

Treatment-Experienced Genotype 1

Multiple highly potent, DAA combination regimens are recommended for patients with genotype 1 infection. There are differences in the recommended regimens based on viral subtype, the presence or absence of baseline NS5A resistance-associated substitutions (RASs), the presence or absence of compensated cirrhosis, and the type of prior failed regimen(s). Genotype 1 infection that cannot be subtyped should be treated as genotype 1a infection.

Approximately 10% to 15% of genotype 1-infected patients without prior exposure to NS5A inhibitors have detectable NS5A RASs prior to treatment. The clinical impact of NS5A RASs varies across regimens and baseline patient characteristics. In patients with genotype 1a infection, the presence of baseline NS5A RASs that cause a large reduction in the activity of NS5A inhibitors (>5 fold) adversely impacts response to some NS5A inhibitor-containing regimens ([Zeuzem, 2017](#)); ([Jacobson, 2015b](#)). These RASs are found by population sequencing in roughly 5% to 10% of patients; relevant RASs vary by DAA regimen. Given that baseline NS5A RASs are one of the strongest pretreatment predictors of therapeutic outcome with certain regimens in genotype 1a-infected patients, testing for these RASs prior to deciding on a therapeutic course is recommended in selected situations ([Zeuzem, 2015c](#)). For further guidance please see the [Resistance Primer](#) section.

Compared to interferon-based therapy, DAAs are associated with an increased risk of drug interactions with concomitant medications. With combinations of DAAs in the various treatment regimens, attention to drug-drug interactions is that much more important (see [Drug Interactions table](#)). The product prescribing information and other resources (eg, <http://www.hep-druginteractions.org>) should be consulted regularly to ensure safety when prescribing DAA regimens. Important interactions with commonly used medications (eg, antacids, lipid-lowering drugs, anti-epileptics, antiretrovirals, etc) exist for all regimens discussed.

The following pages include guidance for management of treatment-experienced patients with genotype 1 infection.

- [Peginterferon/Ribavirin-Experienced, Genotype 1a Patients Without Cirrhosis](#)
- [Peginterferon/Ribavirin-Experienced, Genotype 1a Patients With Compensated Cirrhosis](#)
- [Peginterferon/Ribavirin-Experienced, Genotype 1b Patients Without Cirrhosis](#)
- [Peginterferon/Ribavirin-Experienced, Genotype 1b Patients With Compensated Cirrhosis](#)
- [NS3 Protease Inhibitor + Peginterferon/Ribavirin-Experienced, Genotype 1 Patients Without Cirrhosis](#)
- [NS3 Protease Inhibitor + Peginterferon/Ribavirin-Experienced, Genotype 1 Patients With Compensated Cirrhosis](#)
- [Non-NS5A Inhibitor, Sofosbuvir-Containing Regimen-Experienced, Genotype 1 Patients Without Cirrhosis](#)
- [Non-NS5A Inhibitor, Sofosbuvir-Containing Regimen-Experienced, Genotype 1 Patients With Compensated Cirrhosis](#)
- [NS5A Inhibitor DAA-Experienced Genotype 1 Patients](#)

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Related References

Jacobson IM, Asante-Appiah E, Wong P, Black T, Howe A, Wahl J, et al. [Prevalence and Impact of Baseline NSA Resistance Associated Variants \(RAVs\) on the Efficacy of Elbasvir/Grazoprevir \(EBR/GZR\) Against GT1a Infection \[Abstract LB-22\]](#). In 66th Annual Meeting of the American Association for the Study of Liver Diseases (AASLD), November 13-17, 2015. San Francisco, CA; 2015.

Zeuzem S, Rockstroh JK, Kwo PY, et al. [Predictors of Response to Grazoprevir/Elbasvir Among HCV Genotype 1 \(GT1\)-Infected Patients: Integrated Analysis of Phase 2-3 Trials \[Abstract 700\]](#). In 66th Annual Meeting of the American Association for the Study of Liver Diseases (AASLD), November 13-17, 2015. San Francisco, CA.; 2015.

Zeuzem S, Mizokami M, Pianko S, Mangia A, Han KH, Martin R, et al. [NS5A resistance-associated substitutions in patients with genotype 1 hepatitis C virus: Prevalence and effect on treatment outcome](#). J Hepatol. 2017;66(5):910-918.