Chronic Hepatitis C Treatment Monitoring Algorithm

1. Order:
   - #84434 Hepatitis C Virus Genotype After Amplification, Serum
   - #83142 Hepatitis C Virus RNA Detection and Quantitation by Real-Time PCR, Serum

2. Diagnosis of chronic hepatitis C virus infection

3. HCV genotype 2 or 3
   - Consider liver biopsy
   - Start pegylated interferon (PEG-IFN) + ribavirin treatment

4. After 4 weeks of treatment:
   - Repeat #83142 Hepatitis C Virus RNA Detection and Quantitation by Real-Time PCR, Serum for “rapid virologic response” (RVR)
   - HCV RNA detected or poorly detectable HCV RNA:
     - Start pegylated interferon (PEG-IFN) + ribavirin treatment
     - Excellent treatment tolerance:
       - Additional 44 weeks of treatment (48 weeks total)
   - No detectable HCV RNA:
     - Poor treatment tolerance:
       - Additional 12 weeks of treatment (16 weeks total)

5. When treatment ends:
   - Repeat #83142 Hepatitis C Virus RNA Detection and Quantitation by Real-Time PCR, Serum for “end-of-treatment (EOT) response”
   - No detectable HCV RNA:
     - Responder
   - HCV RNA detected:
     - “Nonresponder” STOP treatment

6. No detectable HCV RNA:
   - HCV RNA detected:
     - Sustained virologic response (SVR) achieved

7. HCV genotype 1, 4, 5, or 6
   - No detectable HCV RNA:
     - Poor treatment tolerance:
       - Additional 12 weeks of treatment (16 weeks total)
   - HCV RNA detected:
     - Excellent treatment tolerance:
       - Additional 20 weeks of treatment (24 weeks total)

8. After 4 weeks of treatment:
   - Repeat #83142 Hepatitis C Virus RNA Detection and Quantitation by Real-Time PCR, Serum for “rapid virologic response” (RVR)
   - Poor treatment tolerance:
     - Additional 8 weeks of treatment (12 weeks total)
   - Excellent treatment tolerance:
     - Additional 44 weeks of treatment (48 weeks total)

9. When treatment ends:
   - Repeat #83142 Hepatitis C Virus RNA Detection and Quantitation by Real-Time PCR, Serum for “end-of-treatment (EOT) response”
   - Detectable HCV RNA, but >100-fold (>2 log) decrease:
     - Additional 48 weeks of treatment (72 weeks total treatment)
   - No detectable HCV RNA:
     - “Nonresponder” STOP treatment

10. See insert

Legend
- Real-Time PCR Testing
- IFN: interferon or pegylated interferon

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