

## HALT-C Specimen Collection and Processing: Blood Specimens

### I. Blood Specimen Collection:

Blood will be collected at every HALT-C Trial study visit. The schedule of collection is detailed in the Blood Draw Protocol (Attachment A). The Blood Draw Protocol illustrates the Vacutainer tubes to be collected and the tests to be performed from each tube by study visit. This Blood draw protocol is generic and can be modified based on clinical center local lab requirements.

The blood tests that should be performed at local and central labs will also be detailed on the Visit Control Sheet that can be generated by the Data Management System (DMS) before each patient study visit.

The Blood Draw Protocol includes the blood to be collected for the Steatosis and Iron and HFE Gene Mutation Ancillary Studies, as all patients enrolled into HALT-C will participate in these studies.

There are several additional Ancillary Studies that require collection of blood that are not included in the Blood Draw protocol as not all centers will participate. These include the Immunology/Virology AS, Quantitative Liver Function Test AS, Serum Fibrosis Marker AS and Cognition AS. Please see the Ancillary study section (Section K) of this manual for the specimen collection requirements of these studies.

### II. Blood Specimen Processing:

#### A. Local lab testing:

Blood collected for local testing should be labeled and processed per each clinical center's standard procedure. Results of these assays should be recorded on Form #30: Local Lab, Form #35: Screen 2 Local Lab, and Form #34: AFP.

#### B. Central lab/Repository:

Blood collected for testing or storage at the BBI Repository or Virology Lab (marked as REPO on Blood Draw Protocol) must be processed and labeled prior to shipment. BBI will supply packets of labels to be used for specimens that will be shipped to the Repository. These label packets will be specific for Screen 1, Screen 2, Lead in Phase, Randomized Phase, Week 20 Responder, R00 visit, Immunology/Virology AS, QLFT AS and Serum Fibrosis Marker AS study visits. A new packet should be used for each patient visit. For Screening, Lead in Phase and the R00 visit, an additional label with the patient ID must be attached with the study visit written on the label.

The Visit Control Sheet will include information on the specimens to be collected for the Repository, including volumes and sequence numbers. See Attachment B for the table of sequence numbers to be used for specimens shipped to the Repository.

#### 1.) Fresh Blood:

Fresh blood will be collected at Screen 2, and when applicable at M21 and M45 (see the Form #73 QxQ for details). The Visit Control Sheet will list the fresh blood specimens to be aliquotted for each study visit. The Vacutainer tubes should be shipped at room temperature to the Repository via overnight delivery on the date collected. These specimens should be held at room temperature prior to shipping. See Section E.4 for shipping procedures.

The Vacutainer tubes must be labeled with the labels supplied by the Repository. The patient's name must not be written on the tube. For Screen 2, the Vacutainer tubes should be labeled with sequence number 003 and 004 (EBV) and 001 and 002 (PBMC). A second

label, supplied by the DCC, with the patient ID should be attached for the S00 visits. For M21 and M45, the tubes should be labeled with sequence number 001 and 002 (PBMC).

Collection of these tubes should be recorded on the appropriate Aliquot Form (Form #71 for Screen 2 and Form #73 for M21 and M45). This form must be data entered prior to shipping these specimens.

2.) Serum:

Blood will be collected in Red top or Tiger top Vacutainer tubes at every visit for serum. Serum must be separated within 2-4 hours of collection. The Visit Control Sheet will list the serum specimens to be aliquotted for each study visit.

Serum Processing Procedures:

- a.) Allow blood to clot at room temperature for approximately 30 minutes.
- b.) Centrifuge the Vacutainer tubes @ 2,500- 3,500 rpm for 10-15 minutes.
- c.) Aliquot 1ml of serum into aliquot tubes supplied by the Repository.
- d.) Aliquot tubes should be labeled with the appropriate labels supplied by the Repository.
- e.) A second label, supplied by the DCC, with the patient ID should be attached to each aliquot tube. The study visit should be written on these labels.
- f.) Tubes should be frozen immediately at  $-20^{\circ}\text{C}$  or  $-70^{\circ}\text{C}$  until ready to ship these specimens to the Repository.
- g.) Collection of these specimens must be recorded on the Aliquot Form for this visit: Form #70: Screen 1 Aliquot Form, Form #71: Screen 2 Aliquot Form, Form #72: Lead in Phase Aliquot Form, Form #73: Randomized Phase Aliquot Form, Form #74: Week 20 Responder Aliquot Form, Form #77: R00 Visit Aliquot Form. These forms must be data entered prior to shipping.
- h.) See Section E-4 for shipping procedures.

3.) Whole Blood for DNA:

Whole Blood for DNA will be collected in Yellow top Vacutainer tubes at the following visits; 20ml should be collected at M09, M15, M18, M27, W30, W42 and W60, 10ml should be collected at W36 and W72.

BBI will be providing large 10ml aliquot tubes to the clinical centers. The whole blood for DNA specimens should be transferred directly from the ACD yellow top tubes to these large 10ml aliquot tubes.

- Tubes should be frozen immediately at  $-20^{\circ}\text{C}$  or  $-70^{\circ}\text{F}$  until ready to ship these specimens to the Repository.
- These specimens should be included in the weekly frozen shipments to the Repository.

4.) Repeat HCV-RNA

Once a patient has a positive HCV-RNA at W36, W48, W60 or W72 the patient will have the option to come in for a repeat HCV-RNA. Use Form #76: Repeat HCV-RNA Aliquot to list the serum aliquots will be shipped to the Virology lab via BBI for RNA testing. Results will be reported on Form #37: Repeat HCV-RNA Results.

The patient might not come in for the repeat blood draw but wait until the next scheduled visit with HCV-RNA testing to have the confirmatory HCV-RNA test. In these cases the standard procedures will be used i.e.: Form #74: W20 Responder aliquot form and Form #31: HCV-RNA Form.

**ATTACHMENT A**

**HALT-C Trial Blood Draw Protocol  
Screening and Lead-in Phases**

|   | Scr1        | Scr2        | W00         | W02         | W04         | W08         | W12         | W16         | W20         | W24         |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Red Top</b>                                | <b>34ml</b> | <b>20ml</b> | <b>45ml</b> | <b>18ml</b> | <b>15ml</b> | <b>15ml</b> | <b>30ml</b> | <b>15ml</b> | <b>38ml</b> | <b>32ml</b> |
| <u>Remove serum for tests:</u>                |             |             |             |             |             |             |             |             |             |             |
| <sup>1</sup> Liver Function Test              | 5           | 5           | 5           | 5           | 5           | 5           | 5           | 5           | 5           | 5           |
| Uric Acid                                     | 5           |             | 5           |             |             |             |             |             | 5           |             |
| Alpha-fetoprotein (AFP)                       | 3           |             | 3           |             |             |             |             |             | 3           |             |
| Thyroid-stimulating hormone (TSH)             |             | 5           |             |             |             |             | 5           |             | 5           |             |
| Repository (REPO)                             | 10          | 10          | 17          | 10          | 10          | 10          | 10          | 10          | 10          | 17          |
| HCV-RNA (REPO)                                | 10          |             | 10          |             |             |             | 10          |             | 10          | 10          |
| Fasting Insulin-Steatosis (REPO)              |             |             | 5           |             |             |             |             |             |             |             |
| Genotyping (REPO)                             |             |             |             | 3           |             |             |             |             |             |             |
| Serum ferritin                                | 1           |             |             |             |             |             |             |             |             |             |
| <sup>4</sup> Serologic assays                 | X           |             |             |             |             |             |             |             |             |             |
| <b>Lavender Top</b>                           | <b>7ml</b>  |             | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  |
| <u>Remove whole blood for tests:</u>          |             |             |             |             |             |             |             |             |             |             |
| <sup>5</sup> Complete Blood Count (CBC)       | 3           |             | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           |
| HIV   | 4           |             |             |             |             |             |             |             |             |             |
| <sup>3</sup> Glycosylated hemoglobin (HgbA1c) | X           |             |             |             |             |             |             |             |             |             |
| <b>Blue Top</b>                               | <b>3ml</b>  |             | <b>3ml</b>  |             |             |             | <b>3ml</b>  |             | <b>3ml</b>  |             |
| <u>Remove whole blood for tests:</u>          |             |             |             |             |             |             |             |             |             |             |
| <sup>7</sup> Prothrombin Time (INR)           | 3           | 3           | 3           |             |             |             | 3           |             | 3           |             |
| <b>Green Top</b>                              | <b>5ml</b>  |             | <b>3ml</b>  |             |             |             |             |             | <b>3ml</b>  |             |
| <u>Remove whole blood for tests:</u>          |             |             |             |             |             |             |             |             |             |             |
| <sup>2</sup> Fasting Chemistry                | 3           |             | 3           |             |             |             |             |             | 3           |             |
| Serum Iron                                    | 1           |             |             |             |             |             |             |             |             |             |
| Total Iron Binding Capacity                   | 1           |             |             |             |             |             |             |             |             |             |
| <b>Yellow Top</b>                             |             | <b>40ml</b> |             |             |             |             |             |             |             |             |
| <u>For overnight shipment to Repository:</u>  |             |             |             |             |             |             |             |             |             |             |
| PBMC/Future Use (REPO)                        |             | 20          |             |             |             |             |             |             |             |             |
| <sup>8</sup> EBV Cell lines (REPO)            |             | 20          |             |             |             |             |             |             |             |             |

<sup>1</sup> Liver Function Tests to include: AST, ALT, Alkaline Phosphatase, Total bilirubin, Total protein or globulin, Albumin

<sup>2</sup> Fasting Chemistries to include: BUN, creatinine, glucose, triglycerides

<sup>3</sup> To be performed on known diabetics only

<sup>4</sup> Serologic assays to include HBsAg + ANA, Hepatitis B surface antigen, Ceruloplasmin, Alpha-1 antitrypsin if previous results of these assays are not available

<sup>5</sup> CBC to include platelets

<sup>7</sup> For Express patients only at S02

<sup>8</sup> Collected only if patient consented for genetic testing

**HALT-C Trial Blood Draw Protocol  
Randomized Phase**

|  | M09   | M12  | M15   | M18   | M21   | M24  | M27   | M30  | M33  | M36  | M39  | M42  | M45   | M48  | M54  |
|--|-------|------|-------|-------|-------|------|-------|------|------|------|------|------|-------|------|------|
| <b>Red Top</b><br><u>Remove serum for tests:</u><br><sup>1</sup> Liver Function Test<br>Uric Acid<br>Alpha-fetoprotein (AFP)<br>Thyroid-stimulating hormone (TSH)<br>Repository (REPO)<br>HCV-RNA (REPO)<br>Fasting Insulin-Steatosis (REPO)<br>Serum ferritin | 18ml  | 40ml | 18ml  | 33ml  | 18ml  | 46ml | 18ml  | 33ml | 18ml | 40ml | 18ml | 33ml | 18ml  | 41ml | 35ml |
|  | 5     | 5    | 5     | 5     | 5     | 5    | 5     | 5    | 5    | 5    | 5    | 5    | 5     | 5    | 5    |
|  | 3     | 3    | 3     | 3     | 3     | 3    | 3     | 3    | 3    | 3    | 3    | 3    | 3     | 3    | 3    |
|  |       | 5    | 5     | 5     | 5     | 5    | 5     | 5    | 5    | 5    | 5    | 5    | 5     | 5    | 5    |
|  | 10    | 17   | 10    | 10    | 10    | 17   | 10    | 10   | 10   | 17   | 10   | 10   | 10    | 17   | 17   |
|  |       | 10   |       | 10    |       | 10   |       | 10   |      | 10   |      | 10   |       | 10   | 10   |
|  |       |      |       |       |       | 5    |       |      |      |      |      |      |       | 1    |      |
|  |       |      |       |       |       | 1    |       |      |      |      |      |      |       |      |      |
| <b>Lavender Top</b><br><u>Remove whole blood for tests:</u><br><sup>5</sup> Complete Blood Count (CBC)<br>HIV  | 3ml   | 3ml  | 3ml   | 3ml   | 3ml   | 3ml  | 3ml   | 3ml  | 3ml  | 3ml  | 3ml  | 3ml  | 3ml   | 7ml  | 3ml  |
|  | 3     | 3    | 3     | 3     | 3     | 3    | 3     | 3    | 3    | 3    | 3    | 3    | 3     | 3    | 3    |
|  |       |      |       |       |       |      |       |      |      |      |      |      |       | 4    |      |
| <b>Blue Top</b><br><u>Remove whole blood for tests:</u><br>Prothrombin Time (INR)  | 3ml   | 3ml  | 3ml   | 3ml   | 3ml   | 3ml  | 3ml   | 3ml  | 3ml  | 3ml  | 3ml  | 3ml  | 3ml   | 3ml  | 3ml  |
|  | 3     | 3    | 3     | 3     | 3     | 3    | 3     | 3    | 3    | 3    | 3    | 3    | 3     | 3    | 3    |
| <b>Green Top</b><br><u>Remove whole blood for tests:</u><br><sup>2</sup> Fasting Chemistry<br>Fasting Iron<br>Total Iron Binding Capacity  |       | 3ml  |       | 3ml   |       | 5ml  |       | 3ml  |      | 3ml  |      | 3ml  |       | 5ml  |      |
|  |       | 3    |       | 3     |       | 3    |       | 3    |      | 3    |      | 3    |       | 3    |      |
|  |       |      |       |       |       | 1    |       | 1    |      | 1    |      | 1    |       | 1    |      |
|  |       |      |       |       |       | 1    |       | 1    |      | 1    |      | 1    |       | 1    |      |
| <b>Yellow Top</b><br><u>For overnight shipment to Repository:</u><br>PBMC/Future use (REPO)<br><br><u>Aliquoted and frozen at site and shipped in weekly frozen shipments:</u><br><sup>8</sup> Whole Blood for DNA (REPO)                                      | 20 ml |      | 20 ml | 20 ml | 30 ml |      | 20 ml |      |      |      |      |      | 30 ml |      |      |
|  |       |      |       |       | 30ml  |      |       |      |      |      |      |      | 30ml  |      |      |
|  | 20ml  |      | 20ml  | 20ml  |       |      | 20ml  |      |      |      |      |      |       |      |      |

<sup>1</sup> Liver Function Tests to include: AST, ALT, Alkaline Phosphatase, Total bilirubin, Total protein or globulin, Albumin

<sup>2</sup> Fasting Chemistries to include: BUN, creatinine, glucose, triglycerides

<sup>5</sup> CBC to include platelets

<sup>8</sup> Collected only if patient consented for genetic testing

### HALT-C Trial Blood Draw Protocol Responder Phase

|   | W30         | W36         | W42         | W48         | W60         | W72         |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Red Top</b><br><u>Remove serum for tests:</u>            | <b>15ml</b> | <b>33ml</b> | <b>15ml</b> | <b>38ml</b> | <b>28ml</b> | <b>33ml</b> |
| <sup>1</sup> Liver Function Test                            | 5           | 5           | 5           | 5           | 5           | 5           |
| Uric Acid   |             |             |             | 5           |             |             |
| Alpha-fetoprotein (AFP)                                     |             | 3           |             | 3           | 3           | 3           |
| Thyroid-stimulating hormone (TSH)                           |             | 5           |             | 5           |             | 5           |
| Repository (REPO)   | 10          | 10          | 10          | 10          | 10          | 10          |
| HCV-RNA (REPO)  |             | 10          |             | 10          | 10          | 10          |
| <sup>6</sup> Repeat HCV-RNA (REPO)                          |             | (10)        |             | (10)        | (10)        | (10)        |
| <b>Lavender Top</b><br><u>Remove whole blood for tests:</u> | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  |
| <sup>5</sup> Complete Blood Count (CBC)                     | 3           | 3           | 3           | 3           | 3           | 3           |
| <b>Blue Top</b><br><u>Remove whole blood for tests:</u>     |             | <b>3ml</b>  |             | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  |
| Prothrombin Time (PT)                                       |             | 3           |             | 3           | 3           | 3           |
| <b>Green Top</b><br><u>Remove whole blood for tests:</u>    |             |             |             | <b>3ml</b>  | <b>3ml</b>  | <b>3ml</b>  |
| <sup>2</sup> Fasting Chemistries                            |             |             |             | 3           | 3           | 3           |
| <b>Yellow Top</b><br><u>Remove whole blood for tests:</u>   | <b>20ml</b> | <b>10ml</b> | <b>20ml</b> |             | <b>20ml</b> | <b>10ml</b> |
| Whole Blood for DNA (REPO)                                  | 20ml        | 10ml        | 20ml        |             | 20ml        | 10ml        |

<sup>1</sup> Liver Function Tests to include: AST, ALT, Alkaline Phosphatase, Total bilirubin, Total protein or globulin, Albumin

<sup>2</sup> Fasting Chemistries to include: BUN, creatinine, glucose, triglycerides

<sup>5</sup> CBC to include platelets

<sup>6</sup> Repeat HCV-RNA taken at one of the 4 visits, after having the first positive HCV-RNA and distinguished as a Breakthrough/Relapse patient.

**HALT-C Trial Blood Draw Protocol  
R00 visit  
Breakthrough/Relapser & Express Patients**

|   | <b>R00</b>         |
|---|--------------------|
| <b>Total</b>  | <b>20 or 23 ml</b> |
| <b>Red Top</b><br><u>Remove serum for tests:</u><br><sup>1</sup> Liver Function Test<br>Uric Acid<br>HCV-RNA (REPO)<br>Alpha-fetoprotein (AFP) <sup>3</sup> | 5<br>5<br>10<br>3  |
| <b>Total</b>  | <b>3ml</b>         |
| <b>Lavender Top</b><br><u>Remove whole blood for tests:</u><br><sup>5</sup> Complete Blood Count (CBC)  | 3                  |
| <b>Total</b>  | <b>3ml</b>         |
| <b>Blue Top</b><br><u>Remove whole blood for tests:</u><br>Prothrombin Time (PT)  | 3                  |
| <b>Total</b>  | <b>3ml</b>         |
| <b>Green Top</b><br><u>Remove whole blood for tests:</u><br><sup>2</sup> Fasting Chemistries  | 3                  |

<sup>1</sup> Liver Function Tests to include: AST, ALT, Alkaline Phosphatase, Total bilirubin, Total protein or globulin, Albumin

<sup>2</sup> Fasting Chemistries to include: BUN, creatinine, glucose, triglycerides

<sup>3</sup> Express patients only

<sup>5</sup> CBC to include platelets

**ATTACHMENT B**

**Repository Specimen Table**

| Description of Material      |                      |          |       | Screen |      | Lead in Phase |      |      |      |      |      |      |      | R00 Visit      | Randomized Phase |      |      |      |      |                |      |      |      |      |      |      |      |      | W/20 Responder Phase |      |      |      |      |      |      |   |   |   |   |
|------------------------------|----------------------|----------|-------|--------|------|---------------|------|------|------|------|------|------|------|----------------|------------------|------|------|------|------|----------------|------|------|------|------|------|------|------|------|----------------------|------|------|------|------|------|------|---|---|---|---|
| Material                     | Purpose              | Vol (ml) | Seq # | S 00   | S 00 | W 00          | W 02 | W 04 | W 08 | W 12 | W 16 | W 20 | W 24 | R 00           | M 09             | M 12 | M 15 | M 18 | M 21 | M 24           | M 27 | M 30 | M 33 | M 36 | M 39 | M 42 | M 45 | M 48 | M 54                 | W 30 | W 36 | W 42 | W 48 | W 60 | W 72 |   |   |   |   |
| Vacutainers                  |                      |          |       |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | blood for PBMC       | 10       | 001   |        | X    |               |      |      |      |      |      |      |      |                |                  |      |      |      |      | <sup>2</sup> X |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | blood for PBMC       | 10       | 002   |        | X    |               |      |      |      |      |      |      |      |                |                  |      |      |      |      | <sup>2</sup> X |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | blood for PBMC       | 10       | 007   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      | <sup>2</sup> X |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | blood for EBV        | 10       | 003   |        | X    |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | blood for EBV        | 10       | 004   |        | X    |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | spare                | 10       | 005   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| ACD                          | spare                | 10       | 006   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Aliquot tubes for Main Trial |                      |          |       |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | AFP                  | 1.0      | 100   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | HCV-RNA-S00/W20      | 1.0      | 101   | X      |      |               |      |      |      |      |      | X    |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | HCV-RNA-S00/W20      | 1.0      | 102   | X      |      |               |      |      |      |      |      | X    |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | HCV-RNA-S00/W20      | 1.0      | 103   | X      |      |               |      |      |      |      |      | X    |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | HCV-RNA-S00/W20      | remain   | 104   | X      |      |               |      |      |      |      |      | X    |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | HCV-RNA-other visits | 1.0      | 105   |        |      | X             |      |      | X    |      |      | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X |   |
| Serum                        | HCV-RNA-other visits | 1.0      | 106   |        |      | X             |      |      | X    |      |      | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X |   |
| Serum                        | HCV-RNA-other visits | 1.0      | 107   |        |      | X             |      |      | X    |      |      | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X |   |
| Serum                        | HCV-RNA-other visits | remain   | 108   |        |      | X             |      |      | X    |      |      | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X |   |
| Serum                        | Repeat HCV-RNA       | 1.0      | 150   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | Repeat HCV-RNA       | 1.0      | 151   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | Repeat HCV-RNA       | 1.0      | 152   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | Repeat HCV-RNA       | 1.0      | 153   |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | serum for Genotype   | 1.0      | 109   |        |      |               | X    |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      |                |      |      |      |      |      |      |      |      |                      |      |      |      |      |      |      |   |   |   |   |
| Serum                        | Long-term storage    | 1.0      | 110   | X      |      | X             | X    | X    | X    | X    | X    | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X | X |
| Serum                        | Long-term storage    | 1.0      | 111   | X      |      | X             | X    | X    | X    | X    | X    | X    | X    | X              | X                | X    | X    | X    | X    | X              | X    | X    | X    | X    | X    | X    | X    | X    | X                    | X    | X    | X    | X    | X    | X    | X | X | X | X |

<sup>2</sup> Only if Baseline specimens were collected.

<sup>3</sup> Express patients only

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| Description of Material      |                    |          |       | Screen |      | Lead in Phase |      |      |      |      |      |      |      | R00 Visit | Randomized Phase |      |      |      |      |      |      |      |      |      |      |      |      |      | W20 Responder Phase |      |      |      |      |      |      |   |
|------------------------------|--------------------|----------|-------|--------|------|---------------|------|------|------|------|------|------|------|-----------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|---|
| Material                     | Purpose            | Vol (ml) | Seq # | S 00   | S 00 | W 00          | W 02 | W 04 | W 08 | W 12 | W 16 | W 20 | W 24 | R 00      | M 09             | M 12 | M 15 | M 18 | M 21 | M 24 | M 27 | M 30 | M 33 | M 36 | M 39 | M 42 | M 45 | M 48 | M 54                | W 30 | W 36 | W 42 | W 48 | W 60 | W 72 |   |
| Aliquot tubes for Main Trial |                    |          |       |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Long-term storage  | 1.0      | 112   |        |      | X             |      |      |      |      |      |      | X    | X         |                  | X    |      |      |      | X    |      |      |      | X    |      |      |      | X    | X                   |      |      |      |      |      |      |   |
| Serum                        | Long-term storage  | 1.0      | 113   |        |      | X             |      |      |      |      |      |      | X    | X         |                  | X    |      |      |      | X    |      |      |      | X    |      |      |      | X    | X                   |      |      |      |      |      |      |   |
| Serum                        | Long-term storage  | 1.0      | 114   |        |      | X             |      |      |      |      |      |      | X    | X         |                  | X    |      |      |      | X    |      |      |      | X    |      |      |      | X    | X                   |      |      |      |      |      |      |   |
| Serum                        | Long-term storage* | 1.0      | 115   | X      |      | X             | X    | X    | X    | X    | X    | X    | X    | X         | X                | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X                   | X    | X    | X    | X    | X    | X    | X |
| Serum                        | Long-term storage* | 1.0      | 116   | X      |      | X             | X    | X    | X    | X    | X    | X    | X    | X         | X                | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X    | X                   | X    | X    | X    | X    | X    | X    | X |
| Serum                        | Long-term storage  | 1.0      | 117   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Long-term storage  | 1.0      | 118   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Long-term storage* | 1.0      | 119   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Long-term storage* | 1.0      | 120   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Steatosis          | 1.0      | 121   |        |      | X             |      |      |      |      |      |      |      |           |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Steatosis          | 1.0      | 122   |        |      | X             |      |      |      |      |      |      |      |           |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Spare              | 1.0      | 123   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Spare              | 1.0      | 124   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Spare              | 1.0      | 125   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Spare              | 1.0      | 126   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Spare              | 1.0      | 127   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Serum                        | Repeat AFP         | 1.0      | 129   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |   |
| Liver                        | Long-term storage  | 2.5cm    | 130   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      | X    |      |      |      |      |      |      |      | X    |                     |      |      |      |      |      |      |   |
| Liver OCT                    | Long-term storage  | 0.4cm    | 132   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      | X    |      |      |      |      |      |      |      | X    |                     |      |      |      |      |      |      |   |

\*stored locally until notified to ship to Repository



HALT-C Trial Manual of Operations

| Description of Material                          |                      |          |       | Screen |      | Lead in Phase |      |      |      |      |      |      |      | R00 Visit | Randomized Phase |      |      |      |      |      |      |      |      |      |      |      | W20 Responder Phase |      |      |      |      |      |      |      |      |   |  |  |  |
|--|----------------------|----------|-------|--------|------|---------------|------|------|------|------|------|------|------|-----------|------------------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|------|------|---|--|--|--|
| Material   | Purpose              | Vol (ml) | Seq # | S 00   | S 00 | W 00          | W 02 | W 04 | W 08 | W 12 | W 16 | W 20 | W 24 | R 00      | M 09             | M 12 | M 15 | M 18 | M 21 | M 24 | M 27 | M 30 | M 33 | M 36 | M 39 | M 42 | M 45                | M 48 | M 54 | W 30 | W 36 | W 42 | W 48 | W 60 | W 72 |   |  |  |  |
| Aliquot tubes for Randomized and Responder Phase |                      |          |       |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |   |  |  |  |
| Whole Blood                                      | DNA                  | 10       | 140   |        |      |               |      |      |      |      |      |      |      |           | X                |      | X    | X    |      |      | X    |      |      |      |      |      |                     |      |      |      | X    | X    | X    |      | X    | X |  |  |  |
| Whole Blood                                      | DNA                  | 10       | 141   |        |      |               |      |      |      |      |      |      |      |           | X                |      | X    | X    |      |      | X    |      |      |      |      |      |                     |      |      | X    |      | X    |      | X    |      |   |  |  |  |
| Whole Blood                                      | spare                | 10       | 143   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |   |  |  |  |
| Whole Blood                                      | spare                | 10       | 144   |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |   |  |  |  |
| Aliquot tubes for Ancillary Studies              |                      |          |       |        |      |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |   |  |  |  |
| Serum  | Immunology-NA        | 1.0      | 301   |        |      | X             |      |      |      |      |      |      |      |           | <sup>1,2</sup> X | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      |      |      |   |  |  |  |
| Serum  | Virology-QUASI       | 1.0      | 302   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1,2</sup> X | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    | X    |      |      |      |      |      |      |   |  |  |  |
| Serum  | Virology-QUASI       | 1.0      | 303   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1,2</sup> X | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    | X    |      |      |      |      |      |      |   |  |  |  |
| Serum  | Fibrosis             | 0.5      | 305   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 306   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 307   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 308   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 309   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 310   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 311   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 312   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 313   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 0.5      | 314   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 1.0      | 315   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 1.0      | 316   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 1.0      | 317   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | 1.0      | 318   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Serum  | Fibrosis             | remain   | 319   |        |      | X             |      |      |      |      |      | X    |      |           | <sup>1</sup> X   | X    |      |      |      | X    |      |      |      | X    |      |      |                     | X    |      |      |      |      |      | X    |      | X |  |  |  |
| Liver-OCT  | Virology-Replication | 2.5cm    | 320   |        | X    |               |      |      |      |      |      |      |      |           |                  |      |      |      |      |      | X    |      |      |      |      |      |                     | X    |      |      |      |      |      |      |      |   |  |  |  |

<sup>1</sup> Breakthrough/Relapse patients only.  
<sup>2</sup> Only if Baseline specimens were collected.

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| Description of Material                       |                     |          |       | Screen |      | Lead in Phase |      |      |      |      |      |      |      | R00 Visit      | Randomized Phase |      |      |      |      |      |      |      |      |      |      |      | W20 Responder Phase |      |      |      |      |      |      |      |      |  |  |  |  |
|---|---------------------|----------|-------|--------|------|---------------|------|------|------|------|------|------|------|----------------|------------------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|------|------|--|--|--|--|
| Material                                      | Purpose             | Vol (ml) | Seq # | S 00   | S 00 | W 00          | W 02 | W 04 | W 08 | W 12 | W 16 | W 20 | W 24 | R 00           | M 09             | M 12 | M 15 | M 18 | M 21 | M 24 | M 27 | M 30 | M 33 | M 36 | M 39 | M 42 | M 45                | M 48 | M 54 | W 30 | W 36 | W 42 | W 48 | W 60 | W 72 |  |  |  |  |
| Aliquot tubes for Ancillary Studies (AS)-QLFT |                     |          |       |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-Lidocaine/T=0  | 2.0      | 330   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-Lidocaine/T=15 | 2.0      | 331   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
|   |                     |          | 332   |        |      |               |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=0    | 2.0      | 333   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=5    | 2.0      | 334   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=10   | 2.0      | 335   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=15   | 2.0      | 336   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=20   | 2.0      | 337   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=30   | 2.0      | 338   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=45   | 2.0      | 339   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=60   | 2.0      | 340   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=75   | 2.0      | 341   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=90   | 2.0      | 342   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=105  | 2.0      | 343   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=120  | 2.0      | 344   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=150  | 2.0      | 345   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Serum   | QLFT-cholate/T=180  | 2.0      | 346   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Plasma  | QLFT-galactose/T=0  | 2.0      | 347   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Plasma  | QLFT-galactose/T=20 | 2.0      | 348   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Plasma  | QLFT-galactose/T=40 | 2.0      | 349   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Plasma  | QLFT-galactose/T=60 | 2.0      | 350   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Plasma  | QLFT-galactose/T=80 | 2.0      | 351   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=0     | 2.0      | 352   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=6     | 2.0      | 353   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=12    | 2.0      | 354   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=24    | 2.0      | 355   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=36    | 2.0      | 356   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=48    | 2.0      | 357   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |
| Saliva  | QLFT-saliva/T=60    | 2.0      | 358   |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |                     |      |      |      |      |      |      |      |      |  |  |  |  |

<sup>3</sup> Express patients only.

HALT-C Trial Manual of Operations

| Description of Material                       |               |          |       | Screen |      | Lead in Phase |      |      |      |      |      |      |      | R00 Visit      | Randomized Phase |      |      |      |      |      |      |      |      |      |      |      |      |      | W20 Responder Phase |      |      |      |      |      |      |
|---|---------------|----------|-------|--------|------|---------------|------|------|------|------|------|------|------|----------------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|
| Material                                      | Purpose       | Vol (ml) | Seq # | S 00   | S 00 | W 00          | W 02 | W 04 | W 08 | W 12 | W 16 | W 20 | W 24 | R 00           | M 09             | M 12 | M 15 | M 18 | M 21 | M 24 | M 27 | M 30 | M 33 | M 36 | M 39 | M 42 | M 45 | M 48 | M 54                | W 30 | W 36 | W 42 | W 48 | W 60 | W 72 |
| Aliquot tubes for Ancillary Studies (AS)-QLFT |               |          |       |        |      |               |      |      |      |      |      |      |      |                |                  |      |      |      |      |      |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/00-1 | 10.0     | 30    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/00-2 | 10.0     | 31    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=10 | 10.0     | 32    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=20 | 10.0     | 33    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=30 | 10.0     | 34    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=40 | 10.0     | 35    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=50 | 10.0     | 36    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |
| Breath  | QLFT-MBT/T=60 | 10.0     | 37    |        |      | X             |      |      |      |      |      |      |      | <sup>3</sup> X |                  |      |      |      |      | X    |      |      |      |      |      |      |      |      |                     |      |      |      |      |      |      |

<sup>3</sup> Express patients only.

**HALT-C Trial Local Lab Blood Collection**

| Local Lab Blood Collection<br>Visit Number → | Screening Phase (S00) |         | Lead In Phase |     |     |     |     |     |     |     |
|--|-----------------------|---------|---------------|-----|-----|-----|-----|-----|-----|-----|
|  | Screen1               | Screen2 | W00           | W02 | W04 | W08 | W12 | W16 | W20 | W24 |
| <b>CBC</b>                                   |                       |         |               |     |     |     |     |     |     |     |
| WBC  | X                     |         | X             | X   | X   | X   | X   | X   | X   | X   |
| Neutrophils                                  | X                     |         | X             | X   | X   | X   | X   | X   | X   | X   |
| Hematocrit                                   | X                     |         | X             | X   | X   | X   | X   | X   | X   | X   |
| Hemoglobin                                   | X                     |         | X             | X   | X   | X   | X   | X   | X   | X   |
| Platelets                                    | X                     |         | X             | X   | X   | X   | X   | X   | X   | X   |
| <b>Fasting Serum Chemistries</b>             |                       |         |               |     |     |     |     |     |     |     |
| BUN  | X                     |         | X             |     |     |     |     |     | X   |     |
| Creatinine                                   | X                     |         | X             |     |     |     |     |     | X   |     |
| Glucose                                      | X                     |         | X             |     |     |     |     |     | X   |     |
| Triglycerides                                | X                     |         | X             |     |     |     |     |     | X   |     |
| <b>Serum Uric Acid</b>                       |                       |         |               |     |     |     |     |     |     |     |
| Uric Acid                                    | X                     |         | X             |     |     |     |     |     | X   |     |
| <b>Liver Chemistries</b>                     |                       |         |               |     |     |     |     |     |     |     |
| AST  | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| ALT  | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| Alkaline phosphatase                         | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| Total bilirubin                              | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| Albumin                                      | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| Globulin or Total Protein                    | X                     | & X     | X             |     | X   | X   | X   | X   | X   | X   |
| <b>Protrombin Time</b>                       |                       |         |               |     |     |     |     |     |     |     |
| Prothrombin Time (INR)                       | X                     | X       | X             |     |     |     | X   |     | X   |     |
| <b>TSH</b>                                   |                       |         |               |     |     |     |     |     |     |     |
| TSH  |                       | X       |               |     |     |     | X   |     | X   |     |
| <b>AFP</b>                                   |                       |         |               |     |     |     |     |     |     |     |
| AFP  | X                     |         | X             |     |     |     |     |     | X   |     |
| <b>Urinalysis</b>                            |                       |         |               |     |     |     |     |     |     |     |
| Urinalysis (heme & protein)                  |                       | X       |               |     |     |     |     |     |     |     |

| Study-Wide Trial Forms           | Randomized Phase           |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------------------------------|----------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                  | Local Lab Blood Collection |      | R00 | M09 | M12 | M15 | M18 | M21 | M24 | M27 | M30 | M33 | M36 | M39 | M42 | M45 | M48 | M54 |
| Visit Number →                   | Exp.                       | Bt/R |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <b>CBC</b>                       |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| WBC                              | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Neutrophils                      | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Hematocrit                       | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Hemoglobin                       | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Platelets                        | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>Fasting Serum Chemistries</b> |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| BUN                              | X                          | X    |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |
| Creatinine                       | X                          | X    |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |
| Glucose                          | X                          | X    |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |
| Triglycerides                    | X                          | X    |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |
| <b>Serum Uric Acid</b>           |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Uric Acid                        | X                          | X    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| <b>Liver Chemistries</b>         |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| AST                              | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| ALT                              | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Alkaline phosphatase             | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Total bilirubin                  | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Albumin                          | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Globulin or Total Protein        | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>Protrombin Time</b>           |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Prothrombin Time (INR)           | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>TSH</b>                       |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| TSH                              |                            |      |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |     | X   |
| <b>AFP</b>                       |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| AFP                              | X                          | X    | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| <b>Urinalysis</b>                |                            |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Urinalysis (heme & protein)      |                            |      |     | X   |     |     |     | X   |     |     |     | X   |     |     |     |     | X   |     |

| Local Lab Blood Collection       | Responder Phase |     |     |     |     |     |
|----------------------------------|-----------------|-----|-----|-----|-----|-----|
| Visit Number →                   | W30             | W36 | W42 | W48 | W60 | W72 |
| <b>CBC</b>                       |                 |     |     |     |     |     |
| WBC                              | X               | X   | X   | X   | X   | X   |
| Neutrophils                      | X               | X   | X   | X   | X   | X   |
| Hematocrit                       | X               | X   | X   | X   | X   | X   |
| Hemoglobin                       | X               | X   | X   | X   | X   | X   |
| Platelets                        | X               | X   | X   | X   | X   | X   |
| <b>Fasting Serum Chemistries</b> |                 |     |     |     |     |     |
| BUN                              |                 |     |     | X   | X   | X   |
| Creatinine                       |                 |     |     | X   | X   | X   |
| Glucose                          |                 |     |     | X   | X   | X   |
| Triglycerides                    |                 |     |     | X   | X   | X   |
| <b>Serum Uric Acid</b>           |                 |     |     |     |     |     |
| Uric Acid                        |                 |     |     | X   |     |     |
| <b>Liver Chemistries</b>         |                 |     |     |     |     |     |
| AST                              | X               | X   | X   | X   | X   | X   |
| ALT                              | X               | X   | X   | X   | X   | X   |
| Alkaline phosphatase             | X               | X   | X   | X   | X   | X   |
| Total bilirubin                  | X               | X   | X   | X   | X   | X   |
| Albumin                          | X               | X   | X   | X   | X   | X   |
| Globulin or Total Protein        | X               | X   | X   | X   | X   | X   |
| <b>Protrombin Time</b>           |                 |     |     |     |     |     |
| Prothrombin Time (INR)           |                 | X   |     | X   | X   | X   |
| <b>TSH</b>                       |                 |     |     |     |     |     |
| TSH                              |                 | X   |     | X   |     | X   |
| <b>AFP</b>                       |                 |     |     |     |     |     |
| AFP                              |                 | X   |     | X   | X   | X   |
| <b>Urinalysis</b>                |                 |     |     |     |     |     |
| Urinalysis (heme & protein)      |                 |     |     | X   |     |     |