in WA)
- ~94,000 new cases/year (~4,000 in WA)
- ~310 Gastroenterologists in state of WA (2019)
- ~6,330 Primary Care Physicians in WA (2021)

Why Primary Care?

Figure 1. Hepatitis C and HIV Surveillance and Prevention Funding Comparison, 2017-2023

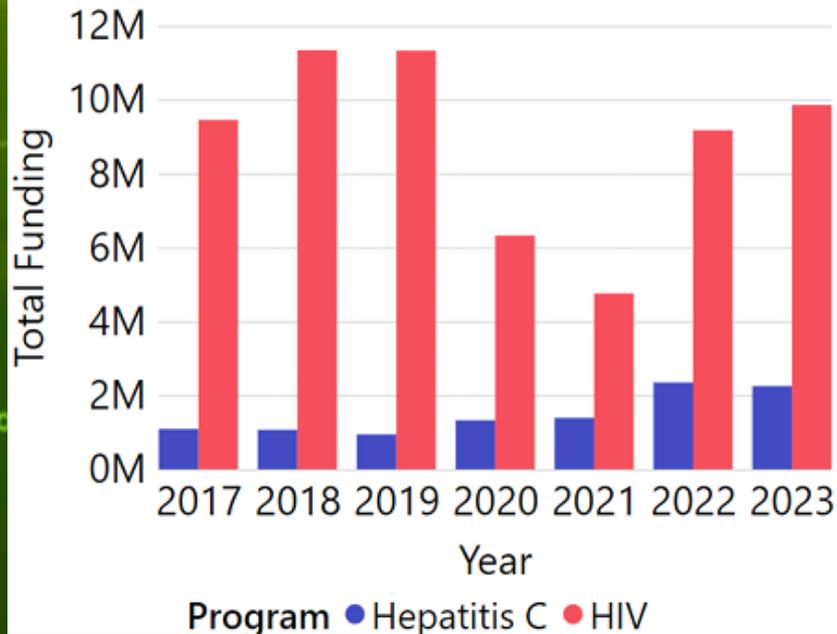
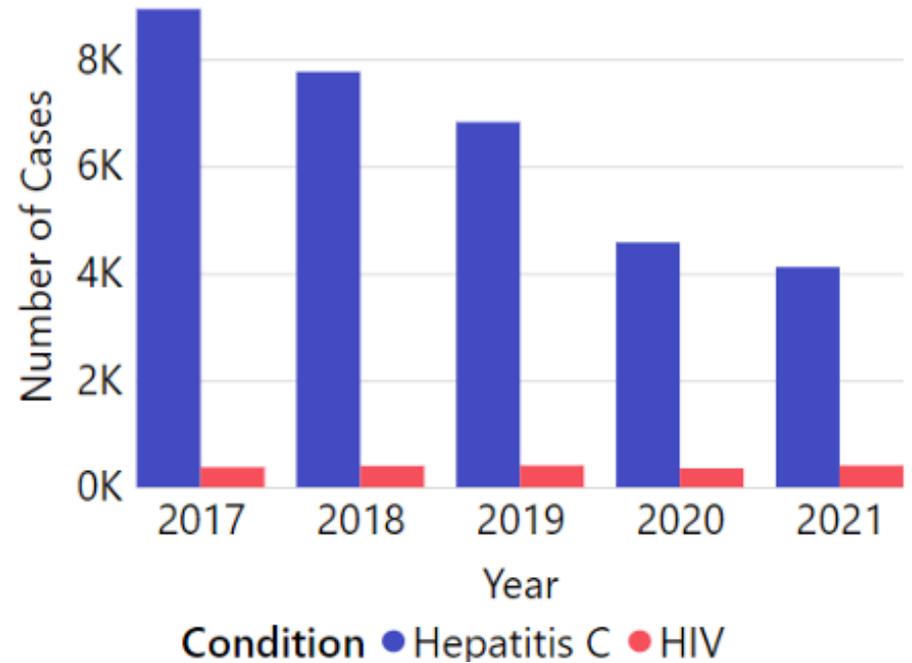
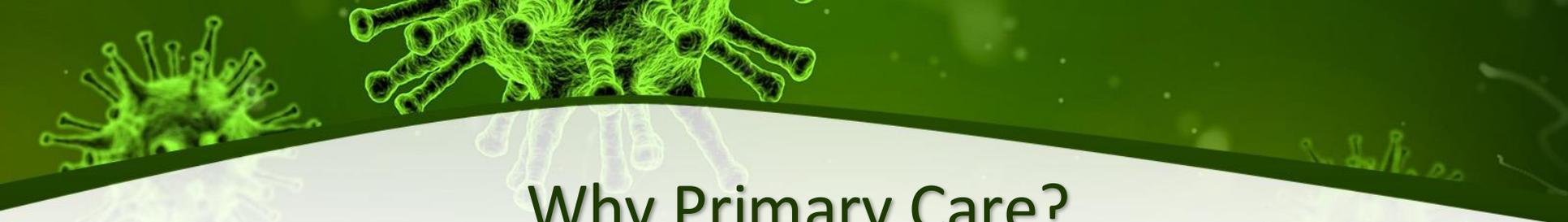


Figure 2. Hepatitis C and HIV Cases Comparison, 2017-2021



A composite image at the top of the slide. On the left, there are several spherical virus particles with prominent spikes. In the center, a human hand is shown with a glowing, wireframe-like texture, appearing to be part of a microscopic or digital environment. The background is a dark, textured green.

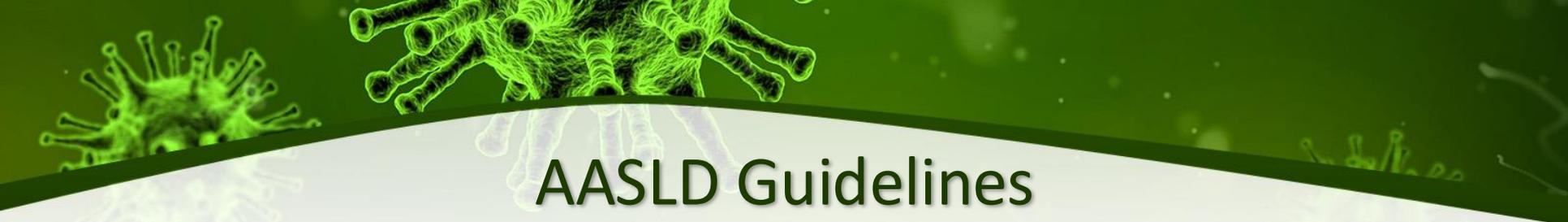
Why Primary Care?

Physician Benefits

- CURE
- Hope is contagious
- Improve therapeutic alliance

Patient Benefits

- Improve health
- Control over life
- Promote positive change



AASLD Guidelines

Simplified HCV Treatment* for Treatment-Naive Adults Without Cirrhosis

Who Is **NOT** Eligible for Simplified Treatment

Patients who have any of the following characteristics:

- Prior hepatitis C treatment
- Cirrhosis (see simplified treatment for treatment-naive adults with
- HIV and/or HBsAg positive
- Current pregnancy
- Known or suspected hepatocellular carcinoma
- Prior liver transplantation

Who Is Eligible for Simplified Treatment

Adults with chronic hepatitis C (any genotype) who do not have cirrhosis and have not previously received hepatitis C treatment

NOT Excluded:

- Active SUD
- Unhoused
- Renal Disease
- Psychiatric Disease

AASLD Guidelines

Initial Orders

HCV RNA Quant,
HBsAg, HBsAb, HBcAb

HepA Ab

HIV

CMP, D. Bili, Fibrosure

CBC, PT/INR

UDS

TSH

Test for HCV Ab

HCV Ab+

Test for HCV RNA Viral Load

Viral Load+

Was this patient
previously treated for
Hepatitis C? or HCV
Genotype 3?

No previous treatments;
Not HCV Genotype 3

Is there concurrent
HIV or Hep B infection

No concurrent
infections

Is there Advanced
Liver Fibrosis or
Cirrhosis?

No fibrosis or cirrhosis

Treat for Hepatitis C
in a treatment naive patient without
cirrhosis or advanced fibrosis

Refer patient
to GI/Hepatology
or Infectious
Disease
Specialist

- Daily dose of Glecaprevir 300mg/
Pibrentasvir 120mg for 8 weeks
OR
 - Daily dose of Sofosbuvir 400mg
/Velpatasvir 100mg for 12 weeks
- * Refer to Table for Medical Evaluation
& Counseling Tips

AASLD Guidelines

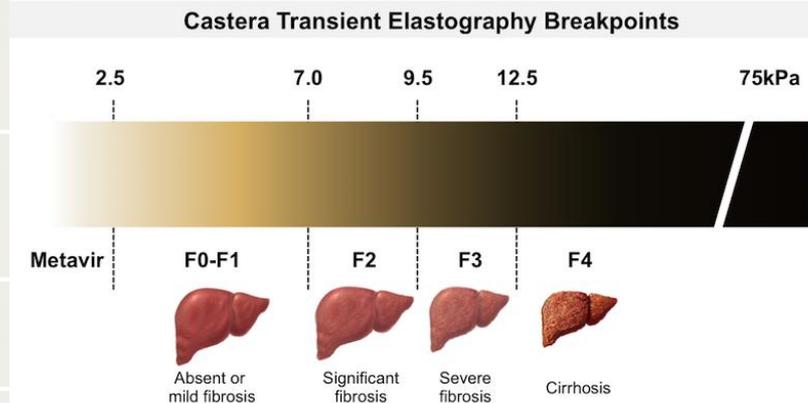
Metavir Scoring System for the Assessment of Liver Fibrosis and Cirrhosis

Level of fibrosis	Score
No fibrosis	F0
Minimal scarring	F1
Positive scarring with extension beyond area containing blood vessels	F2
Bridging fibrosis with connection to other areas of fibrosis	F3
Cirrhosis or advanced liver scarring	F4

LabCorp – FibroSure

ARUP – FibroMeter

Fib4 Score	Estimated Fibrosis	Accuracy
<1.45	NOT F3/F4	NPV 95%
1.46-3.25	Indeterminate	
	F3/F4 Likely	PPV ~75%



Common Problems

1. I don't have enough knowledge...



Virtual Meeting 1200-1300 every Tuesday
Email Pam Landinez, landinez@uw.edu



Online, Self-Paced, Certificate Program
<https://www.hepatitisc.uw.edu/>



Online, Reference
<https://www.aasld.org/practice-guidelines/hepatitis-c>



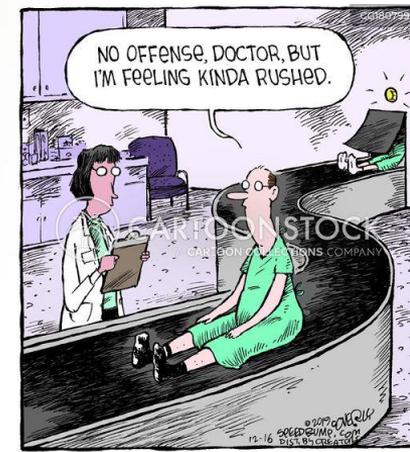
Online, Reference
<https://www.hep-druginteractions.org/>

Common Problems

2. I don't have enough time...



“Just shup up and take the lollipop.”



Two Weeks

Initial Visit

ECHO Presentation

Prior Auth

Meds Sent, START MEDS!

Mid Tx Appt

LAST DAY of MEDS!

12 week Viral Load

CURE!
(Phone Call)

6 Months

Common Problems

3. My patients can't afford it...

Dosage and quantity limits

Contracts with AbbVie

HCA signed two contracts w/ AbbVie to provide the DAA Mavyret (Glecaprevir/pibrentasvir) in Washington. No Prior Approval Price Coverage



YOUR DISEASE IS CURABLE, BUT ONE SIDE EFFECT OF THIS DRUG IS POVERTY."

Drug Name	Dose and Quantity Limits
Glecaprevir/pibrentasvir (MAVYRET)	<p>Treatment Naïve Genotypes 1, 2, 3, 4, 5, 6</p> <ul style="list-style-type: none"> 8 weeks without cirrhosis or with compensated cirrhosis 12 weeks for liver or kidney transplant recipients <p>Treatment Experienced</p> <ul style="list-style-type: none"> With peg-interferon, ribavirin, or sofosbuvir, but no prior treatment with an NS5A inhibitor or an NS3/4A protease inhibitor <ul style="list-style-type: none"> Genotypes 1, 2, 4, 5, 6 <ul style="list-style-type: none"> 8 weeks without cirrhosis 12 weeks with compensated cirrhosis 12 weeks for liver or kidney transplant recipients Genotype 3 <ul style="list-style-type: none"> 16 weeks without cirrhosis or with compensated cirrhosis 16 weeks for liver or kidney transplant recipients With an NS5A inhibitor without an NS3/4A protease inhibitor <ul style="list-style-type: none"> 16 weeks for Genotype 1 without cirrhosis or with compensated cirrhosis 16 weeks for liver or kidney transplant recipients With an NS3/4A protease inhibitor without an NS5A inhibitor <ul style="list-style-type: none"> 12 weeks for Genotype 1 without cirrhosis or with compensated cirrhosis 12 weeks for Genotype 1 liver or kidney transplant recipients

benefits.

Common Problems

3. My patients can't afford it...

Medicare Part D - ~\$3-5K copay, "Extra Help" for Low Income

[Gilead Support Path](#) – Gilead assistance for Epclusa (Sof/Vel)

[myAbbVie Assist](#) – AbbVie assistance for Mavyret (Glec/Pib)

[PAN Foundation](#) – Charitable organization to help with med costs

[Patient Advocate Foundation](#) – Similar to above



Common Problems

3. My patients can't afford it...

Find a friendly pharmacist

- CommonSpirit Mail-In Pharmacy (St. Joseph's McAuley Pharmacy, 500 W Thomas Rd. Ste 190, Phoenix, AZ 85013)



Miss Timing	Miss Duration	Modifying Features	Drug Plan
Before 28 days	<7 days	None	Resume Planned Tx
Before 28 days	≥ 8 days	If RNA-	Resume Planned Tx
		If RNA+, 3, or Cirrhosis	Resume Tx +4w
After 28 days	<7 days	None	Resume Planned Tx
After 28 days	≥ 8 days	If RNA-	Resume Planned Tx
		If RNA+, 3, or Cirrhosis	STOP Tx

A composite image at the top of the slide. On the left, a green, spiky virus particle is shown. In the center, a hand is depicted with a green, textured, almost crystalline appearance, suggesting a microscopic or molecular view. The background is a dark green gradient with some light spots.

Pearls



- Most common med side effects:
 - Fatigue
 - Headache
 - Nausea
- Most common med [interactions](#)
 - Atorvastatin (pause or Δ)
 - Warfarin (can \downarrow INR)
 - Oral DM meds (can \downarrow BG)



Pearls



- Post Tx Monitoring
 - No Fibrosis ... None!
 - Fibrosis/Cirrhosis... q6 month RUQ US + AFP

Pearls



- Estimated F3/F4 Fibrosis... Cirrhosis?

Signs of Decompensation	Treatment	Feared Complications
Hepatic Encephalopathy	Lactulose, Rifaximin, +/- Zinc	Hepatocellular Carcinoma
Jaundice	N/A	Hepatorenal Syndrome
Varices	Propranolol or Nadolol to decrease BP* Type & Screen	Variceal Hemorrhage
Ascites	<2g Na, <2L Water, Diuretics, High Protein Diet	Spontaneous Bacterial Peritonitis (SBP)



Pearls



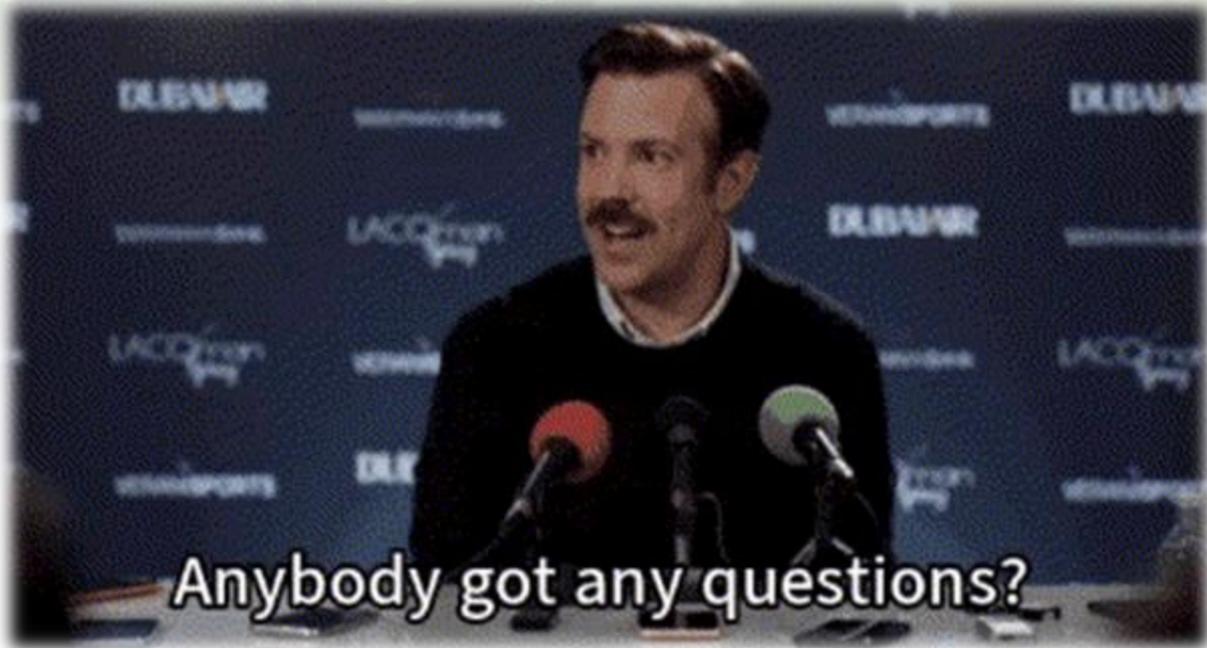
- Estimated F3/F4 Fibrosis... Cirrhosis?
 - Refer to GI for variceal screen (Upper Endoscopy)
 - Check for HCC (RUQ US + AFP)
 - Assess synthetic function (Plt, Albumin, INR)
 - May warrant transplant evaluation

The top of the slide features a dark green background with several microscopic images. On the left, there is a spherical virus with many protruding spikes. In the center and right, there are larger, more complex structures that look like clusters of cells or larger viruses with multiple arms or filaments extending from them. The overall theme is related to medicine or biology.

Take Home

1. Two pangenotypic antivirals:
 - Mavyret (Glec/Pib)
 - Epclusa (Sof/Vel)
2. Most cases of HepC can be treated easily in the office
3. Sobriety is not a prerequisite for care

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Anybody got any questions?

Questions??



References - Pathology

Virion Images:

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Life Cycle:

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References – Epi/Primary Care

History:

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<https://mydigitalpublication.com/publication/?m=63420&i=826363&p=1&ver=html5>.

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1. Lewis KC, Barker LK, Jiles RB, Gupta N. Estimated Prevalence and Awareness of Hepatitis C Virus Infection Among US Adults: National Health and Nutrition Examination Survey, January 2017-March 2020. *Clin Infect Dis.* 2023;77:1413-5.
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Why Primary Care – Benefits for Physician and Patient:

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The top of the slide features a dark green background with several microscopic images of viruses, likely Hepatitis C Virus, showing their characteristic spherical shape and surface spikes. Below these, a pair of hands is shown in a similar greenish tint, suggesting a focus on infection control and hygiene.

References – Guidelines

AASLD Guidelines:

1. Debika Bhattacharya, Andrew Aronsohn, Jennifer Price, Vincent Lo Re, the American Association for the Study of Liver Diseases–Infectious Diseases Society of America HCV Guidance Panel , Hepatitis C Guidance 2023 Update: American Association for the Study of Liver Diseases– Infectious Diseases Society of America Recommendations for Testing, Managing, and Treating Hepatitis C Virus Infection, *Clinical Infectious Diseases*, 2023;, ciad319, <https://doi.org/10.1093/cid/ciad319>
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