Chronic Hepatitis C Treatment and Monitoring Algorithm: Direct Antiviral Agent (DAA) Combination

**If HCV RNA level is <500 IU/mL,**
order: HCVQN / Hepatitis C Virus RNA Detection and Quantification by Real-Time Reverse Transcription-PCR (RT-PCR), Serum in 1 to 2 months, if clinically indicated

**If HCV RNA level is ≥500 IU/mL,**
then HCVG / Hepatitis C Virus Genotype, Serum will be performed automatically

**Diagnosis of chronic hepatitis C virus infection,**
including baseline measurement of HCV viral load: HCVQN / Hepatitis C Virus (HCV) RNA Detection and Quantification by Real-Time Reverse Transcription-PCR (RT-PCR), Serum

**Order:** HCVG / Hepatitis C Virus Genotype, Serum

**Noninvasive elastography or liver biopsy to determine stage of liver fibrosis at baseline***

**Decision made to start DAA therapy***

Genotype 1a, 1b, or 3
- **Order:** HCVDR / Hepatitis C Virus Genotypic Antiviral Drug Resistance, Serum (requires minimum HCV RNA levels of ≥50,000 IU/mL)

Genotype 2, 4, 5 or 6
- **Continue monitoring patient for:**
  - Liver function
  - HCV viral load
  - Clinical symptoms

**Continue planned treatment**

**At 12 weeks after treatment ended, repeat HCVQN**
- **If considering retreatment with DAA therapy, order HCVDR when HCV RNA level is ≥50,000 IU/mL**

**SVR achieved at 12 weeks (SVR12)**
- **Optional**
  - Complete remaining duration of treatment (8 or 12 weeks total, per current guidelines)

**At 24 weeks after treatment ended, repeat HCVQN (to verify SVR)**
- **SVR achieved at 24 weeks (SVR24)**
- **Relapser**
- **HCV RNA detected at any level**

**At 6 weeks of treatment, repeat HCVQN**
- **Undetectable HCV RNA**
- **HCV RNA detected but not quantifiable**
- **HCV RNA of >10x the level at week 4 of treatment**

**SVR achieved at 24 weeks (SVR24)**
- **Relapser**
- **HCV RNA detected at any level**

**At end of treatment (8 or 12 weeks total) repeat HCVQN**
- **Undetectable HCV RNA**
- **HCV RNA detected at any level**

**Nonresponder***

**Decision not to start antiviral therapy**

**Undetectable HCV RNA**

**At end of treatment (8 or 12 weeks total) repeat HCVQN**
- **Undetectable HCV RNA**
- **SVR achieved at 12 weeks (SVR12)**
- **Optional**
  - Complete remaining duration of treatment (8 or 12 weeks total, per current guidelines)

**Nonresponder***

**HCV RNA detected (any level)**

**Undetectable HCV RNA**

**Relapser**

**HCV RNA detected at any level**

**Nonresponder***

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