

Six key questions before commencing treatment for hepatitis C virus (HCV) infection	
<ul style="list-style-type: none"> • Is cirrhosis present? • What is the HCV genotype? • Is the patient treatment-naïve? 	<ul style="list-style-type: none"> • Is HBV–HCV or HIV–HCV coinfection present? • Are there potential drug–drug interactions? • What is the renal function (eGFR)?

Checklist for pre-treatment assessment for people with hepatitis C virus (HCV) infection

HCV virology: <ul style="list-style-type: none"> • Anti-HCV (serology) • HCV PCR • HCV genotype, quantitative HCV RNA level* 	<ul style="list-style-type: none"> • Indicates HCV exposure • Confirms HCV infection • May influence choice and duration of treatment regimen
HCV treatment history — previous regimen and response	Determines treatment regimen and duration
Potential for non-adherence?	Consider medical and social issues that may be barriers to medication adherence
Alcohol intake history	Cofactor for cirrhosis
Check for drug–drug interactions	www.hep-druginteractions.org Includes prescribed, over-the-counter, herbal, illicit drugs
Pregnancy discussion†	
Weight and body mass index	Non-alcoholic fatty liver disease is a cofactor for cirrhosis
Signs of chronic liver disease	
FBE	<ul style="list-style-type: none"> • Baseline haemoglobin level • Low platelets — suspect portal hypertension
LFTs and INR	Low albumin, raised bilirubin, raised INR suggest advanced cirrhosis
U&Es and eGFR	<ul style="list-style-type: none"> • Sofosbuvir is not recommended if eGFR < 30 mL/min/1.73 m² • Ribavirin is renally cleared and needs dose reduction if eGFR < 50 mL/min/1.73 m²
HBV (HBsAg, anti-HBc, anti-HBs), HIV, HAV serology	Specialist referral is recommended for people with HBV or HIV coinfection If seronegative, vaccinate against HAV, HBV
Cirrhosis assessment <ul style="list-style-type: none"> • e.g. FibroScan • e.g. APRI 	Thresholds consistent with no cirrhosis: <ul style="list-style-type: none"> • Liver stiffness < 12.5 kPa • APRI < 1.0 Specialist referral is recommended for people with cirrhosis
Electrocardiogram if ribavirin therapy planned and patient is aged > 50 years OR has cardiac risk factors	Screen for ischaemic heart disease

FBE = full blood examination. LFT = liver function test. INR = international normalised ratio. U&E = urea and electrolyte. eGFR = estimated glomerular filtration rate. HBV = hepatitis B virus. HAV = hepatitis A virus. HBsAg = hepatitis B surface antigen. anti-HBc = hepatitis B core antibody. anti-HBs = hepatitis B surface antibody. APRI = aspartate aminotransferase to platelet ratio index. MELD = Model for End-Stage Liver Disease. HCC = hepatocellular carcinoma. * HCV genotype is required by the PBS criteria; it is important before prescribing elbasvir plus grazoprevir or sofosbuvir plus ledipasvir. HCV RNA level is important for determining eligibility for 8-week treatment duration with sofosbuvir plus ledipasvir. † As there are no safety data for the use of any direct-acting antiviral regimen during pregnancy, treatment of pregnant women is not recommended. Ribavirin (Category X) and peginterferon-alfa are contraindicated during pregnancy.

Support for people living with hepatitis C
People living with hepatitis C can receive information, support and referral from community services, including: <ul style="list-style-type: none"> • Hepatitis Australia: http://www.hepatitisaustralia.com • Hepatitis Information Line: 1800 437 222 • Australian Injecting & Illicit Drug Users League: http://www.aivl.org.au

On-treatment and post-treatment monitoring for virological response

Routine monitoring for a 12-week treatment regimen:	
Week 0	<ul style="list-style-type: none"> • Pre-treatment blood tests, including LFTs, HCV PCR
Week 12 post-treatment (SVR)	<ul style="list-style-type: none"> • LFTs, HCV PCR (qualitative)
<ul style="list-style-type: none"> • More intensive monitoring may be required in certain populations (see <i>Australian recommendations for the management of hepatitis C virus infection: a consensus statement</i> (September 2018), http://www.gesa.org.au). • People treated with elbasvir plus grazoprevir should have LFTs at Week 8 to screen for hepatotoxicity. 	
SVR = sustained virological response at least 12 weeks after treatment (cure). LFT = liver function test. INR = international normalised ratio. HCV = hepatitis C virus. PCR = polymerase chain reaction.	

Ongoing monitoring of people after successful hepatitis C treatment outcome (SVR)

SVR, no cirrhosis and normal LFT results (males, ALT < 30 U/L; females, ALT < 19 U/L): <ul style="list-style-type: none"> • People who are cured do not require clinical follow-up for hepatitis C
SVR and abnormal LFT results (males, ALT ≥ 30 U/L; females, ALT ≥ 19 U/L): <ul style="list-style-type: none"> • Patients with persistently abnormal LFT results require evaluation for other liver diseases and should be referred for gastroenterology review. Investigations to consider include: fasting glucose level, fasting lipid levels, iron studies, ANA, ASMA, anti-LKM antibodies, total IgG and IgM, AMA, coeliac serology, copper level, caeruloplasmin level and α-1-antitrypsin level
SVR and cirrhosis: <ul style="list-style-type: none"> • Patients with cirrhosis require long-term monitoring and should be enrolled in screening programs for: <ul style="list-style-type: none"> ▶ hepatocellular carcinoma ▶ oesophageal varices ▶ osteoporosis
SVR = sustained virological response at least 12 weeks after treatment (cure). LFT = liver function test. ALT = alanine aminotransferase. ANA = anti-nuclear antibodies. ASMA = anti-smooth muscle antibodies. LKM = liver–kidney microsome. AMA = anti-mitochondrial antibody.

People who do not respond to hepatitis C treatment
<ul style="list-style-type: none"> • Specialist referral recommended



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Recommended treatment protocols for treatment-naive people with hepatitis C virus (HCV) infection and compensated liver disease, including people with HCV–HIV coinfection

Regimen	HCV genotype	Treatment duration	
		No cirrhosis	Cirrhosis
Sofosbuvir 400 mg, orally, daily + Velpatasvir 100 mg, orally, daily	1, 2, 3, 4, 5, 6	12 weeks	12 weeks*
Glecaprevir 300 mg, orally, daily + Pibrentasvir 120 mg, orally, daily	1, 2, 3, 4, 5, 6	8 weeks	12 weeks
Elbasvir, 50 mg, orally, daily + Grazoprevir, 100 mg, orally, daily	1, 4	12 weeks	12 weeks
Sofosbuvir 400 mg, orally, daily + Ledipasvir 90 mg, orally, daily	1	8 or 12 weeks†	12 weeks

HIV = human immunodeficiency virus.

* Addition of ribavirin may be considered for patients with genotype 3 HCV and compensated cirrhosis. Ribavirin dosing is weight-based; recommended dose is 1000 mg for people weighing < 75 kg and 1200 mg for people weighing ≥ 75 kg.

† 8 weeks may be considered if HCV RNA level is < 6 × 10⁶ IU/mL in people with no cirrhosis who are treatment-naive.

Notes:

- Sofosbuvir is not recommended for patients with an estimated glomerular filtration rate < 30 mL/min/1.73 m².
- Dose reduction or dose interruption of direct-acting antiviral therapy is not recommended.
- Dose reduction of ribavirin for the management of symptomatic anaemia according to the product information is appropriate and will not reduce the likelihood of SVR.
- The recommended treatment regimens differ in the setting of decompensated liver disease (Child–Pugh score ≥ B7) (see *Australian recommendations for the management of hepatitis C virus infection: a consensus statement* (September 2018), <http://www.gesa.org.au>).

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