HCV: Treatment Update 2019

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ABIM Disclosure
Hugo E. Vargas, M.D.

- I am a current member of the ABIM Transplant Hepatology Exam Committee.

- To protect the integrity of certification, ABIM enforces strict confidentiality and ownership of exam content.

- As a member of the Board of Directors and of an ABIM exam committee, I have pledged to keep exam information confidential.

- *No exam questions will be disclosed in my presentation.*
Educational Goals

The attendee should:

• Discuss the types of agents that constitute DDA
• Explain how durability and applicability outside of trials is more clear: ”Real World Data”
• Identify new populations who will receive care
• Become aware of the value of treating HCV
The burden of HCV
Impact of HCV in US

- HCV infects 2.7 to 3.9 million people in U.S.
  - 4x as common as HIV

- Estimated 12,000 deaths/yr from chronic liver dz
  - Liver cancer second fastest rising cancer in US

- RNA virus so is “curable” BUT
  - < 50% know they have disease
  - Only 10% treated with DAAs since intro in 2013
  - Not enough specialists to treat

Fox Dig Dis Sci 2016
HCV is the Most Common Blood-Borne Chronic Viral Infection in the US

Available at www.cdc.gov
AASLD/IDSA Recommendations for Screening

**One-time HCV testing:**
- Anyone born between 1945–1965* without prior assessment of risk
- Others with 1+ risk factors
- Anyone who asks to be tested
- Pregnant women

**Annual HCV testing:**
- Persons who inject drugs
- HIV-positive MSM who have unprotected sex

**Periodic HCV testing:**
- Others with ongoing risk factors for HCV

### Risk Behaviors, Exposures, and Other Considerations

- IDU (current or ever)
- Intranasal illicit drug use
- HIV infection
- Unexplained chronic liver disease (persistently elevated ALT)
- Tattoo or body piercing (unregulated)
- Have ever been incarcerated
- Long-term hemodialysis (ever)
- Received blood/organs prior to 1992
- Received clotting factors prior to 1987
- Healthcare workers after exposures to HCV-infected blood
- Children born to HCV-infected women
- Solid organ donors (deceased and living)
- Sexually active persons about to start PrEP
US Trends for Acute HCV Cases (2000–2014) and Heroin-Related Deaths

People who inject drugs (PWIDs) account for ≈75% of new HCV infections

How do we approach treatment?
Treatment Recommendations

• The current recommended regimens (will focus in USA predominantly)
Treatment Recommendations

• The goal of treatment of HCV-infected persons is to reduce all-cause mortality and liver-related health adverse consequences.
  • Includes:
    • ESLD
    • HCC

• Treatment is recommended for all patients with chronic HCV infection, except those with short life expectancies that cannot be remediated by treating HCV, by transplantation, or by other directed therapy.

Patients with short life expectancies owing to liver disease should be managed in consultation with an expert.
Treatment Recommendations

• Basics:
  • Viral genotype
  • Titers
  • Fibrosis
    • FibroScan
    • MR elastography
    • Serological tests
• RAS analysis:
  • Strongly consider in patients who have been exposed to DAA’s and in patients with G1a and 3

AASLD/IDSA Guidance panel
Recommendations on HCV Testing

[Flowchart Diagram]

- **HCV antibody**
  - **Nonreactive**
    - No HCV antibody detected
    - **STOP**
  - **Reactive**
    - **HCV RNA**
      - **Not detected**
        - No current HCV infection
        - Additional testing as appropriate
      - **Detected**
        - Current HCV infection
        - **Link to care**
## Fibrosis Staging in HCV

<table>
<thead>
<tr>
<th>Score</th>
<th>F0</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibrosis (scarring)</td>
<td>No damage</td>
<td>Mild Portal fibrosis without septa</td>
<td>Moderate Portal fibrosis with rare septa</td>
<td>Advanced Numerous septa, not cirrhosis</td>
<td>Severe Cirrhosis</td>
</tr>
</tbody>
</table>

**META VIR Scale**

Determining fibrosis level is important as it may affect treatment regimen, duration of treatment, and determines the need for HCC screening post-cure.

**AASLD/IDSA Guidance**

Initiating therapy in patients with lower-stage fibrosis augments the benefits of SVR.
Treatment Recommendations

• Check for co-infection with HBV
• Review HIV risk factors and test
• Discuss non-infected sexual partner testing and precautions
• Ensure that they understand SVR does not preclude re-infection
• Discuss how you will design treatment and follow up
  • Do not forget cirrhosis complications and f/u
HBV Reactivation Associated with HCV DAA Therapy

From FDA Adverse Event Reporting System (FAERS) for cases of HBV-R associated with HCV DAAs from 11/22/2013–10/15/2016

*HBV-R is defined as the abrupt increase in HBV replication in a patient with inactive or resolved HBV (HBsAg positive or negative, respectively), and hepatitis B core antibody (HBcAb) positive

<table>
<thead>
<tr>
<th>Descriptive Characteristics</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td># of cases/geography</td>
<td>29 cases (5 in US, 19 Japan, 5 in other)</td>
</tr>
<tr>
<td>Timing</td>
<td>Temporally related to HCV therapy (mean t to HBV-R 53 days)</td>
</tr>
<tr>
<td>Baseline HBV viral parameters</td>
<td>HBsAg+ (n=13) (n=12 not reported); HBcAb+ (n=6) (n=23 not reported)</td>
</tr>
<tr>
<td></td>
<td>HBV DNA undetectable/detectable (n=16/9)</td>
</tr>
<tr>
<td>Outcome</td>
<td>Death (n=2) (due to decompensated liver failure); transplant (n=1); hospitalization (n=6); other (n=20)</td>
</tr>
<tr>
<td>Specific DAAs used</td>
<td>SOF-based (n=16); DCV+ASV (n=11); PI-based (n=2)</td>
</tr>
<tr>
<td>HBV treatment</td>
<td>In 16 patients who received HBV treatment, treatment was delayed in at least 7 of the cases (44%); one of these 7 patients died; possible delay in at least 7 other cases (one had a liver transplant)</td>
</tr>
</tbody>
</table>

“Our data show that HBV-R is a safety concern in pts previously infected with HBV who take DAAs”
“The benefit of high HCV cure rate with DAAs continues to outweigh the risks, even in those patients who may be at risk of HBV-R”
“Patients with a history of HBV require careful clinical monitoring while on DAA therapy”

Bersoff-Matcha, Annals IM, 2017
DDI screening
www.hep-druginteractions.org
Rising Cure Rates for Chronic HCV

Discovery of HCV (Chiron) | 1989
---|---
HCV Antibody Testing | 1992
Approval Ribavirin | 1998
Approval pegIFN | 2001
Genotype-Specific RGT | 2005
Approval Telaprevir | 2011
Boceprevir | 2013
Approval Simeprevir | 2014
Sofosbuvir | 2015
Approval Daclatasvir | 2018
PrO

SVR: 6% 12% 20% 40% 54% 65–75% > 90%

Approval Grazoprevir/Elbasvir | 2015
Sofosbuvir/Velpatasvir

Approval Ledipasvir/Sofosbuvir | 2018
PrOD

Approval Sof/Vel/Voxelaprevir | 2018
Glecaprevir/Pibrentasvir
Treatment Targets

NS3/4API
- Boceprevir
- Glecaprevir
- Grazoprevir
- Paritaprevir
- Simeprevir
- Teleprevir
- Voxilaprevir

NS5A
- Daclatasvir
- Elbasvir
- Ledipasvir
- Ombitasvir
- Pibrentasvir
- Velpatasvir

NS5B
- Dasabuvir
- Sofosbuvir
Recommendations for Testing, Managing, and Treating Hepatitis C

http://www.hcvguidelines.org/
Diagnosis AND treatment

CURE

Highly Efficacious Treatments Are Not Enough!

All HCV patients

PEG-IFN/RBV

100%

20%

10%

95% SVR

100%

20%

19%

95% SVR + HIGH Dx/TX

100%

90%

85%
Treatment Recommendations

The current recommended regimens focus on **optimal** regimens.
Genotype 1

**SOF/VEL 12wks**
- *a*- Decomp cirrhosis, add RBV*
- *b*- Decomp cirrhosis, and SOF or  NS5A failure, add RBV 24wks

**GPV/PBV 8wks**
- *a*- not for Decomp
- *b*- TE same duration
Genotype 2

GPV/PBV 8wks
- *a-not for Decomp*
- *TE same duration*

SOF/VEL 12 wks
- *a-Decomp cirrhosis, add RBV*

SOF/DCV 12wks
- *a-Cirrhosis, 16-24wks*
- *b-Decomp cirrhosis, add RBV 12wks*
- *c-SOF/RBV TE, +/- RBV 24wks*
Genotype 3

SOF/VEL 12wks
- a-Decomp cirrhosis, or PEG-IFN/RBV or SOF/RBV TE, add RBV

GPV/PBV 8wks
- a-not for Decomp
- b-TE get 16 wks including Cirrhosis
Genotype 4

**SOF/VEL 12wks**
- *a*- Decomp cirrhosis, add RBV*
- *b*- SOF or NS5A TE, add RBV 24wks

**SOF/LDV 12wks**
- *a*- Decomp cirrhosis, add RBV *
- *b*- PEG-IFN/RBV TE and cirrhosis, add RBV*
- *c*- SOF TE, add RBV

**GPV/PBV 8wks**
- *a*- not for Decomp
Rescue Treatment

- NS5A containing regimen
- **SOF/VEL/VOX** for 12 weeks
- GT 1-6 including Cirrhosis
  - Not for Decomp or Renal Failure
- For GT1 (if no NS3/4A PI) including Cirrhosis
- **GPV/PRV** for 12 weeks (1b) 16 weeks (1a)
http://www.hcvguidelines.org/

Recommendations for Testing, Managing, and Treating Hepatitis C
### Baseline Demographics

<table>
<thead>
<tr>
<th></th>
<th>GT 2 N=214</th>
<th>GT 3 N=279</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SOF/VEL  n=198</td>
<td>SOF/VEL  +RBV  n=16</td>
</tr>
<tr>
<td>Median age, years</td>
<td>62</td>
<td>60</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>126 (64)</td>
<td>12 (75)</td>
</tr>
<tr>
<td>Cirrhosis, n (%)</td>
<td>30 (15)</td>
<td>10 (63)</td>
</tr>
<tr>
<td>TE, n (%)</td>
<td>20 (10)</td>
<td>11 (69)</td>
</tr>
<tr>
<td>HIV/HCV, n (%)</td>
<td>3 (1.5)</td>
<td>5 (3)</td>
</tr>
</tbody>
</table>

**SVR12 (PP)**

<table>
<thead>
<tr>
<th></th>
<th>GT2</th>
<th>GT3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOF/VEL</td>
<td>99/176</td>
<td>99/141</td>
</tr>
<tr>
<td>SOF/VEL +RBV</td>
<td>94/15/177</td>
<td>95/101/106</td>
</tr>
</tbody>
</table>

SVR12 for SOF/VEL ± RBV in this real-world cohort was similar to that reported in ASTRAL-2 & -3.
Real-World Experience of SOF/VEL in HCV GT 1–6: HCV-TARGET

407 patients treated with SOF/VEL from the HCV-TARGET registry (July 2016 - Feb 2017)

Baseline Demographics

<table>
<thead>
<tr>
<th></th>
<th>SOF/VEL n=407</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>228 (56)</td>
</tr>
<tr>
<td>Age ≥60, n (%)</td>
<td>164 (40)</td>
</tr>
<tr>
<td>HCV GT, %</td>
<td>1 / 2 / 3 / Other 17 / 39 / 38 / 6</td>
</tr>
<tr>
<td>Treatment duration</td>
<td></td>
</tr>
<tr>
<td>12 weeks, n (%)</td>
<td>330 (81)</td>
</tr>
<tr>
<td>Other, n (%)</td>
<td>39 (10)</td>
</tr>
<tr>
<td>Ongoing</td>
<td>38 (9)</td>
</tr>
<tr>
<td>Cirrhosis, n (%)</td>
<td>113 (28)</td>
</tr>
<tr>
<td>History of DC, n (%)</td>
<td>30 (7)</td>
</tr>
<tr>
<td>TE*, n (%)</td>
<td>67 (17)</td>
</tr>
<tr>
<td>Liver transplant, n (%)</td>
<td>8 (2)</td>
</tr>
</tbody>
</table>

* 21 (5%) were DAA treatment failures

SVR12 (PP)

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>GT 1</th>
<th>GT 2</th>
<th>GT 3</th>
<th>TN</th>
<th>TE</th>
<th>NC</th>
<th>CC</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVR12, %</td>
<td>97</td>
<td>94</td>
<td>98</td>
<td>98</td>
<td>99</td>
<td>90</td>
<td>98</td>
<td>94</td>
<td>93</td>
</tr>
</tbody>
</table>

TN=treatment-naïve
TE=treatment-experienced
NC=non-cirrhotic
CC=compensated cirrhotic
DC=decompensated cirrhotic

Landis, AASLD 2017, Poster 1096
Impact of RAS or RBV Use on SOF/VEL±RBV for 12 Weeks, GT3 Patients: GECCO

Prospective multicenter cohort from Germany

**Baseline Demographics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>161 (69)</td>
</tr>
<tr>
<td>Age, years</td>
<td>47 (38–54)</td>
</tr>
<tr>
<td>HIV/HCV, %</td>
<td>11</td>
</tr>
<tr>
<td>TE, %</td>
<td>26</td>
</tr>
<tr>
<td>Cirrhosis (%)</td>
<td>22</td>
</tr>
<tr>
<td>Child Pugh A / B / C, %</td>
<td>90 / 10 / 0</td>
</tr>
<tr>
<td>Baseline NS5A RAS available, n (%)</td>
<td>177 (76)</td>
</tr>
<tr>
<td>Baseline NS5A RAS positive (A30K/Y93H/A30T)</td>
<td>16 (9%) (8/7/1)</td>
</tr>
<tr>
<td>+RBV, n (%)</td>
<td>32 (14)</td>
</tr>
</tbody>
</table>

**SVR12 (PP)**

- Overall: 99/100
- Cirrhosis, +RBV: 140/141
- Cirrhosis, -RBV: 13/13

- 100% SVR in patients with baseline RASs
  - A30K (n=5)
  - Y93H (n=5)
- One relapser
Phase 3 POLARIS-1 Study

SOF/VEL/VOX for 12 Weeks in NS5A TE: Deferred Treatment Group, Polaris 3

Double-blind, randomized, placebo-controlled trial in HCV GT1-6 patients

Baseline Demographics

<table>
<thead>
<tr>
<th></th>
<th>N=147</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>116 (79)</td>
</tr>
<tr>
<td>White, n (%)</td>
<td>121 (82)</td>
</tr>
<tr>
<td>Cirrhosis, n (%)</td>
<td>49 (33)</td>
</tr>
<tr>
<td>GT 1a/1b/other/6, %</td>
<td>77/20/1/1</td>
</tr>
<tr>
<td>IL28B non-CC, n (%)</td>
<td>121 (82)</td>
</tr>
<tr>
<td>Previous LDV/SOF, n (%)</td>
<td>91 (62)</td>
</tr>
<tr>
<td>Baseline RAS, n (%)</td>
<td>131 (89)</td>
</tr>
</tbody>
</table>

SVR by genotype

- Four patients relapsed (all GT 1a)
SOF/VEL for 12 Weeks in Liver Transplant Recipients with Recurrent HCV GT 1-4

Single-arm, open-label phase 2 study conducted in Europe

<table>
<thead>
<tr>
<th>Baseline Demographics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age, y (range)</td>
<td>62 (45–81)</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>64 (81)</td>
</tr>
<tr>
<td>Mean time since transplant, y (range)</td>
<td>8.7 (0.3–23.9)</td>
</tr>
<tr>
<td>HCV GT, % 1a / 1b / 2 / 3 / 4</td>
<td>19 / 28 / 4 / 44 / 5</td>
</tr>
<tr>
<td>Protocol-defined Cirrhosis, n (%)</td>
<td>7 (9)</td>
</tr>
<tr>
<td>TE, n (%)</td>
<td>47 (60)</td>
</tr>
<tr>
<td>DAA ± PEG + RBV*</td>
<td>4 (5)</td>
</tr>
<tr>
<td>IFN/PEG ± RBV</td>
<td>43 (54)</td>
</tr>
<tr>
<td>Immunosuppression use, n (%)</td>
<td></td>
</tr>
<tr>
<td>Tacrolimus</td>
<td>56 (71)</td>
</tr>
<tr>
<td>Cyclosporine</td>
<td>11 (14)</td>
</tr>
<tr>
<td>Sirolimus</td>
<td>8 (10)</td>
</tr>
<tr>
<td>Everolimus</td>
<td>5 (6)</td>
</tr>
<tr>
<td>Mycophenolate</td>
<td>19 (24)</td>
</tr>
<tr>
<td>Azathioprine</td>
<td>9 (11)</td>
</tr>
<tr>
<td>Prednisolone</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>
SOF/VEL for 12 Weeks in GT 1–4 HCV-Infected Post-Liver Transplant Patients

- 3 patients did not achieve SVR:
- 4/4 patients with baseline Y93H RASs (3 GT 3 and 1 GT 1b) achieved SVR12
  - No changes in immunosuppression were needed for rejection or suspected drug-drug interactions

### Safety

<table>
<thead>
<tr>
<th>Patients, n (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AEs</strong></td>
<td>62 (78)</td>
</tr>
<tr>
<td>Grade 3–4 AE</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Serious AE</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Treatment D/C due to AE</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>
LDV/SOF for 12 Weeks in GT 1 HCV eGFR ≤30 mL/min, not on HD

Efficacy & safety of full dose LDV/SOF (90mg/400mg)

**Baseline Demographics**

<table>
<thead>
<tr>
<th></th>
<th>LDV/SOF 12 weeks n=18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age, y (range)</td>
<td>57 (32–66)</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>12 (67)</td>
</tr>
<tr>
<td>White / Black, %</td>
<td>44 / 56</td>
</tr>
<tr>
<td>Mean eGFR (range)</td>
<td>24.9 (9.0–39.6)</td>
</tr>
<tr>
<td>Cirrhosis, n (%)</td>
<td>2 (11)</td>
</tr>
<tr>
<td>GT 1 / 1a / 1b, %</td>
<td>100 / 78 / 22</td>
</tr>
<tr>
<td>Mean HCV RNA, log_{10} IU/mL (range)</td>
<td>6.2 (5.0–7.1)</td>
</tr>
</tbody>
</table>

- No treatment-related cardiac AEs, including bradycardia; no clinically meaningful changes in QTc intervals

**Safety**

<table>
<thead>
<tr>
<th></th>
<th>n=18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients, n (%)</td>
<td></td>
</tr>
<tr>
<td>AEs</td>
<td>13 (72)</td>
</tr>
<tr>
<td>AEs (&gt;15% of patients): Fatigue, Headache, Hyperkalemia</td>
<td>4 (22), 4 (22), 3 (17)</td>
</tr>
<tr>
<td>Grade 3–4 AE</td>
<td>5 (28)</td>
</tr>
<tr>
<td>Serious AE</td>
<td>4 (22)</td>
</tr>
<tr>
<td>Treatment-related serious AE</td>
<td>0</td>
</tr>
<tr>
<td>Treatment D/C due to AE</td>
<td>0</td>
</tr>
<tr>
<td>Grade 3–4 Lab Abnormalities</td>
<td>10 (56)</td>
</tr>
</tbody>
</table>

- No clinically meaningful change in eGFR:
- LDV and SOF plasma concentrations were similar to those seen with mild to moderate renal
Clinical outcomes in patients with chronic hepatitis C after direct-acting antiviral treatment: a prospective cohort study

Fabrice Carrat, Hélène Fontaine, Céline Dorival, Mélanie Simony, Alpha Diallo, Christophe Hezode, Victor De Ledinghen, Dominique Larrey, Georges Haour, Jean-Pierre Bronowicki, Fabien Zoulim, Tarik Asselah, Patrick Marcellin, Dominique Thabut, Vincent Leroy, Albert Tran, François Habersetzer, Didier Samuel, Dominique Guyader, Olivier Chazouilleres, Philippe Mathurin, Sophie Metivier, Laurent Alric, Ghassan Riachi, Jérôme Gournay, Armand Abergel, Paul Cales, Nathalie Ganne, Véronique Loustaud-Ratti, Louis D’Alterroche, Xavier Causse, Claire Geist, Anne Minello, Isabelle Rosa, Moana Gelu-Simeon, Isabelle Portal, François Raffi, Marc Bourliere, Stanislas Pol, for the French ANRS CO22 Hepather cohort *

Lancet (online Feb 11th)
First prospective evidence that DAA are associated with a decreased risk of death (All)
First prospective evidence that DAA are associated with a decreased risk of death (ESLD)
Survival Curves for CLD Patients With and Without SVR: VA

Overall

HCC Disease Free Survival

83.5% reduction in incident HCC: Increasing access to DAAs for CLD patients should result in fewer overall deaths

Backus, Hepatology 2018
Impact of the DAA on short-term post-LT outcomes compared to non-HCV etiologies [pre-DAA era (n=3,672); DAA era (n=3,855)]

Patient and graft survival rates have improved during the DAA era and they are no longer different from non-HCV transplant patients.

### Patient Survival

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-DAA Survival</th>
<th>DAA Era Survival</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>89</td>
<td>92</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>2012</td>
<td>91</td>
<td>92</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>2013</td>
<td>93</td>
<td>90</td>
<td>0.23</td>
</tr>
<tr>
<td>2014</td>
<td>92</td>
<td>92</td>
<td>0.76</td>
</tr>
<tr>
<td>2015</td>
<td>93</td>
<td>92</td>
<td>0.35</td>
</tr>
</tbody>
</table>
Increasing use of HCV-infected organs

Increasing use of HCV NAT+ donors for transplant – both to HCV+ recipients and now recently HCV- recipients

Increasing use of HCV-infected organs for transplantation with similar outcomes to those in HCV-uninfected organs at 1 and 2 yrs

Cotter, Hepatology 2019
So what are we doing?

- 1. Decreasing the impact of HCV on cirrhosis burden
- 2. Decreasing the impact of HCV-cirrhosis driven HCC
- 3. Decrease in extrahepatic manifestations of HCV
- 4. Less LT from HCV

Ioannu Gastro 2019
Retrospective 167 medical centers including 35,871 IFN-only regimens, 4,535 DAA+IFN and 21,948 DAA-only; f/u of 6.1 years (range: 2-18)

Incident HCCs=3,271

DAA-induced SVR is associated with 71% reduction in HCC risk

Ioannou, J Hepatology 2018
Thank you

vargas.hugo@mayo.edu
Case

- 54 year old man referred to you by his primary care because of HCV infection (HCV G1a)
- He is a police officer, was a medic during his military service
- He has mild essential HTN and does not consume alcohol
Case

• PE
  • No jaundice
  • Lungs and heart normal
  • Abdomen is soft, NT, no liver or spleen enlargement
  • No edema

• Labs:
  • CBC normal
  • AST 75, ALT 95, AP 123, Tbili 1.0, Alb 3.9, Screat 1.2
  • Transient Elastography 5.8 KPa (stage 1 fibrosis)
  • HIV negative
  • HBV HBsAg+, HBeAg- HBV DNA 6000 IU
Case

- The best course of action is:

  - A) Begin HCV treatment with SOF/VEL for 12 wks
  - B) Begin tenofovir alafenamide 25mg daily and SOF/VEL for twelve weeks
  - C) Begin HCV treatment with SOF/VEL for 12 wks, thereafter treat with tenofovir alafenamide 25mg daily
  - D) Begin HCV treatment with SOF/VEL for 12 wks, check HBV DNA weekly
Case

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  • A) Begin HCV treatment with SOF/VEL for 12 wks
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