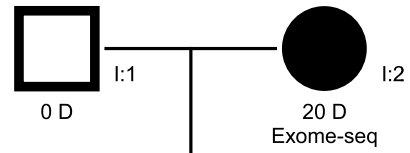


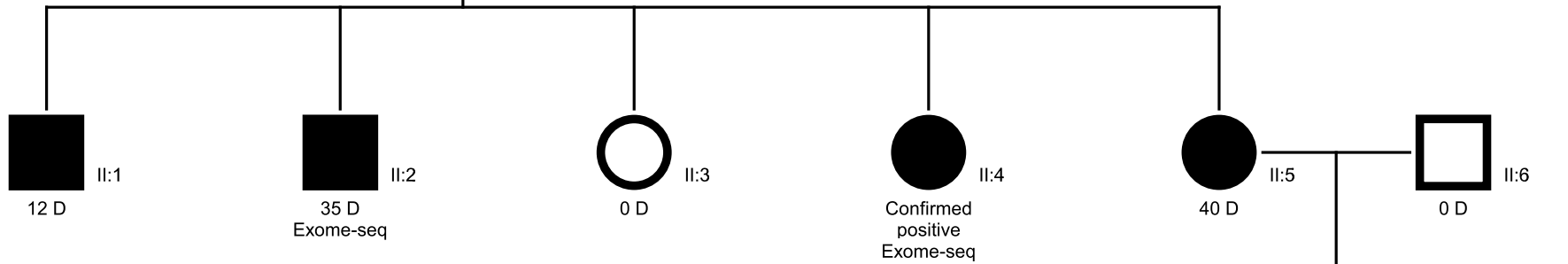
**Supplemental File 1:** Pedigrees for all exome sequenced families with AIS. Individuals affected with AIS are indicated with filled shapes, and individuals selected for sequencing are indicated by “exome-seq” below affected individuals. Degree of spinal curvature as measured by Cobb angle is indicated in numbers below affected individuals (i.e. 20D). Individuals with known double curves have both listed (i.e. 26/30D), as are any triple curvatures. All individuals with listed curvatures were examined radiographically, and any found to be unaffected on physical exam are labeled as “confirmed negative”. Proband for each family is indicated with an arrow.

# Family A

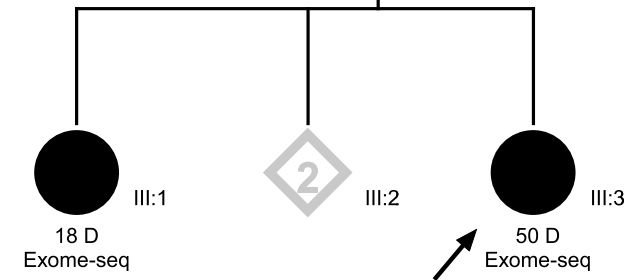
I



II



III



IV

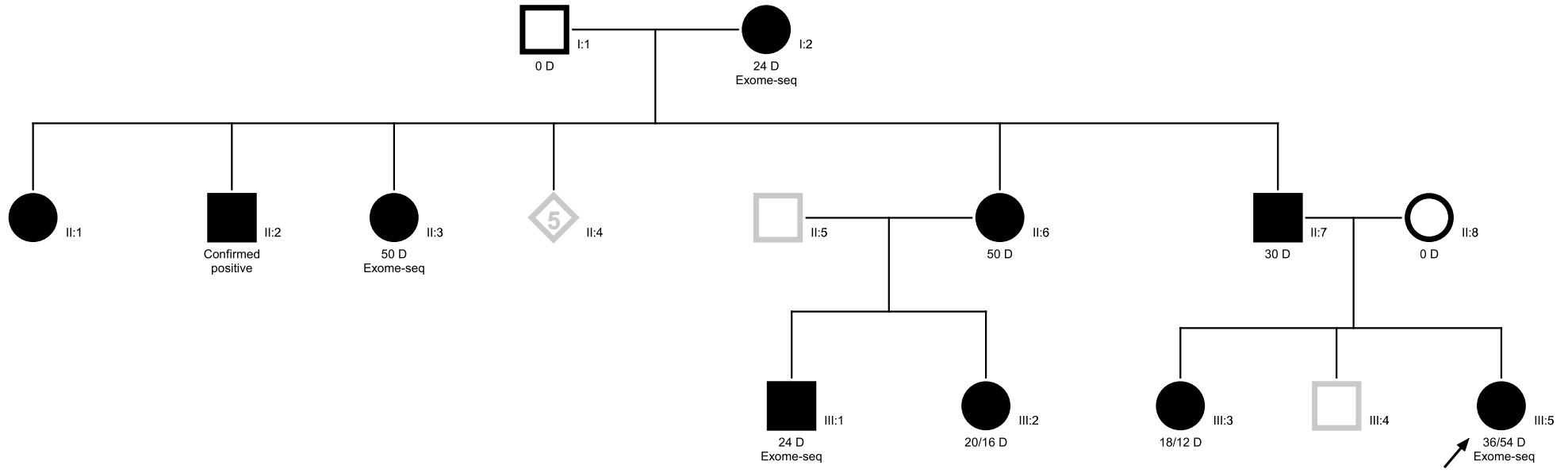
## Family B

I

II

III

IV



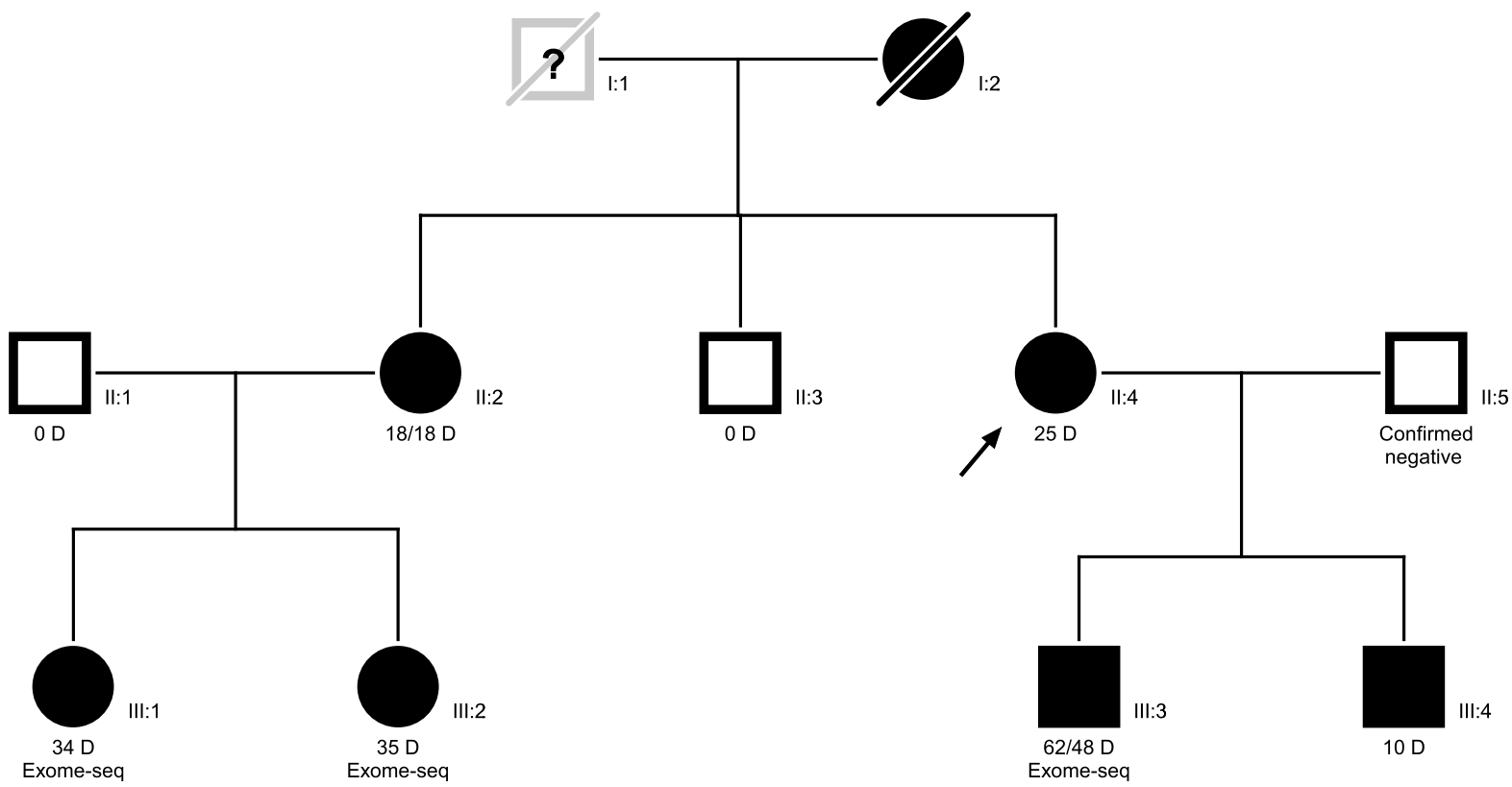
# Family C

I

II

III

IV



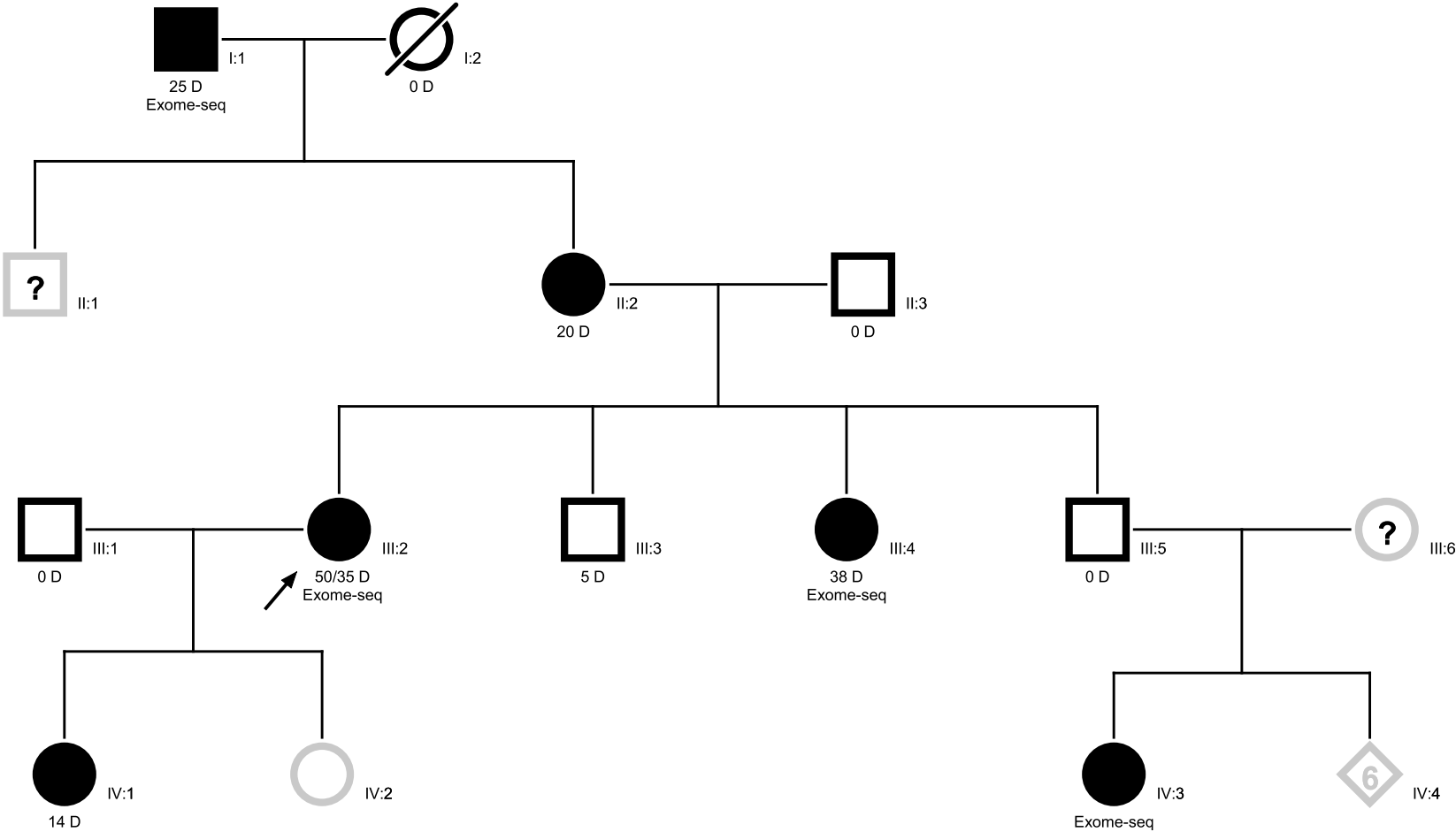
Family D

I

II

III

IV



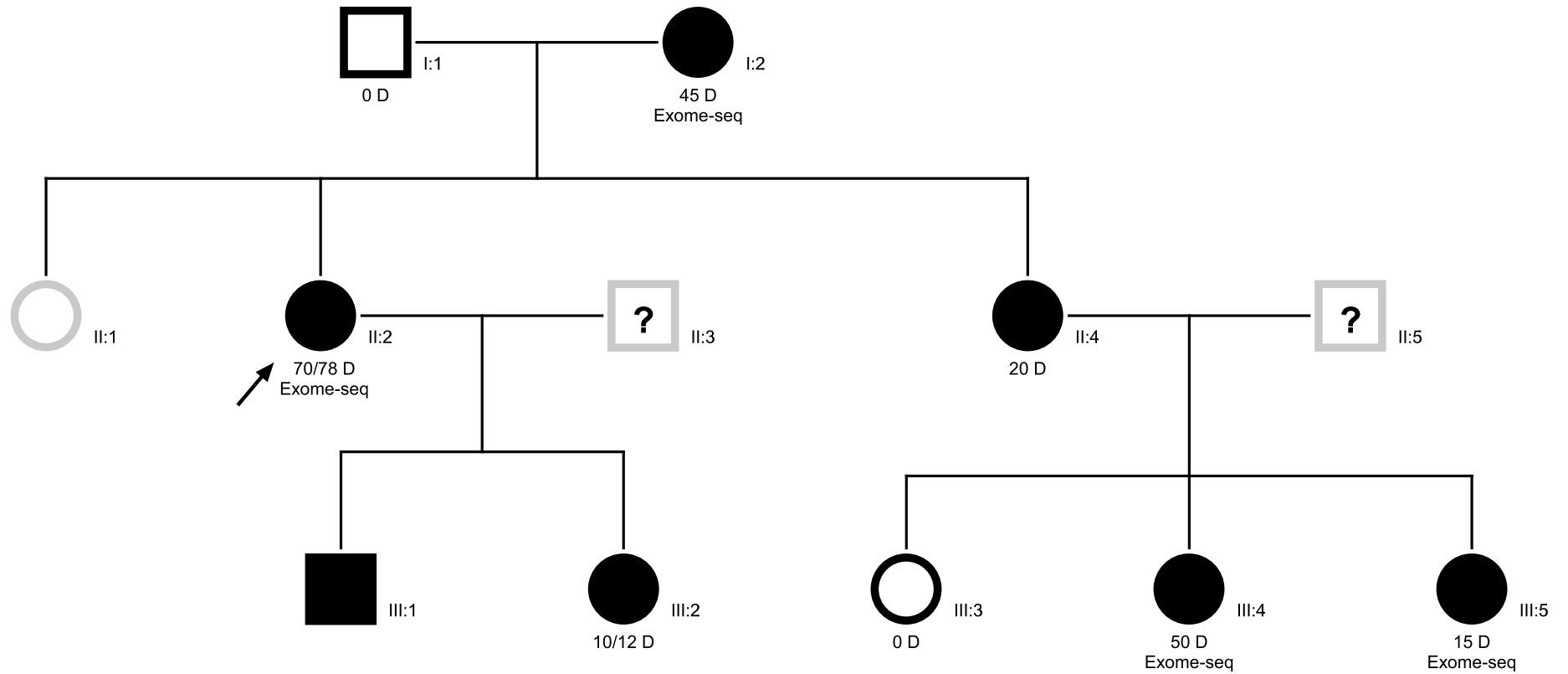
# Family E

I

II

III

IV



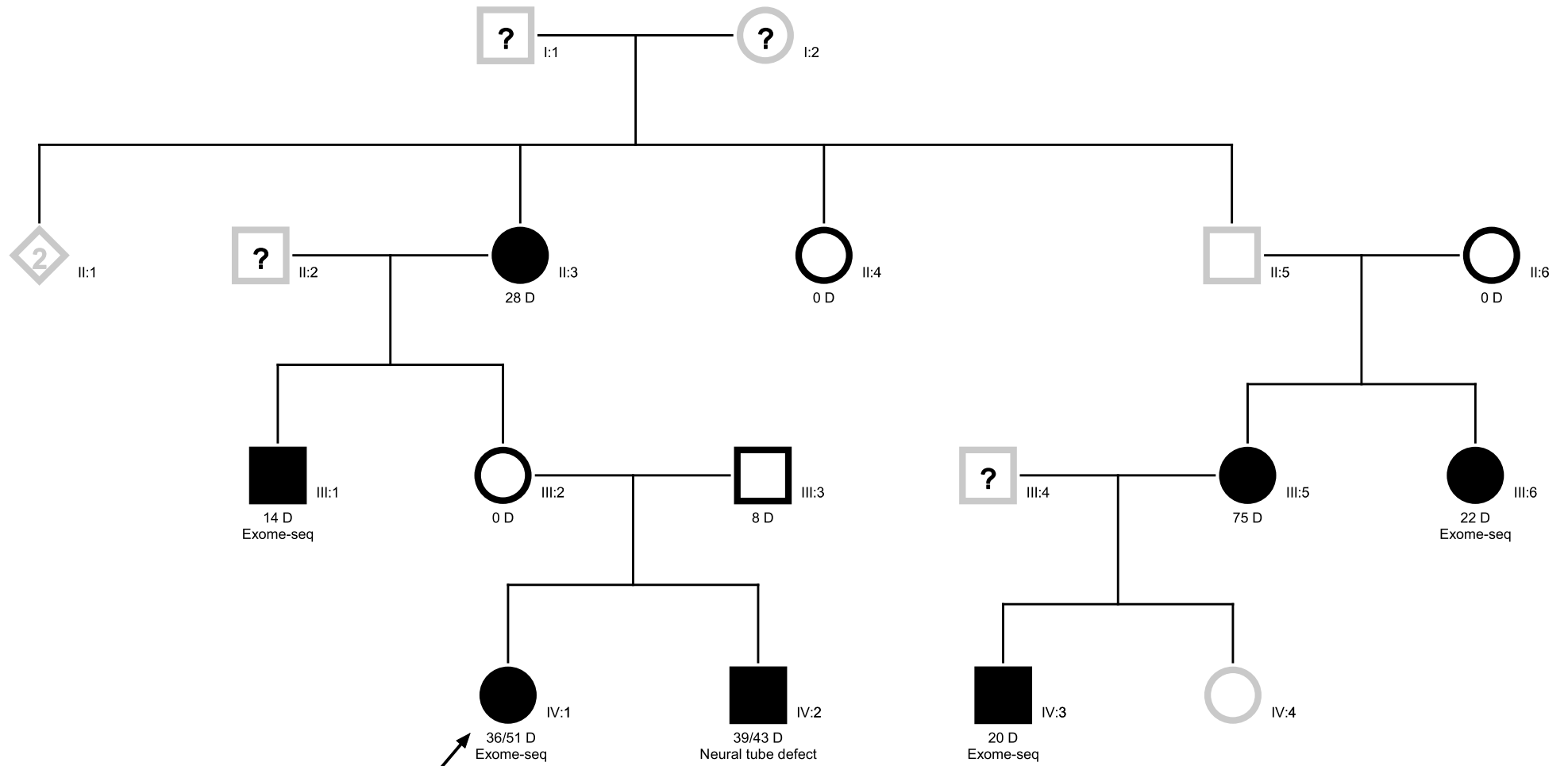
# Family F

I

II

III

IV



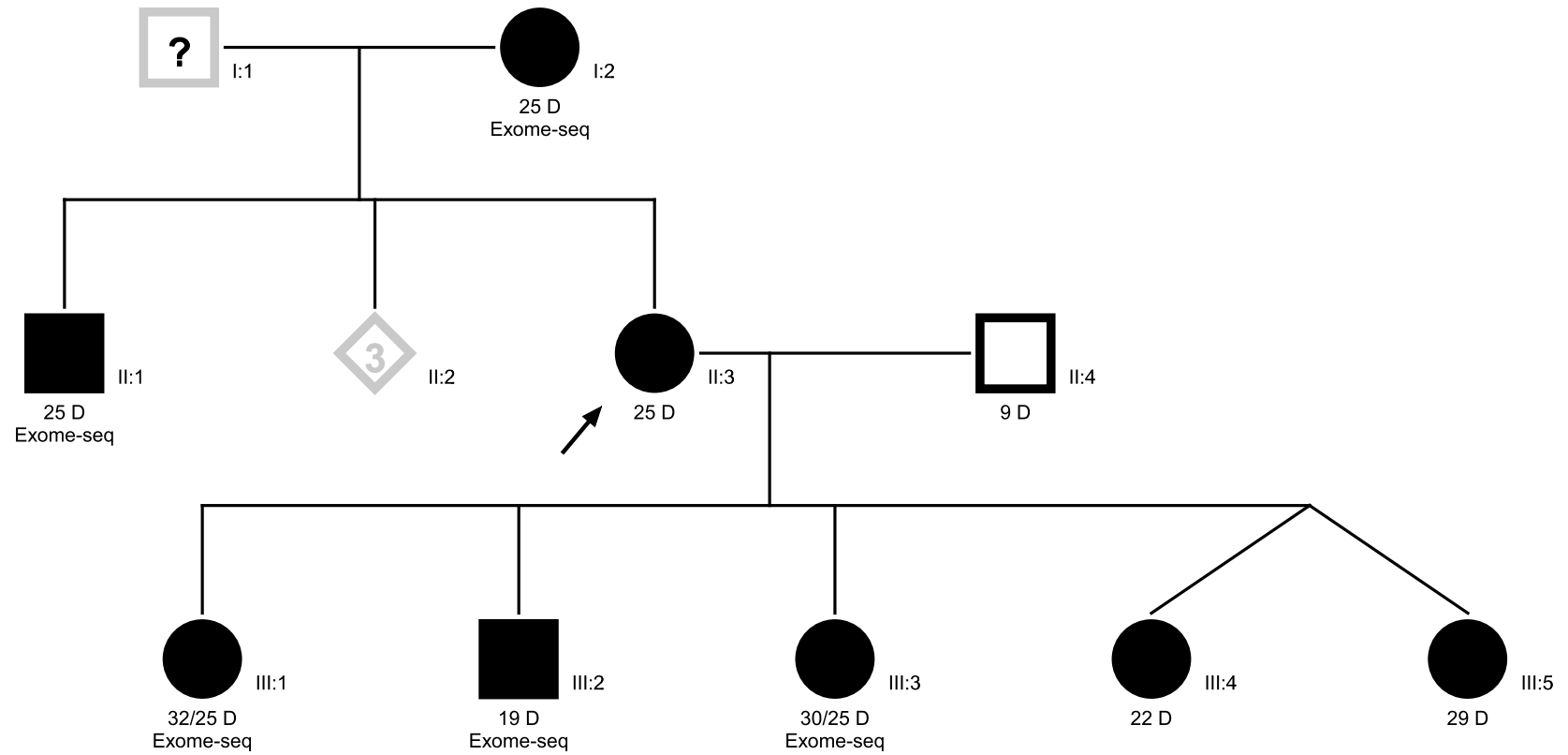
# Family G

I

II

III

IV





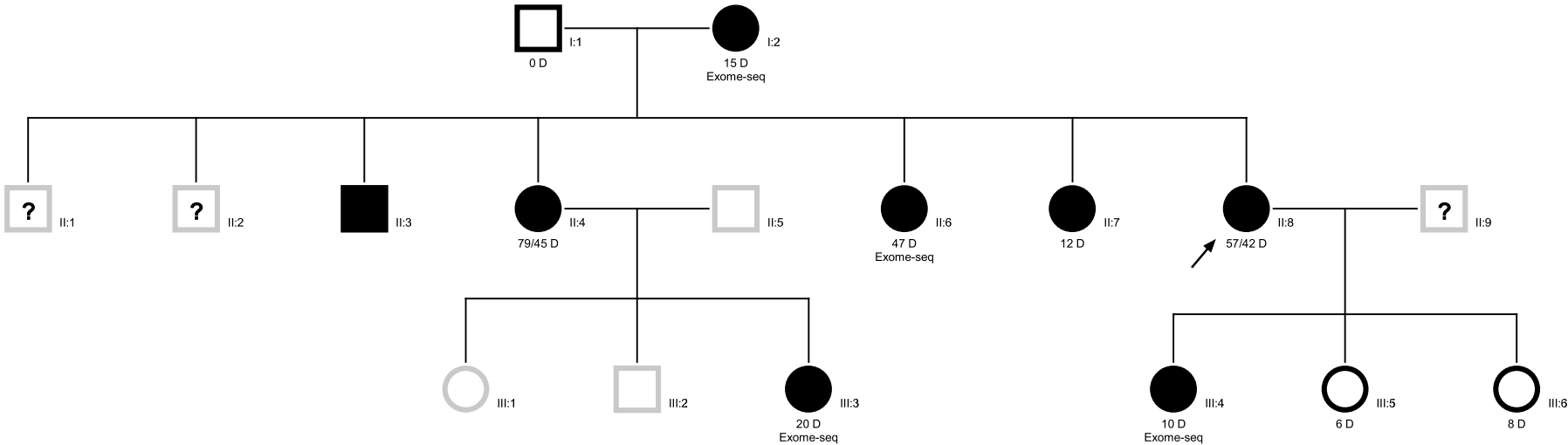
Family H

I

II

III

IV



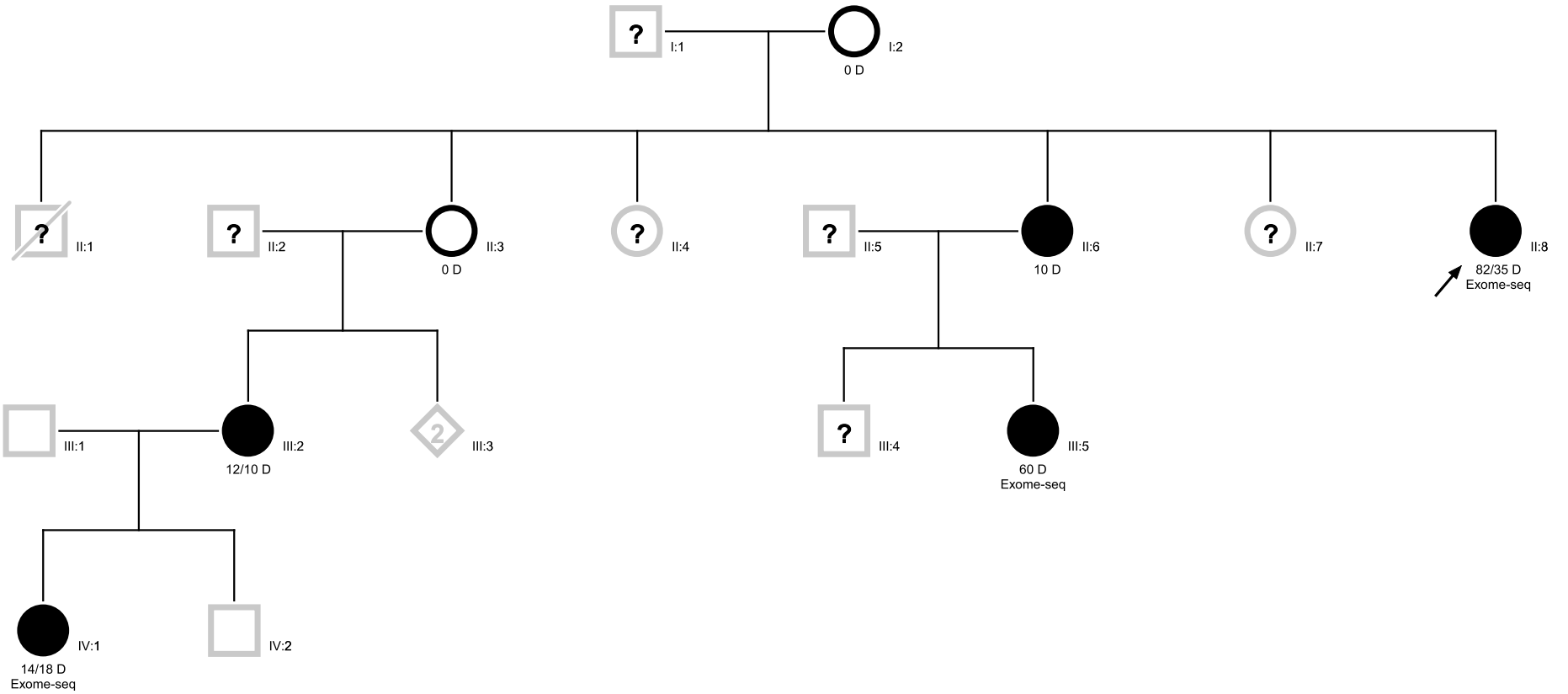
# Family I

I

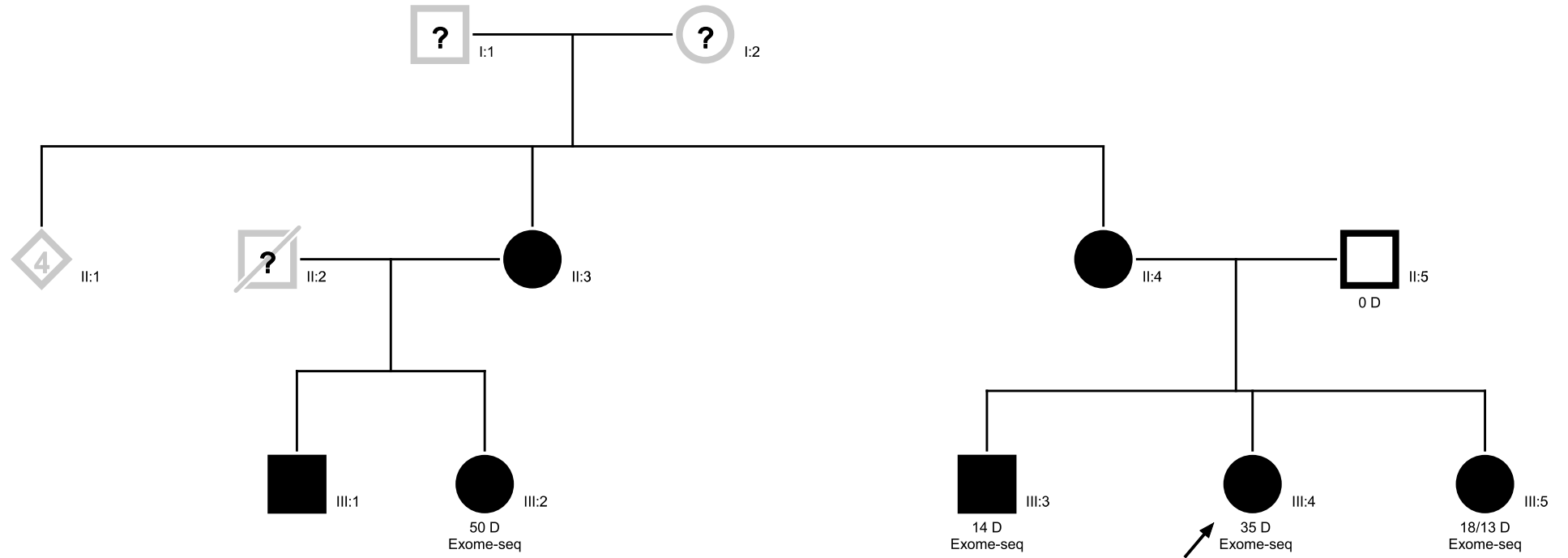
II

III

IV



# Family J



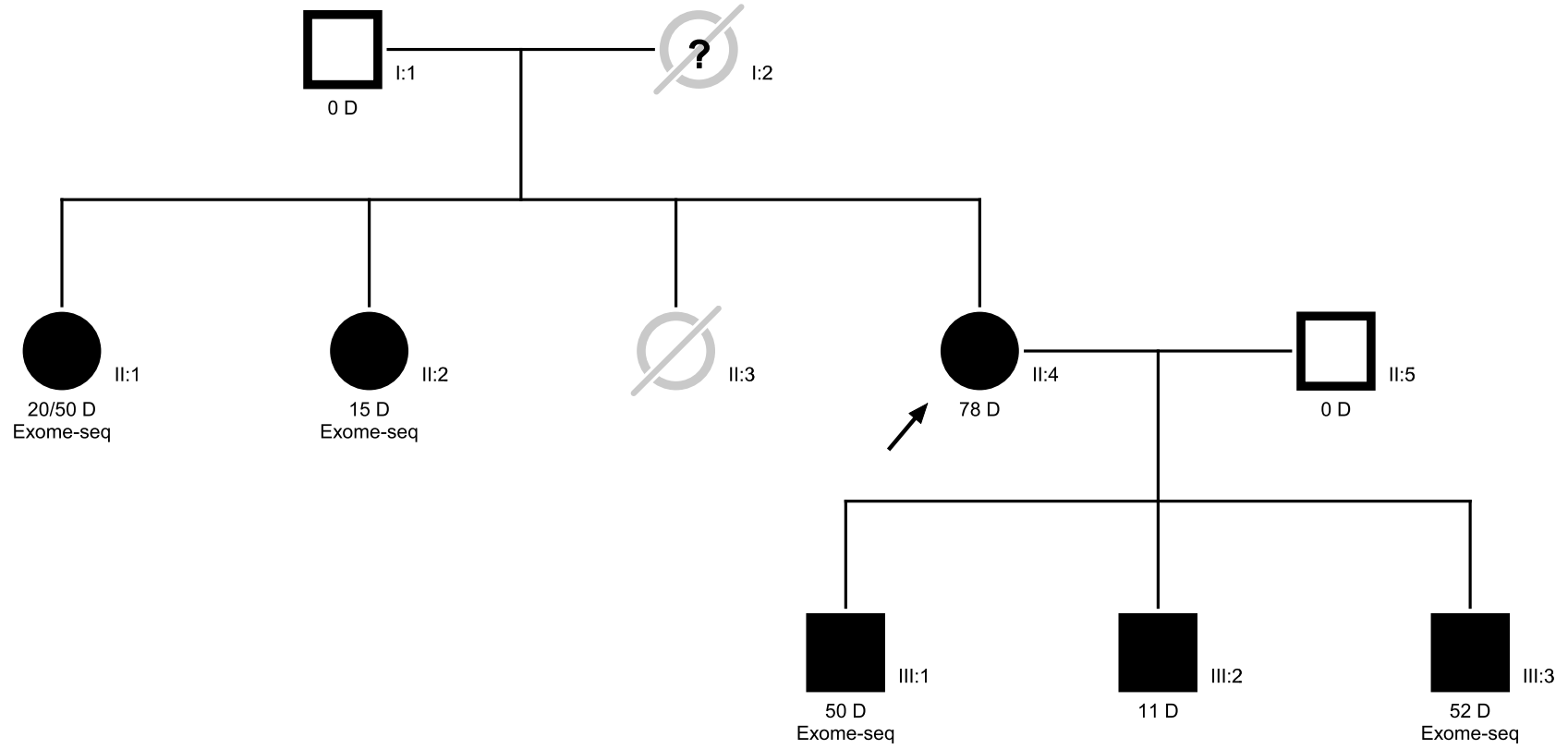
# Family K

I

II

III

IV



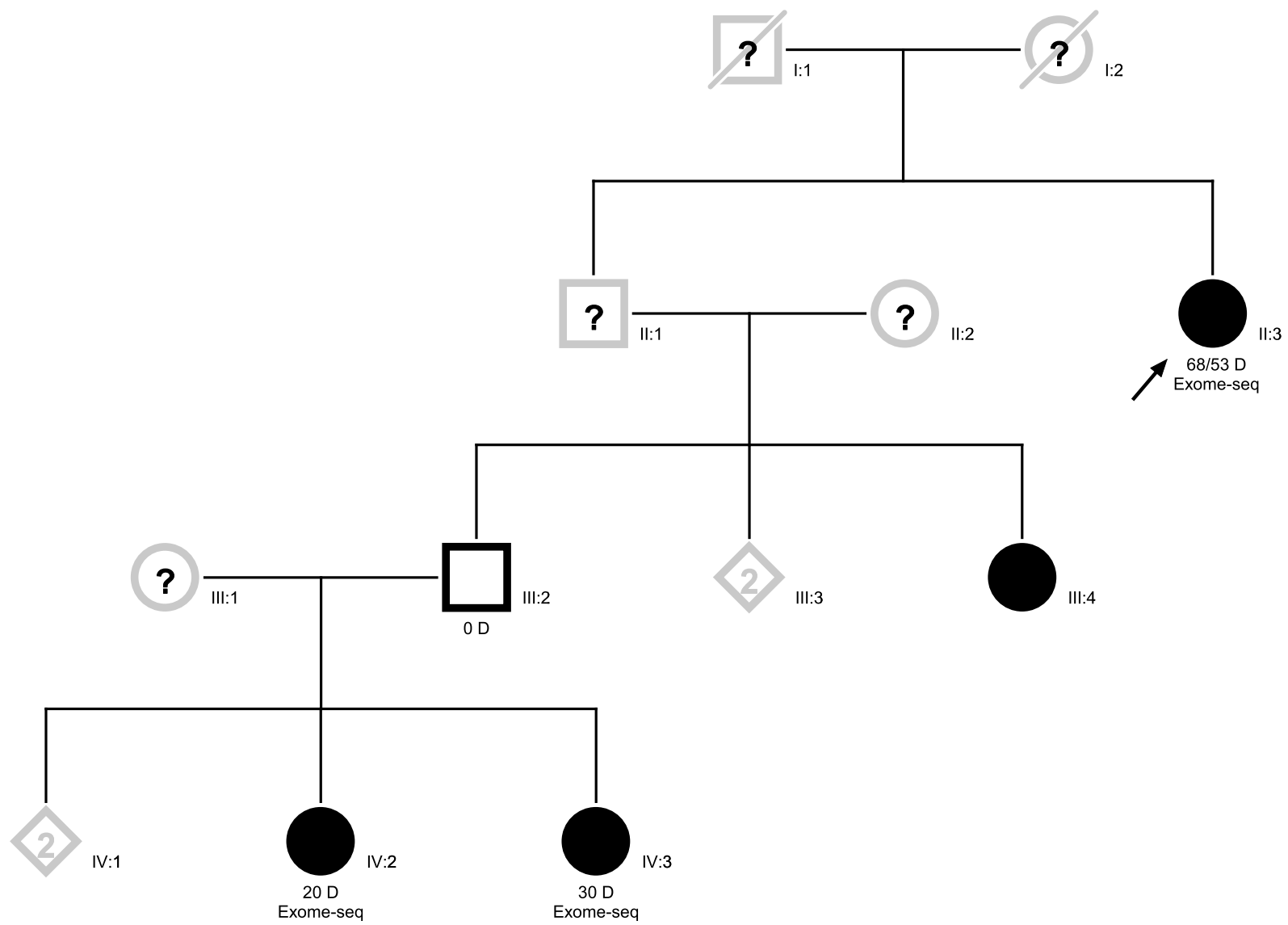
# Family L

I

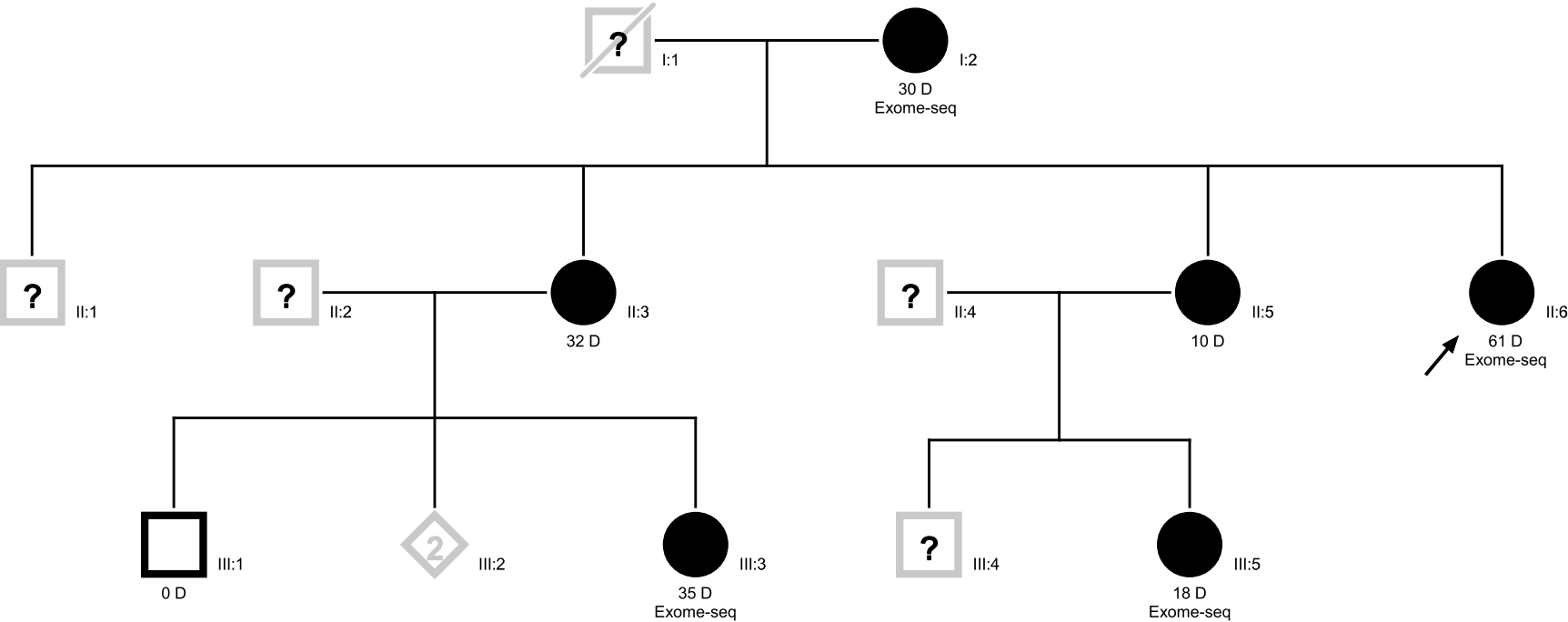
II

III

IV



Family M



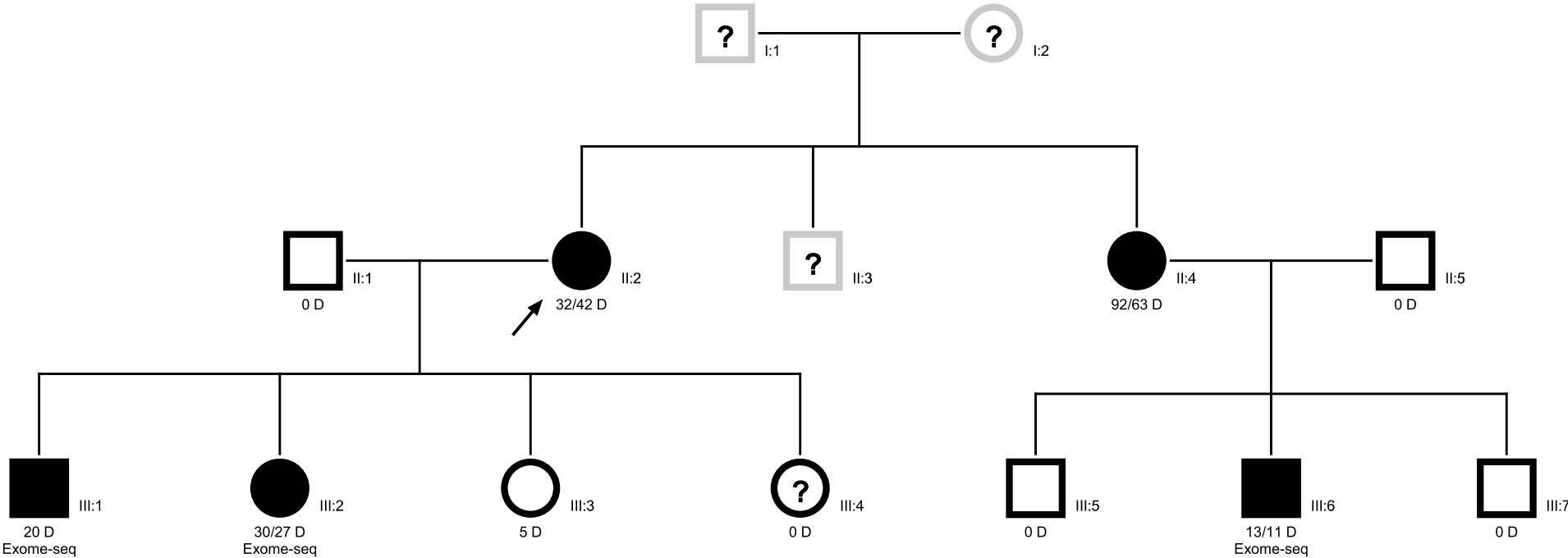
Family N

I

II

III

IV



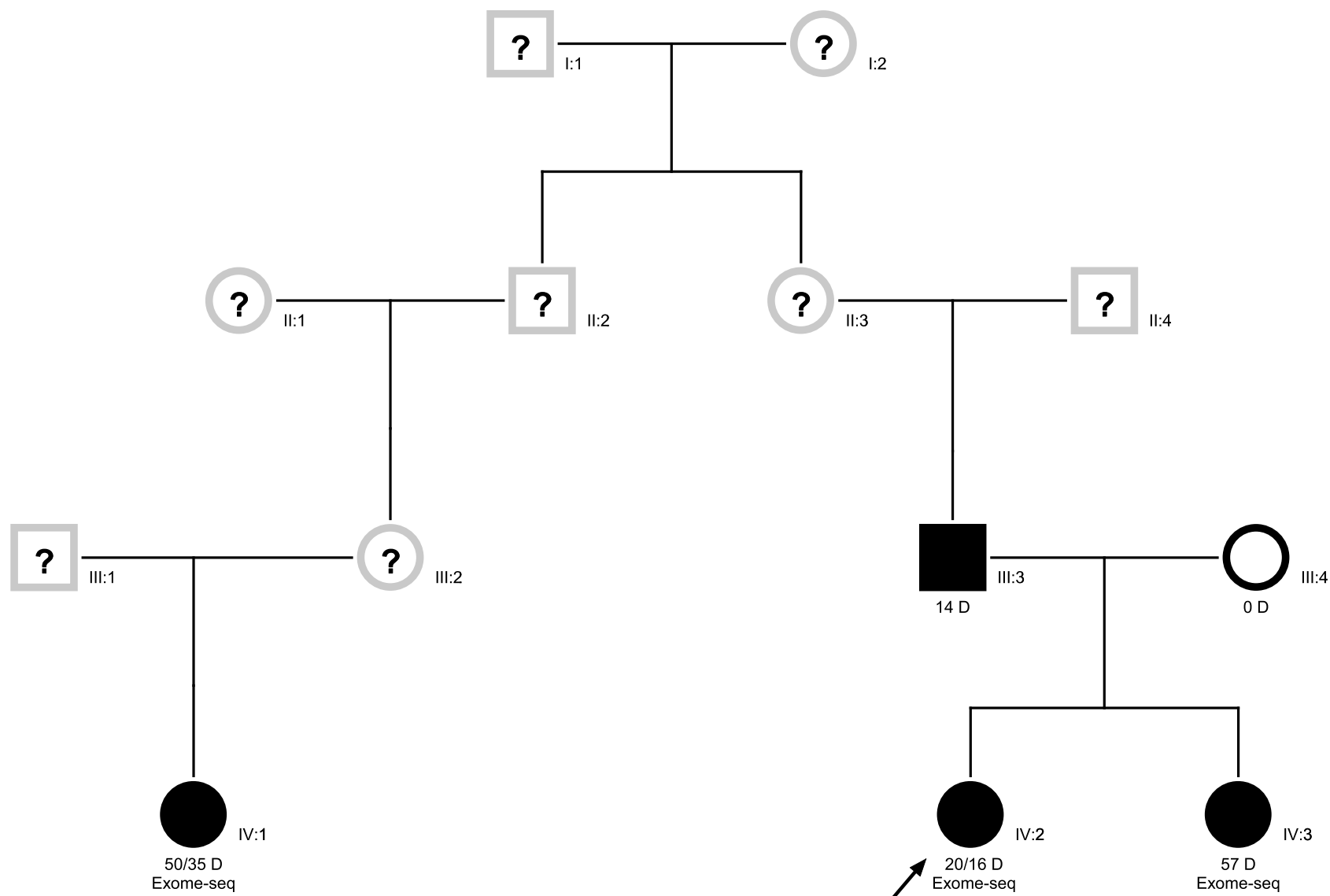
# Family O

I

II

III

IV





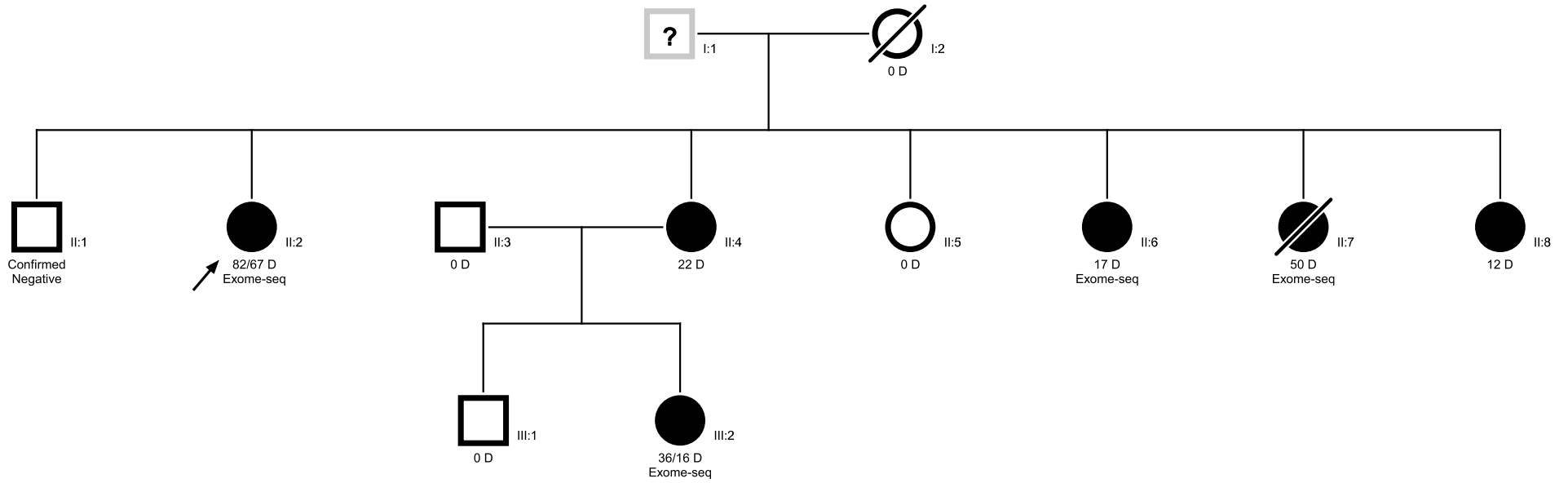
# Family P

I

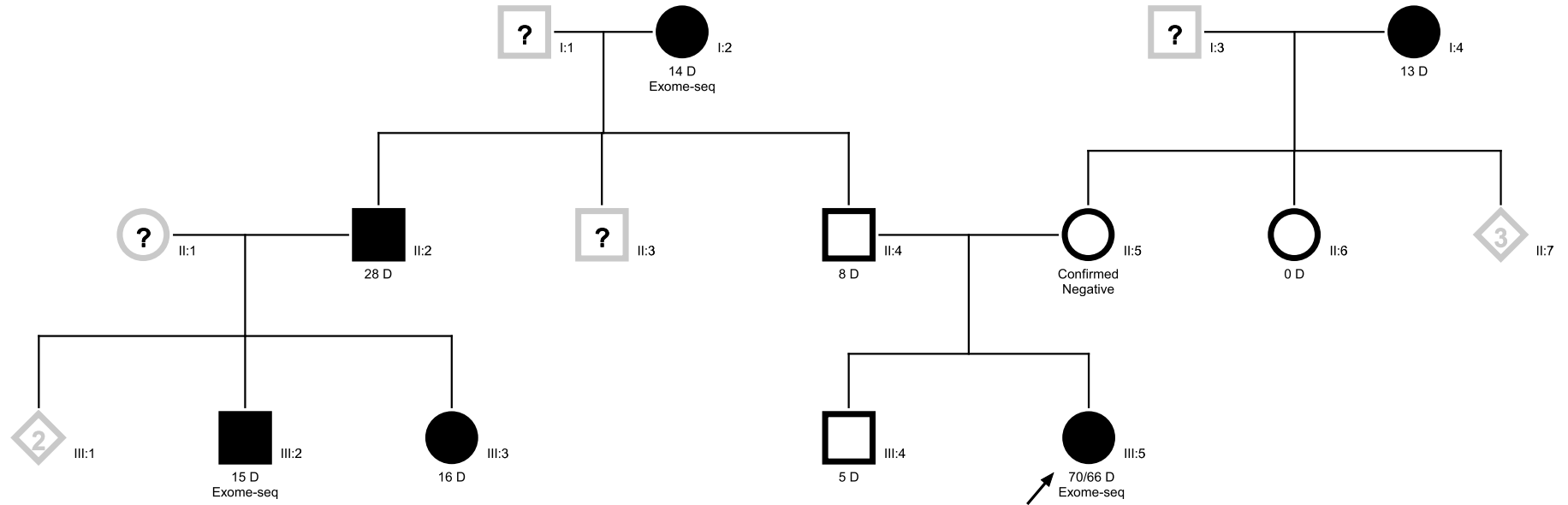
II

III

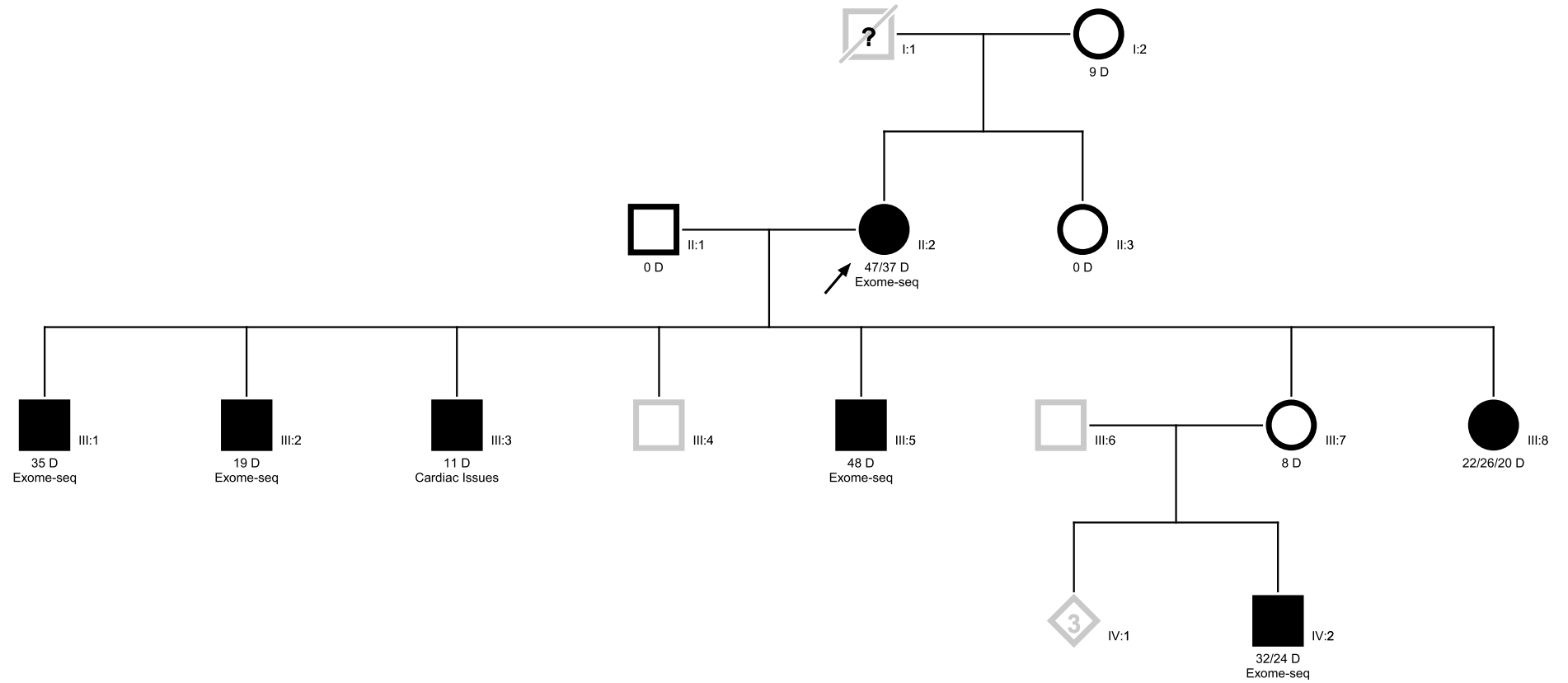
IV



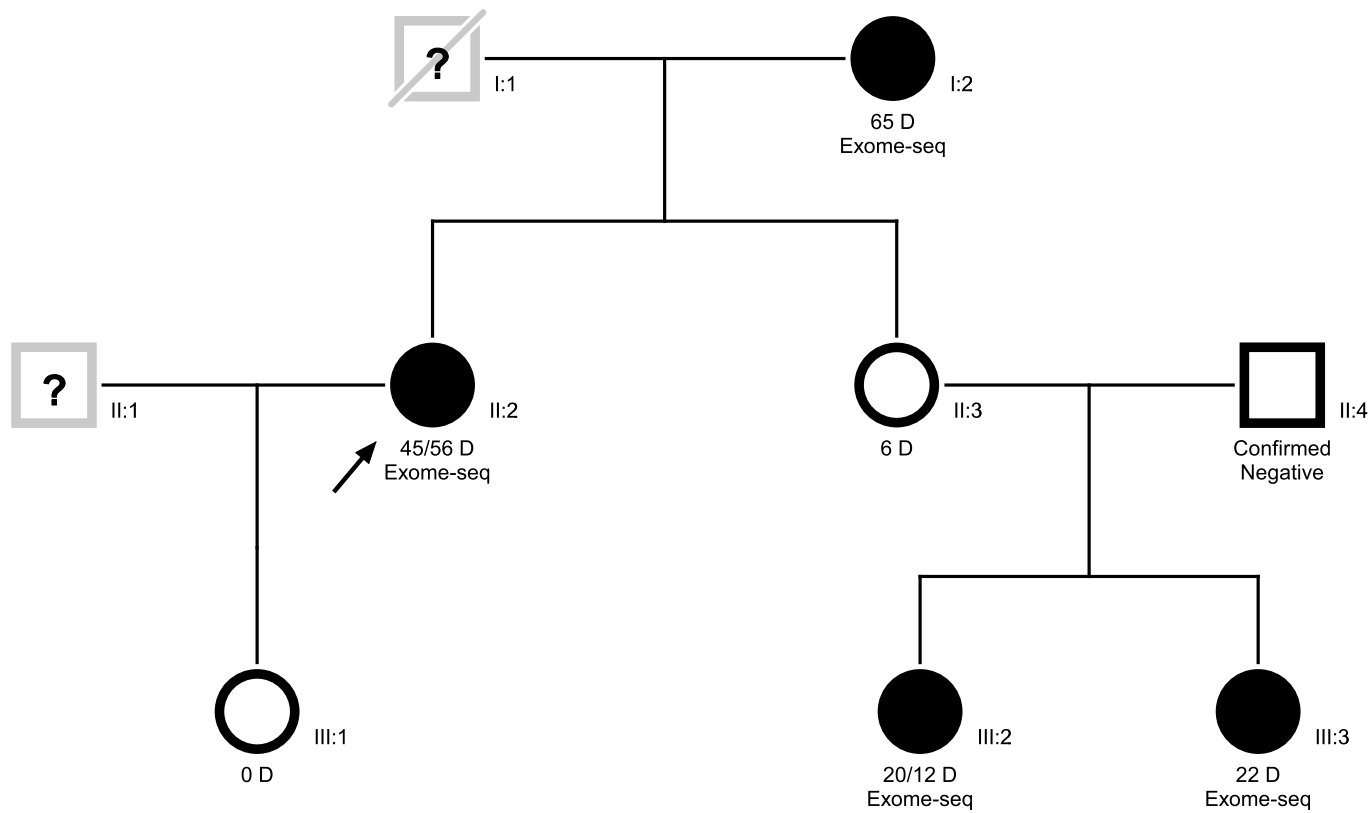
# Family Q



# Family R



# Family S



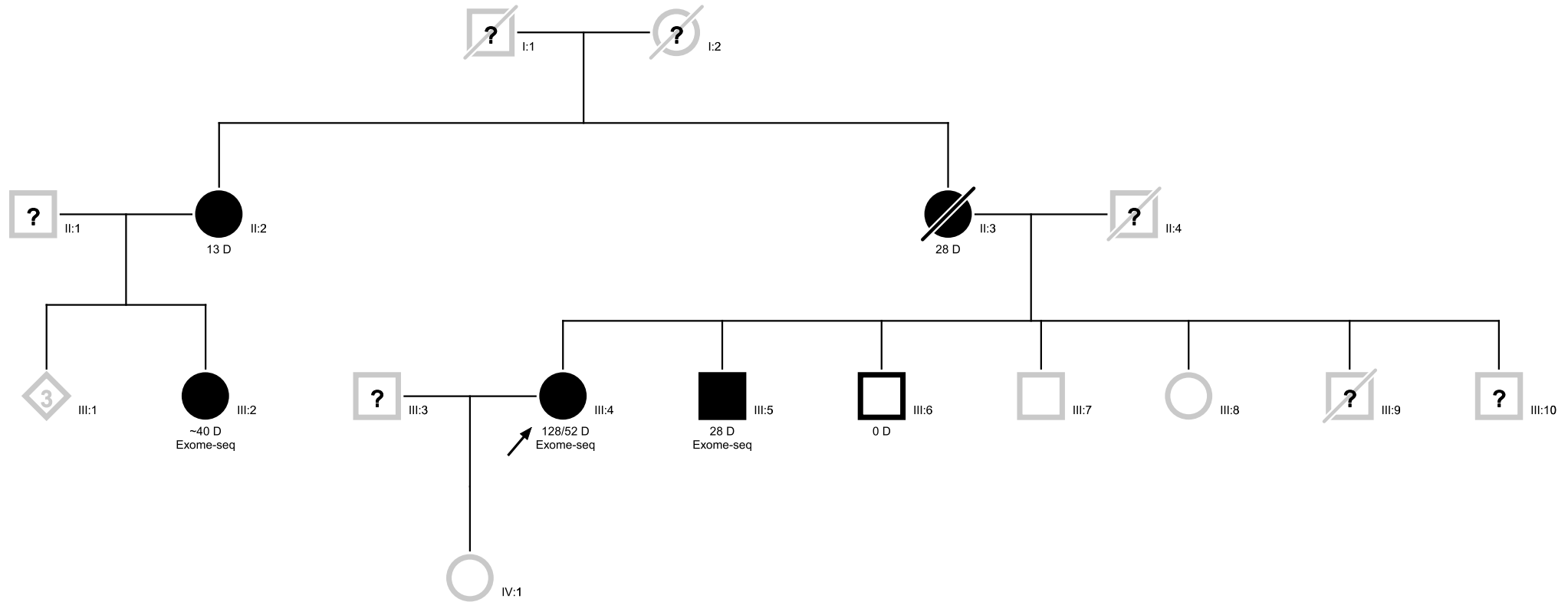
# Family T

I

II

III

IV



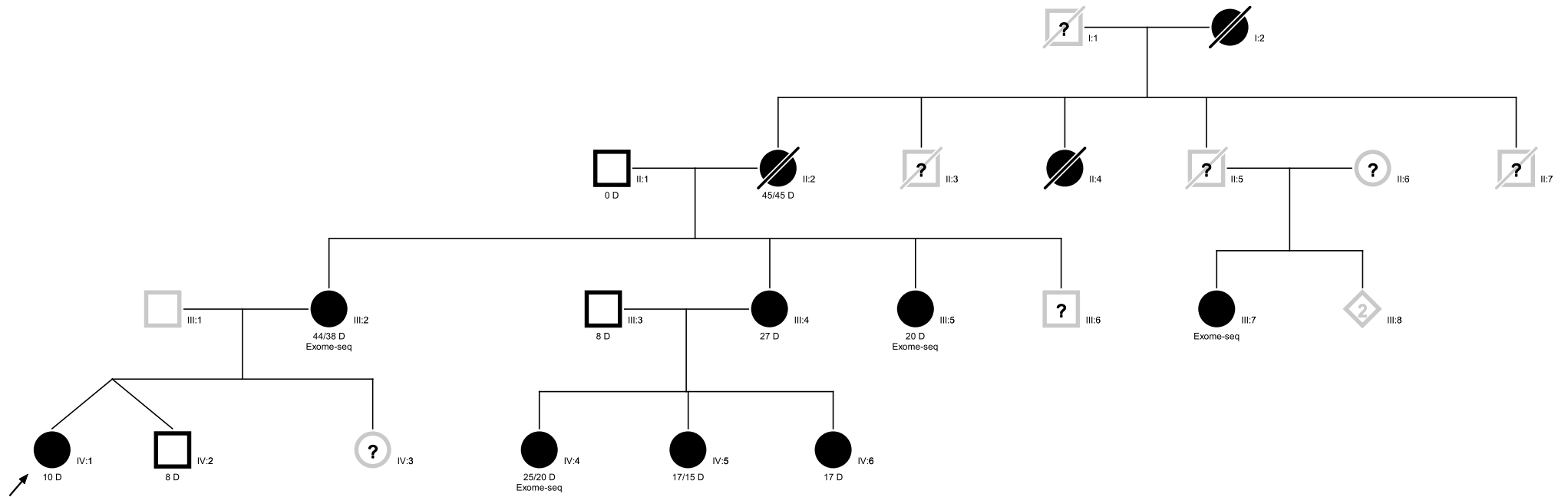
# Family U

I

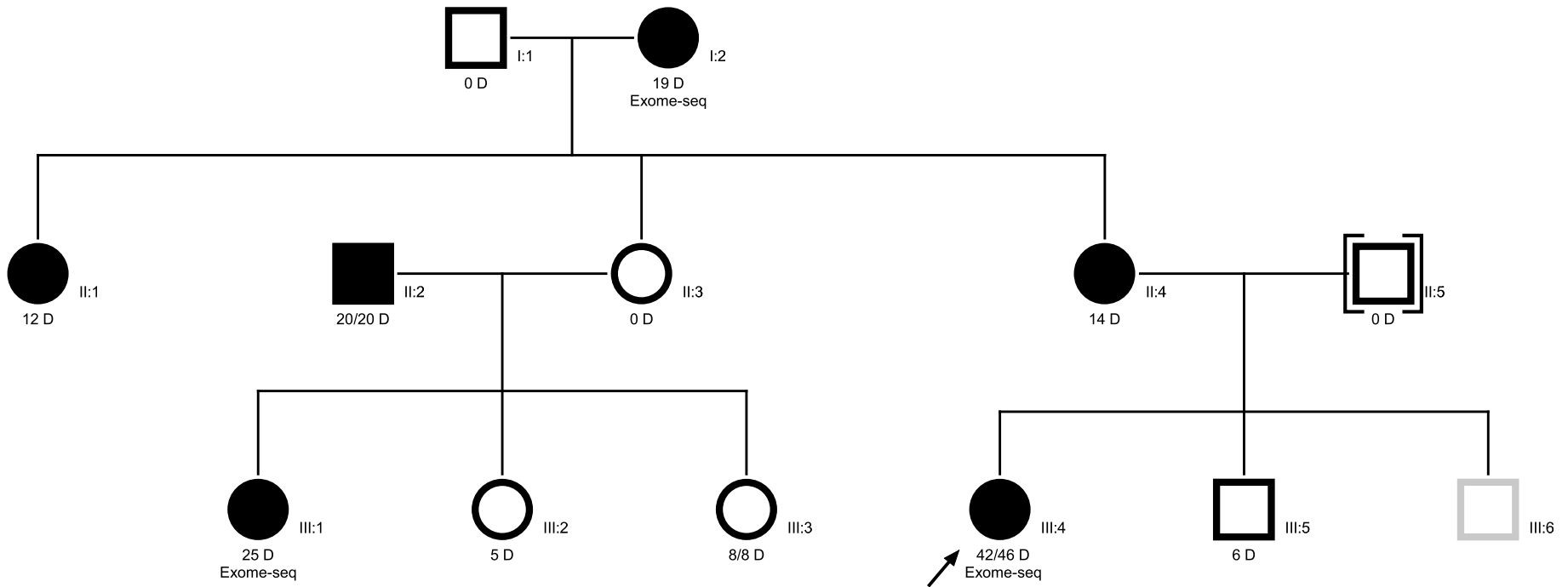
II

III

IV



# Family V



# Family W

