CLINICAL GUIDELINES PROGRAM ¼-FOLDED GUIDE

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HCV POCKET GUIDE 2: DAA TREATMENT, FOLLOW-UP, MONITORING, AND RETREATMENT

NYSDOH AIDS INSTITUTE CLINICAL GUIDELINES PROGRAM PRINTED 1/2019

→ KEY POINTS

- Treatment regimen recommendations are organized according to HCV genotype and subtype, the presence or absence of compensated cirrhosis, and HCV treatment history.
- The recommended regimens within each list are in alphabetical order, not in order of preference.
- No single regimen is recommended over another within each list of options; data on direct comparisons of treatment regimens have not been published.
- The choice of regimen should be based on individual pretreatment assessment findings, the general considerations detailed above, and insurance coverage.

ALL RECOMMENDATIONS P.1 *Consult the full guideline for additional information.*

RETREATMENT AFTER FAILURE WITH ANY PRIOR DAA REGIMEN

Failure is defined as detectable HCV RNA 12 weeks after the conclusion of HCV treatment.

- **Clinicians new to HCV treatment should consult a liver specialist when retreating a patient who has failed treatment with any DAA regimen. (B3)**

TREATMENT OF PATIENTS WITH HIV/HCV COINFECTION

- Clinicians should: 1) Recommend initiation of ART for any patient with HIV/HCV coinfection who is not already receiving ART (A1); 2) Not exclude patients with $CD4$ counts <200 cells/mm^3 from HCV treatment (A3); 3) Choose a DAA drug regimen that will not cause adverse DAA–ARV drug–drug interactions (A3); 4) Prescribe DAA regimens for a minimum of 12 weeks in patients with HIV/HCV coinfection, but GLE/PIB may be prescribed for 8 weeks in some patients. (A3)

RETREATMENT OPTIONS AFTER DAA FAILURE

Failure with DCV, ELB, LDV, OBV, or VEL

Genotype	No cirrhosis or compensated cirrhosis
1	No previous treatment with GRZ, PTV, or VOX: GLE/PIB once daily x 16 wks
ALL	SOF/VEL/VOX once daily x 12 wks
3	*Compensated cirrhosis only:* SOF/VEL/VOX once daily + RBV twice daily x 12 wks

Prior failure with GRZ or PTV, but not DCV, ELB, LDV, OBV, or VEL

Genotype	No cirrhosis	Compensated cirrhosis
1	· GLE/PIB once daily x 12 wks · SOF/VEL once daily x 12 wks · LDV/SOF once daily x 12 wks	· GLE/PIB once daily x 12 wks · SOF/VEL once daily x 12 wks · LDV/SOF once daily + plus RBV twice daily x 12 wks · LDV/SOF once daily x 24 wks
ALL	SOF/VEL/VOX once daily x 12 wks	

Prior failure with SOF but not DCV, ELB, LDV, OBV, or VEL

Genotype	No cirrhosis	Compensated cirrhosis
1	No previous treatment with GRZ, PTV, or VOX: GLE/PIB once daily x 12 wks	No previous treatment with GRZ, PTV, or VOX: GLE/PIB once daily x 16 wks
ALL	SOF/VEL/VOX once daily x 12 wks	

Prior failure with PEG-IFN plus RBV and SOF

Genotype	No cirrhosis or compensated cirrhosis
1,2,4,5,6	GLE/PIB once daily x 12 wks
3	GLE/PIB once daily x 16 wks
ALL	SOF/VEL/VOX once daily x 12 wks

HCV DRUG NAME ABBREVIATION KEY

DCV: Daclatasvir
DSV: Dasabuvir
ELB: Elbasvir
GLE: Glecaprevir
GRZ: Grazoprevir
LDV: Ledipasvir
OBV: Ombitasvir
PEG-IFN: Pegylated interferon
PIB: Pibrentasvir
PTV: Paritaprevir
RBV: Ribavirin
RBV: Ritonavir
SOF: Sofosbuvir
VEL: Velpatasvir
VOX: Voxilaprevir

ALL RECOMMENDATIONS P.2 *Consult the full guideline for additional information.*

TREATMENT OF PATIENTS WITH HIV/HCV COINFECTION *continued*

- Clinicians should consult with an experienced HIV care provider if a patient's ART regimen must be changed to accommodate simultaneous treatment of HCV infection. (A3)
- When prescribing LDV or VEL to patients taking TDF, clinicians should do one of the following: 1) Substitute TAF for TDF, particularly when the CrCl is <50 mL/min or the patient's regimen also includes COBI or RTV (A3); 2) Substitute ABC if the patient is HLA B*5701 negative and does not have HBV sAg+, and if the patient has no evidence of prior HIV resistance to ABC (A3); 3) Choose a different DAA regimen. (A3)
- Clinicians should assess for proteinuria and glucosuria at baseline and monitor CrCl at weeks 2, 4, and 8 of a 12-week LDV or VEL regimen in patients who: 1) Must take TDF with dosing adjusted for renal issues as part of ART and have CrCl ≤50 mL/min (B3); 2) Are taking COBI or RTV. (B3)
- Clinicians should perform follow-up HCV screening with an HCV RNA test at least annually in patients with ongoing risk factors for reinfection. (A1)
- In patients with underlying bridging fibrosis or cirrhosis, clinicians should screen for HCC every 6 months. (A1)

MONITORING DURING DAA TREATMENT

- While patients are taking RBV, clinicians should perform hemoglobin testing at weeks 2 and 4 of treatment and every 4 weeks thereafter until therapy is complete. (A1)
- In patients taking regimens that contain a DAA protease inhibitor (OBV/PTV/RTV and DSV; ELB/GRZ), clinicians should monitor ALT 4 weeks after initiating treatment and continue to obtain serum aminotransferase as needed according to the drug's prescribing information. (A3)
- When patients are HBsAg positive and have no detectable HBV DNA, clinicians should monitor for HBV reactivation by performing AST, ALT, and HBV DNA tests every 4 weeks during HCV treatment (A3). Clinicians new to HCV treatment should consult a liver or HBV specialist for further evaluation of patients who develop detectable HBV DNA. (A3)
- If a woman becomes pregnant during therapy with a regimen containing RBV, clinicians should stop the RBV (A1); if a woman becomes pregnant during therapy with any DAA regimen, clinicians should discuss with her the benefits and risks of using DAAs during pregnancy. (A3)

EVALUATING THE RESPONSE TO TREATMENT

- Clinicians should perform HCV RNA testing 12 weeks after treatment is complete to verify that SVR has been achieved. (A1)
- If SVR is achieved, as established by undetectable HCV RNA at 12 weeks after treatment, clinicians should: 1) Inform their patients that the HCV infection has been cured (A2); and 2) Explain the risk of HCV reinfection and that HCV antibodies are not protective against reinfection. (A1)
- To assess for reinfection in patients with ongoing risk factors, clinicians should perform follow-up screening with HCV RNA testing (not HCV antibody testing) at least annually, even with a history of an SVR. (A1)
- If HCV RNA is detectable at 12 weeks after treatment, clinicians should: 1) Inform patients that treatment has failed (A1) and 2) If new to HCV treatment, consult with a liver disease specialist for retreatment evaluation. (B3)

POST-TREATMENT MONITORING

- For patients taking RBV-containing HCV treatment regimens, clinicians should advise male and female patients to take extreme care to avoid pregnancy for 6 months after completion of therapy (A2) and counsel female and male patients on effective contraceptive use. (A2)
- If a woman becomes pregnant within 6 months of completing an RBV-containing HCV treatment, clinicians should discuss with her the risks of using DAAs and RBV during pregnancy. (A3)

PATIENTS WITH PERSISTENT LIVER DISEASE

- Clinicians should evaluate patients with persistent abnormal transaminase levels after SVR for other causes of liver disease and consult with a liver disease specialist. (A3)
- In patients with underlying bridging fibrosis or cirrhosis, clinicians should screen for HCC every 6 months. (A1)

HCV GENOTYPE 1A

Treatment Naive

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • PTV/RTV/OBV/DSV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks • *Patients who are non-black, HIV-uninfected, and have HCV RNA <6 million copies/mL:* LDV/SOF once daily x 8 wks (AII) • *Patients who are black, HIV-infected, or have HCV RNA ≥6 million copies/mL:* LDV/SOF once daily x 12 wks • *Without baseline NS5A polymorphisms:* ELB/GRZ* once daily x 12 wks • *With baseline NS5A polymorphisms:* ELB/GRZ* once daily + RBV twice daily x 16 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV/DSV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks • *Without baseline NS5A polymorphisms:* ELB/GRZ* once daily x 12 wks • *With baseline NS5A polymorphisms:* ELB/GRZ* once daily + RBV twice daily x 16 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV/DSV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks • *Without baseline NS5A polymorphisms:* ELB/GRZ* once daily x 12 wks • *With baseline NS5A polymorphisms:* ELB/GRZ* once daily + RBV twice daily x 16 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 24 wks • LDV/SOF once daily + RBV twice daily x 12 wks • PTV/RTV/OBV/DSV once daily + RBV twice daily x 24 wks • SOF/VEL once daily x 12 wks • *Without baseline NS5A polymorphisms:* ELB/GRZ* once daily x 12 wks • *With baseline NS5A polymorphisms:* ELB/GRZ* once daily + RBV twice daily x 16 wks

* Clinicians should test for the presence of NS5A resistance-associated variants before starting therapy with ELB/GRZ in all patients with HCV genotype 1a infection. (AIII)

HCV GENOTYPE 3

Treatment Naive

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 16 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 16 wks • SOF/VEL once daily x 12 wks

HCV GENOTYPE 4

Treatment Naive

No cirrhosis	Compensated cirrhosis
• ELB/GRZ once daily x 12 wks • GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks	• ELB/GRZ once daily x 12 wks • GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• ELB/GRZ once daily + RBV twice daily x 12 wks • GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks	• ELB/GRZ once daily + RBV twice daily x 16 wks • GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV once daily + RBV twice daily x 12 wks • SOF/VEL once daily x 12 wks

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ELB: Elbasvir
GLE: Glecaprevir
GRZ: Grazoprevir
LDV: Ledipasvir
OBV: Ombitasvir
PEG-IFN: Pegylated interferon
PIB: Pibrentasvir
PTV: Paritaprevir
RBV: Ribavirin
RBV: Ritonavir
SOF: Sofosbuvir
VEL: Velpatasvir
VOX: Voxilaprevir

HCV GENOTYPE 1B

Treatment Naive

No cirrhosis	Compensated cirrhosis
• ELB/GRZ once daily x 12 wks • GLE/PIB once daily x 8 wks • PTV/RTV/OBV/DSV once daily x 12 wks • SOF/VEL once daily x 12 wks • *Patients who are non-black, HIV-uninfected, and have HCV RNA <6 million copies/mL:* LDV/SOF once daily x 8 wks (AII) • *Patients who are black, HIV-infected, or have HCV RNA ≥6 million copies/mL:* LDV/SOF once daily x 12 wks	• ELB/GRZ once daily x 12 wks • LDV/SOF once daily x 12 wks • GLE/PIB once daily x 12 wks • PTV/RTV/OBV/DSV once daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• ELB/GRZ once daily x 12 wks • GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • PTV/RTV/OBV/DSV once daily x 12 wks • SOF/VEL once daily x 12 wks	• ELB/GRZ once daily x 12 wks • GLE/PIB once daily x 12 wks • LED/SOF once daily x 24 wks • LDV/SOF once daily + RBV twice daily x 12 wks • PTV/RTV/OBV/DSV once daily x 12 wks • SOF/VEL once daily x 12 wks

HCV GENOTYPE 2

Treatment Naive

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • SOF/VEL once daily x 12 wks

HCV GENOTYPE 5

Treatment Naive

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks

HCV GENOTYPE 6

Treatment Naive

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks

Prior Failure with PEG-IFN + RBV

No cirrhosis	Compensated cirrhosis
• GLE/PIB once daily x 8 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks	• GLE/PIB once daily x 12 wks • LDV/SOF once daily x 12 wks • SOF/VEL once daily x 12 wks

← Use this code with your phone's QR code reader to go directly to a mobile-friendly version of this guideline.

This ¼-Folded Guide is a companion to the New York State Department of Health AIDS Institute guideline *Treatment Of Chronic HCV With Direct-Acting Antivirals*. The full guideline is available at hivguidelines.org.