**APPLICATION FOR MULTIDISCIPLINARY TEAM MEETING / VOLANESORSEN (WAYLIVRA)**

**(Familial Chylomicronaemia or Hyperchylomicronaemia Syndromes)**

**Date of application for Team Meeting: \_\_\_ \_\_\_ / \_\_\_ \_\_\_ / \_\_\_ \_\_\_ \_\_\_ \_\_\_** (day/month/year)

**Patient’s referring Physician: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_@\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / Telephone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**ADDRESS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Expert Physician: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_@\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / Telephone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date of Meeting: \_\_\_ \_\_\_ / \_\_\_ \_\_\_ / \_\_\_ \_\_\_ \_\_\_ \_\_\_** (day/month/year)

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| **PATIENT** |
| Patient’s initials \_\_\_ \_\_\_ \_\_\_ - \_\_\_ \_\_\_ (First 3 letters of Surname + first 2 letters of Given name)Date of birth \_ \_ /\_ \_ \_ \_ (month / year) Age: \_\_\_\_\_\_\_\_\_ yrsSex: □ Male □ Female Weight: ….………. (kg) Height: ………… (m) BMI: P/T2 = \_\_\_ \_\_\_, \_\_\_ kg/m2**Female** patients:  * Desires **pregnancy**? □ Yes □ No
* Effective **Contraception** (excluding oestrogen-progesterone) ? □ Yes □ No □ Informed refusal
 |
| **Date of diagnosis** of Familial Hyperchylomicronaemia Syndrome: **\_ \_ / \_ \_ /\_ \_ \_ \_**Diagnosis based only on **phenotype**? □ Yes □ No Complete and fill in **FCS** **score** *(cf. in appendix 1)*: **\_\_ \_\_** **Genetic test completed**? □ Yes □ No □ Pending **If Yes, Date**: **\_ \_ / \_ \_ /\_ \_ \_ \_** **Place**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *Specify for each gene: deleterious causal variant / SI variant /variant frequently assoc.HTG/variant Non- functional variant*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Deleterious causal variant | Rare SI variant | Var. freq. assoc. HTG | Non-functional variant  |
| LPL |  |  |  |  |
| Apo AV |  |  |  |  |
| GPIHBP1 |  |  |  |  |
| LMF1 |  |  |  |  |
| Apo C2  |  |  |  |  |
| Apo C3 |  |  |  |  |
| Apo E |  |  |  |  |

**Results**:  □ WT *(Wild Type)* □ FCS A □ FCS B □ MCS C   □ MCS D *(cf appendix 2)* **Interpretation validated by referring molecular biology centre** (Lille, Lyon, Paris)□ Yes □ No**Functional Genotype retained:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Eg: ApoC2 K77Q het, LPL, P116R het, pol ApoA5\*2):**Activity of LPL tested** (post-heparin LPL plasma activity) ? □ Yes □ No If Yes, analysis carried out where?: ………………………………………………………………………………..If Yes, **result** ……………………… normal:………………………………………………………. |

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| **HISTORY OF DISEASE** |
| **Triglyceridaemia current (fasting):** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mmol/L or \_\_\_\_\_\_\_\_\_\_\_\_ g/L **Triglyceridaemia maximum recorded:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mmol/L or \_\_\_\_\_\_\_\_\_\_\_\_ g/L **Triglyceridaemia minimum recorded:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mmol/L or \_\_\_\_\_\_\_\_\_\_\_\_ g/L ----------------------------------------------------------------------------------------------------------------------------------------------**History of acute pancreatitis attack(s)** reported **during patient’s lifetime**? □ Yes □ No If Yes, Total number of acute of **pancreatitis:** \_\_\_\_\_\_\_\_\_If Yes, Total number of **hospital admissions**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_If Yes**, severe or complicated pancreatitis** (pancreatic necrosis confirmed by scans, necrotic infection) □ Yes □ No   **Episode(s) of acute pancreatitis in the past year**? □ Yes □ No**If Yes,** **number of attacks of acute pancreatitis**: \_\_\_\_\_\_\_\_\_

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| --- | --- | --- |
| **Date** | **Hospital admission** | **Length of stay** |
|  |  | **Stay** (days) in Intensive Care | **Total Stay** (days)  |
| **\_ \_ / \_ \_ /\_ \_ \_ \_** | □ No □ Yes  | ……day(s) | ……day(s) |
| **\_ \_ / \_ \_ /\_ \_ \_ \_** | □ No □ Yes  | ……day(s) | ……day(s) |
| **\_ \_ / \_ \_ /\_ \_ \_ \_** | □ No □ Yes  | ……day(s) | ……day(s) |
| **\_ \_ / \_ \_ /\_ \_ \_ \_** | □ No □ Yes  | ……day(s) | ……day(s) |
| **\_ \_ / \_ \_ /\_ \_ \_ \_** | □ No □ Yes  | ……day(s) | ……day(s) |

**Chronic pancreatitis** (calcifications or duct abnormalities)?: □ Yes □ No**Existing diabetes?** □ Yes □ No; If Yes:* + type 1: □ Yes □ No
	+ type 2: □ Yes □ No
	+ type 3: □ Yes □ No
	+ Unknown □ Yes □ No

**Malnutrition**: □ Yes □ NoOther significant medical history; Comorbidities: …………………………………………………………………………………………………………………………… ……………………………………………………………………………..……………………………………………..………………………………..……………………………………………………………………………..…………… **Ischaemic history:**  *(n = total number of events)*Coronary heart disease Date 1st event \_\_/\_\_ □ Yes *n \_\_* □ No  SCA ST- or ST+ or IDM Date 1st event \_\_/\_\_ □ Yes *n \_\_* □ No Cerebral Vascular Accident Date 1st event \_\_/\_\_ □ Yes *n \_\_* □ No  Revascularised occlusive disease of lower peripheral arteries □ Yes *n \_\_* □ No  Date 1st event \_\_/\_\_ History of phlebitis Date 1st event \_\_/\_\_ □ Yes *n \_\_* □ No History of pulmonary embolism Date 1st event \_\_/\_\_ □ Yes *n \_\_* □ No  |
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| **CONTRAINDICATIONS TO TREATMENT WITH VOLANESORSEN** | YES | NO |
| Hypersensitivity to active substance in volanesorsen | □ | □ |
| Pre-existing thrombocytopenia **< 140 000/mm3** | □ | □ |

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| **Main concomitant therapies**  |
| Is patient taking concomitant drugs such as fibrates, omega 3, statins, platelet antiaggregants, anticoagulants, blood-thinners or other medications considered appropriate by treating physician. No Yes, please give details:

|  |  |  |  |
| --- | --- | --- | --- |
| Drug name | Dosage  | Start Date | Indication |
|  |  | **\_ \_ / \_ \_ /\_ \_ \_ \_** |  |
|  |  | **\_ \_ / \_ \_ /\_ \_ \_ \_** |  |
|  |  | **\_ \_ / \_ \_ /\_ \_ \_ \_** |  |
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| **BIOLOGY TEST RESULTS** |
| **Type** |  **Date Values** |
| Platelets | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| /mm3  |
| Urinalysis test strips |  **❑ Positive ❑ Negative** |
|  - If positive result: proteinuria 24h  | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g |
| Glomerular filtration rate | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| mL/min/1,73 m² |
| Serum Creatinine concentration | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| µmol/L |
| Liver function tests | ALAT | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| UI/L  |
|  | ASAT | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| UI/L |
|  | Alcaline phosphatase | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| UI/L  |
|  | Total bilirubin | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| mg/L |
|  | Gamma GT | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| UI/L |
| ESR | Sedimentation rate | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| mm |
| CRP | C-reactive protein  | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| mg/L |
| Lipid profile | Total cholesterol | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
|  | Triglyceridaemia | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
|  | LDLc | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
|  | HDLc | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
|  | ApoB | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
| Glycaemia | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| g/L |
| HbA1c (if diabetic) | Glycohaemoglobin | **\_ \_ / \_ \_ /\_ \_ \_ \_** |\_\_\_\_\_\_\_\_\_\_\_| % |

**Appendix 1 (Score FCS)**

**Scoring FCS**

*Moulin P, Dufour R, Averna M, Bruckert E et al. Expert panel recommendations and proposal of an "FCS score". Atherosclerosis. 2018 Aug. 275:265-272.*

**Please complete FCS score:**

|  |  |
| --- | --- |
|  | **Number of points***(Circle each score and calculate total)* |
| Triglyceridaemia - fasting >10 mmol/l 3 consecutive results\* | **+5** |
| Triglyceridaemia - fasting >20 mmol/l at least once | **+1** |
| History of Triglyceridaemia - fasting <2 mmol/l | **- 5** |
| No known secondary cause\*\* (excluding pregnancy\*\*\* and ethinylestradiol) | **+2** |
| History of pancreatitis | **+1** |
| Unexplained recurrent abdominal pain | **+1** |
| No family history of hyperlipidaemia  | **+1** |
| No response (reduction in TG <20%) to hypolipidaemia treatment | **+1** |
| Onset of symptoms at age:  | < 40 yrs< 20 yrs< 10 yrs | **+1****+2****+3** |
| **TOTAL** **(Number of points)**  | **[\_\_\_\_\_\_\_]** |

*\*dosages at intervals of at least one month*

*\*\*including alcohol, diabetes; metabolic syndrome, hypothyroidism, corticosteroid and other treatments*

*\*\*\*repeat diagnosis after pregnancy if necessary*

**Score ≤ 8: FCS very unlikely - Score ≤ 9: FCS unlikely - Score ≥10: FCS highly likely**

**Appendix 2 (gene / variants)**

**FCS**

**(monogenic / low LPL activity)**

**FCS A**: Ho deleterious coding variant LPL

**FCS B**: Ho or Comp Het deleterious coding variant,

Apo AV, GPIHBP1, Apo C2, LMF1

**MCS**

**(oligogenic +/- secondary factors)**

**MCS C**: composite He coding variant +/- susceptibility variants

LPL>Apo AV>GPIHBP1>LMF1>Apo C2

**MCS D**: combination of variants/genetic load

Apo AV, apo E, apo C3, LPL, GPIHBP1, LMF1, Apo C2,

S19W, E2, SSt1 2, D9N, C14F,

**CR teleconference between requesting Physician and RCP Multidisciplinary Team Committee**

**Date:** \_\_\_ \_\_\_ / \_\_\_ \_\_\_ / \_\_\_ \_\_\_ \_\_\_ \_\_\_ (day/month/year)

**Participants: Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Given name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Given name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Given name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Given name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Given name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Decision: Inclusion of patient in ATU Waylivra® (volanesorsen) cohort**: **□ Yes □ No**

**Date of response from RCP/Multidisciplinary Team Committee**:

 \_\_\_ \_\_\_ / \_\_\_ \_\_\_ / \_\_\_ \_\_\_ \_\_\_ \_\_\_ (day/month/year)