Testing algorithm for hepatitis C infection

Test for anti-HCV antibody or combined HCV antigen/antibody EIA screening assay*

Negative

Recent infection suspected?

No

Positive

Test for HCV antigen or HCV-RNA*

Negative

Consistent with current HCV infection. Confirm diagnosis on a second sample and test for HCV-RNA if not previously done. Test for genotype.

Yes

Positive

Perform a second anti-HCV assay (either a second EIA, or an immunoblot) to confirm the initial assay result

Positive/ concordant with first antibody test

Consistent with resolved HCV infection. Retest for HCV-RNA after 6-12 months to confirm resolved infection

Negative/ discordant with first antibody test

Further testing not required at this stage

Ongoing risk of infection?

Yes

No

Further testing should be performed to resolve the discordant result profile. The further testing should be performed at a laboratory with sufficient expertise and experience to provide a resolution

Re-test at least annually, or every 6 months if clinically indicated

Ongoing risk of infection?

Yes

No

No evidence of HCV infection

Ongoing risk of infection?

Yes

No

*In certain patient groups, initial testing should routinely incorporate HCV-antigen or HCV-RNA testing. Those are: immunocompromised individuals; individuals previously treated for HCV infection; and those at risk of recent infection in whom an antibody response might not yet have developed (HCV-RNA testing should be performed six weeks post-exposure)
Who should I screen for hepatitis C?

- Those who have ever injected drugs
- Those who have used unprescribed or illicit drugs by a route other than injecting, if there is a possibility of transmission of infection by the route of administration
- Prisoners or former prisoners
- Homeless people who have a history of engaging in risk behaviours associated with HCV transmission, or who have had a potential HCV risk exposure
- Migrants from a country with an intermediate or high prevalence of HCV (anti-HCV ≥ 2%*)
- People who are HIV positive
- Infants of HCV-RNA positive women
- Men who have sex with men
- People on renal dialysis or who have had a kidney transplant
- Recipients of blood or blood components in Ireland prior to October 1991 who have not yet been tested
- Recipients of anti-D immunoglobulin in Ireland between 1st May 1977 and the end of July 1979, and 1st March 1991 to 18th February 1994 who have not yet been tested
- Recipients of plasma derived clotting factor concentrates in Ireland prior to 1992 who have not yet been tested

- Those with a tattoo, particularly those who received tattoos a number of decades ago, in non-professional settings, prisons, countries with a high prevalence of HCV, or in circumstances where infection control was poor
- Household contacts of a person who is HCV positive in circumstances where household transmission is more likely to have occurred
- Recipients of solid organ transplants in Ireland prior to the introduction of routine screening
- Recipients of blood components and blood products overseas in any country where a quality assured blood donor screening programme may not have been in place
- People who have received medical or dental treatment in countries where HCV is common (anti-HCV prevalence ≥ 2%*) and infection control may be poor
- Sexual partners of known HCV cases:
  - If the case or contact is also HIV positive
  - If the HCV-infected case is an injecting drug user
- Sexual contacts of persons who injects drugs, but where HCV status is unknown or where there is evidence of resolved infection
- Commercial sex workers

What specimen type should I use?

- Serum and plasma are the preferred specimen types
- Dried blood spot testing can be considered for screening for HCV in special circumstances, such as mass screening initiatives e.g. in prisons.