

| Patient ID | Age | Sex | TC  | LDL | CA | TX | FHx CAD | DLCNC | DLCNC Cat |
|------------|-----|-----|-----|-----|----|----|---------|-------|-----------|
| F10        | 22  | 1   | 176 | 131 | 0  | 0  | 1       | 6     | 2         |
| F11        | 20  | 2   | 167 | 135 | 0  | 0  | 1       | 6     | 2         |
| F9         | 55  | 2   | 306 | 214 | 0  | 0  | 1       | 8     | 3         |
| F12        | 65  | 2   | 450 | 323 | 1  | 0  | 1       | 12    | 3         |
| F13        | 32  | 2   | 250 | 190 | 0  | 0  | 1       | 8     | 3         |
| F14        | 44  | 2   | 312 | 214 | 0  | 0  | 1       | 8     | 2         |
| F15        | 31  | 1   | 236 | 169 | 0  | 0  | 1       | 6     | 2         |
| F16        | 51  | 2   | 267 | 145 | 0  | 0  | 1       | 6     | 2         |
| F17        | 35  | 1   | 328 | 222 | 0  | 0  | 1       | 8     | 2         |
| F18        | 60  | 2   | 350 | 190 | 0  | 0  | 1       | 8     | 2         |
| F19        | 28  | 1   | 292 | 179 | 0  | 1  | 0       | 11    | 3         |
| F20        | 58  | 1   | 203 | 154 | 0  | 0  | 1       | 4     | 1         |
| F1         | 8   | 1   | 775 | 730 | 1  | 1  | 1       | 20    | 3         |
| F2         | 24  | 2   | 350 | 442 | 1  | 1  | 1       | 20    | 3         |
| F3         | 30  | 1   | 325 | 259 | 1  | 0  | 1       | 11    | 3         |
| F4         | 60  | 1   | 390 | 295 | 1  | 1  | 1       | 15    | 3         |
| F21        | 35  | 1   | 350 | 257 | 0  | 0  | 1       | 8     | 2         |
| F22        | 58  | 2   | 300 | 185 | 0  | 0  | 1       | 6     | 2         |
| F23        | 35  | 1   | 250 | 160 | 0  | 0  | 1       | 6     | 2         |
| F24        | 40  | 1   | 210 | 151 | 0  | 0  | 1       | 6     | 2         |
| F25        | 58  | 1   | 190 | 150 | 0  | 0  | 1       | 6     | 2         |
| F26        | 36  | 1   | 266 | 185 | 0  | 0  | 1       | 6     | 2         |
| F27        | 65  | 2   | 108 | 196 | 1  | 0  | 1       | 10    | 3         |
| F28        | 45  | 2   | 194 | 296 | 0  | 0  | 1       | 8     | 3         |
| F29        | 17  | 1   | 91  | 164 | 0  | 0  | 1       | 6     | 2         |
| F30        | 15  | 2   | 76  | 145 | 0  | 0  | 1       | 6     | 2         |
| F5         | 25  | 1   | 350 | 600 | 1  | 1  | 1       | 20    | 3         |
| F6         | 27  | 1   | 200 | 165 | 0  | 0  | 1       | 6     | 2         |
| F7         | 44  | 1   | 386 | 300 | 1  | 1  | 0       | 20    | 3         |
| F8         | 60  | 2   | 280 | 198 | 1  | 0  | 1       | 12    | 3         |

Table S1: Patient demographics and clinical characteristics, including age, sex, total cholesterol (TC), low-density lipoprotein cholesterol (LDL), presence or absence of corneal arcus (CA) and tendon xanthomas (TX), family history of coronary artery disease (FHx CAD), and Dutch Lipid Clinic Network Criteria (DLCNC) score and category (1: possible, 2: probable, 3: definite familial hypercholesterolemia).

| Family ID | Patient ID | Paternal ID | Maternal ID | Sibling ID | Sex | DLCNC Cat |
|-----------|------------|-------------|-------------|------------|-----|-----------|
| FAM01     | F10        | 0           | F9          | F11        | 1   | 2         |
| FAM01     | F11        | 0           | F9          | F10        | 2   | 2         |
| FAM01     | F9         | 0           | 0           | 0          | 2   | 3         |
| FAM02     | F12        | 0           | 0           | 0          | 2   | 3         |
| FAM02     | F13        | 0           | F12         | 0          | 2   | 3         |
| FAM03     | F14        | 0           | 0           | 0          | 2   | 2         |
| FAM04     | F15        | 0           | F16         | 0          | 1   | 2         |
| FAM04     | F16        | 0           | 0           | 0          | 2   | 2         |
| FAM05     | F17        | 0           | F18         | 0          | 1   | 2         |
| FAM05     | F18        | 0           | 0           | 0          | 2   | 2         |
| FAM06     | F19        | F20         | 0           | 0          | 1   | 3         |
| FAM06     | F20        | 0           | 0           | 0          | 1   | 1         |
| FAM07     | F1         | F3          | F2          | 0          | 1   | 3         |
| FAM07     | F2         | F4          | 0           | 0          | 2   | 3         |
| FAM07     | F3         | 0           | 0           | 0          | 1   | 3         |
| FAM07     | F4         | 0           | 0           | 0          | 1   | 3         |
| FAM08     | F21        | 0           | 0           | 0          | 1   | 2         |
| FAM09     | F22        | 0           | 0           | 0          | 2   | 2         |
| FAM10     | F23        | 0           | 0           | 0          | 1   | 2         |
| FAM11     | F24        | 0           | 0           | 0          | 1   | 2         |
| FAM12     | F25        | 0           | 0           | 0          | 1   | 2         |
| FAM13     | F26        | 0           | F27         | F28        | 1   | 2         |
| FAM13     | F27        | 0           | 0           | 0          | 2   | 3         |
| FAM13     | F28        | 0           | F27         | F26        | 2   | 3         |
| FAM13     | F29        | 0           | 0           | F30        | 1   | 2         |
| FAM13     | F30        | 0           | 0           | F29        | 2   | 2         |
| FAM14     | F5         | 0           | 0           | F6         | 1   | 3         |
| FAM14     | F6         | 0           | 0           | F5         | 1   | 2         |
| FAM15     | F7         | 0           | F8          | 0          | 1   | 3         |
| FAM15     | F8         | 0           | 0           | 0          | 2   | 3         |

Table S2: Pedigree information for the 30 study participants across 15 families. Each patient is identified by their family ID and patient ID, along with their sex (1: male, 2: female) and Dutch Lipid Clinic Network Criteria (DLCNC) category (1: possible, 2: probable, 3: definite familial hypercholesterolemia). Relationships within families are indicated by paternal ID, maternal ID, and sibling IDs, elucidating the familial patterns of hypercholesterolemia within the study cohort.