

A1. Site/Study ID #: _____ / G _____ A2. Visit Date: _____ / _____ / _____
Month Day Year A3. Staff Initials: _____
 To DCC

A4. BARC P003 Site / Study ID#: _____ - _____ ELG1A04SID V2(1)/ ELG1A04PID V2(4)

SECTION B: GENERAL INCLUSION/EXCLUSION CRITERIA

B1. Date of Birth: ELG1B01MM V2(2)/ ELG1B01DD V2(2)/ ELG1B01YY V2(2)/ ELG1B01DT
Month Day Year

B2. Disease: ELG1B02 V2(3)

1. Bile Acid Synthesis and Metabolism Disorders²
2. Progressive Familial Intrahepatic Cholestasis (PFIC)
3. a1-Antitrypsin (a 1-AT) Deficiency
4. Alagille Syndrome (AGS)

GENERAL INCLUSION CRITERIA:

- B3. Less than 25 years at enrollment 1. Yes 2. No ELG1B03 V2(3)
- B11. Currently enrolled in BARC PROBE Study (P003) 1. Yes 2. No ELG1B11 V2(3)

GENERAL EXCLUSION CRITERIA:

- B5. Inability to comply with follow-up 1. Yes 2. No ELG1B05 V2(3)
- B6. Failure to sign consent or HIPAA medical record release form 1. Yes 2. No ELG1B06 V2(3)

B7. Date consent form signed: ELG1B07MM V2(2)/ ELG1B07DD V2(2)/ ELG1B07YY V2(4)/ ELG1B07DT
Month Day Year

SECTION C: BILE ACID SYNTHESIS AND METABOLISM DISORDERS

INCLUSION CRITERIA:

- C1. Diagnosis of bile acid synthesis confirmed by:
- a. Biochemical evidence of defect by FAB-MS **OR** GC-MS of urine or serum **-OR-** 1. Yes 2. No **ELG1C01**
 - b. Two identified pathological genetic mutations in one enzyme of bile acid synthetic pathway 1. Yes 2. No **ELG1C02**

EXCLUSION CRITERIA:

- C3. Isolated enzymatic or structural peroxisomal defect producing a recognized syndrome disorder 1. Yes 2. No **ELG1C03 V2(3)**

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SECTION D: PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS / BENIGN RECURRENT INTRAHEPATIC CHOLESTASIS

INCLUSION CRITERIA:

D1. Diagnosis of PFIC by (must meet requirements of Section A or Sections B and C):

a. Documented two mutant alleles in:

- i. *ATP8B1* (F1C1) gene **-OR- ELG1D1AI V2(3)** 1. Yes 2. No
- ii. *ABCB11* (BSEP) gene **-OR- ELG1D1AII V2(3)** 1. Yes 2. No
- iii. *ABCB4* (MDR3) gene **ELG1D1AIII V2(3)** 1. Yes 2. No

-OR-

b. Evidence of chronic liver disease by:

- i. Clinical or biochemical hepatic abnormalities of >6 months **-OR- ELG1D1BI V2(3)** 1. Yes 2. No
- ii. Clinical or histologic stigmata of chronic liver disease **-OR- ELG1D1BI I V2(3)** 1. Yes 2. No
- iii. Sibling of known individual affected by PFIC **ELG1D1BIII V2(3)** 1. Yes 2. No
- iv. Recurrent and episodic cholestatic disease occurring on more than two occasions with episodes separated by at least 3 months and **ELG1D1BIV V2(3)** within other known cause. 1. Yes 2. No

-AND-

c. Evidence of cholestasis by:

- i. Fasting serum bile acid > 3x ULN for age **-OR- ELG1D1CI V2(3)** 1. Yes 2. No
- ii. Direct bilirubin > 2mg/dL **-OR- ELG1D1CII V2(3)** 1. Yes 2. No
- iii. Fat soluble vitamin deficiency **-OR- ELG1D1CIII V2(3)** 1. Yes 2. No
- iv. GGTP > 3x ULN for age **-OR- ELG1D1CIV V2(3)** 1. Yes 2. No
- v. Intractable pruritus explainable only by liver disease **ELG1D1CV V2(3)** 1. Yes 2. No

EXCLUSION CRITERIA:

D2. Presence of other known causes of chronic cholestasis **ELG1D02 V2(3)** 1. Yes 2. No

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SECTION E: a1-ANTITRYPSIN (a 1-AT) DEFICIENCY

INCLUSION CRITERIA:

E1. Presence of liver disease (check all that apply – must have at least one)

- a. Neonatal cholestasis **ELG1E1A V2(3)** 1. Yes 2. No
- b. AST or ALT > 1.25 x ULN **ELG1E1B V2(3)** 1. Yes 2. No
- c. Impaired hepatic synthetic function **ELG1E1C V2(3)** 1. Yes 2. No
- d. Hepatomegaly **ELG1E1D V2(3)** 1. Yes 2. No
- e. Portal hypertension or cirrhosis **ELG1E1E V2(3)** 1. Yes 2. No
- f. Abnormal liver biopsy histology **ELG1E1F V2(3)** 1. Yes 2. No

-AND-

E2. Diagnosis of α 1-AT deficiency by:

- a. Low serum α 1-AT level (**ELG1E2AMG V2(10)**__mg/dL) **-AND- ELG1E2A V2(3)** 1. Yes 2. No
- b. At least one of the following:
 - i. PiZZ phenotype **-OR- ELG1E2BI V2(3)** 1. Yes 2. No
 - ii. PiSZ phenotype **-OR- ELG1E2BII V2(23)** 1. Yes 2. No
 - iii. PiZZ genotype **-OR- ELG1E2BIII V2(3)** 1. Yes 2. No
 - iv. PiSZ genotype **ELG1E2BIV V2(3)** 1. Yes 2. No

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SECTION F: AGS

INCLUSION CRITERIA:

F1. Presence of liver disease **-AND-** 1. Yes 2. No **ELG1F01 V2(3)**

F2. Confirmed diagnosis of AGS 1. Yes 2. No **ELG1F02 V2(23)**

a. Diagnostic Characteristics (specify one of the following scenarios): **ELG1F2A V2(3)**

	Family History Of AGS^a	Paucity of interlobular bile ducts	Jagged1^d or Notch2 mutations	Number of clinical criteria
1. <input type="checkbox"/>	Present or absent	Present	Identified ^b	Any or no features
2. <input type="checkbox"/>	None (proband)	Present	Not identified ^c	3 or >
3. <input type="checkbox"/>	None (proband)	Absent or unknown	Not identified	4 or >
4. <input type="checkbox"/>	None (proband)	Absent or unknown	Identified	1 or >
5. <input type="checkbox"/>	Present	Present	Not identified	1 or >
6. <input type="checkbox"/>	Present	Absent or unknown	Not identified	2 or >
7. <input type="checkbox"/>	Present	Absent or unknown	Identified	Any or no features

^aFamily history = AGS present in a first degree relative

^bIdentified = Jagged1 mutation may have been identified in clinical or research laboratory

^cNot identified = Not identified on mutation screening, or not screened for

^dJagged1 mutation = mutation, whole gene deletion or deletion of chromosome 20p which includes Jagged1 locus

Major clinical criteria include cholestasis, consistent cardiac, renal, ocular disease, butterfly vertebrae, or characteristic "Alagille" facies of childhood or adulthood. The specific clinical criteria are:

Cardiac: Heart murmur (with further studies to clarify), Pulmonary stenosis (valvular, pulmonary artery stenosis), pulmonary atresia, tetralogy of Fallot, ASD or VSD.

Ocular: posterior embryotoxon or other anterior chamber defect, retinal pigmentary anomalies

Vertebral: butterfly vertebrae

Characteristic facial features: broad forehead, deep set eyes, pointed chin in child (preteen) or prognathism in adults, triangular face.

Renal: functional defects (such as tubular acidosis), renal insufficiency, renal vascular hypertension, vesicoureteral reflux, structural defects (agenesis, small kidneys, renal cysts, renal artery stenosis, dysplastic kidneys)

Cholestasis: See question F3 for evidence of cholestasis.

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F3. Evidence of cholestasis: (check all that apply)

- a. Fasting total serum bile acid > 3x ULN for age **ELG1F03A V2(2)**
- b. Direct bilirubin > 2 mg/dl **ELG1F03B V2(2)**
- c. Fat soluble vitamin deficiency otherwise unexplainable **ELG1F03C V2(2)**
- d. yGTP > 3x ULN for age **ELG1F03D V2(23)**
- e. Intractable pruritus explainable only by liver disease **ELG1F03E V2(2)**

SECTION G: SUMMARY

G1. Is the subject eligible? 1. Yes 2. No 3. Eligible by exemption **ELG1G1**

ELG1INSIG V2(3)

ELG1SIGMM V2(2)/ ELG1SIGDD V2(2)/ ELG1SIGYY V2(4)/ ELG1SIGDT

Investigators Signature

Date