**Supplementary Material**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Individual** | **Age** | **Sex** | **Phenotype** | **Heteroplasmy (%)** | | **Clinical Features** | | | | | | | | | |
| **Urine** | **Blood\*** | **BMI** | **HbA1c** | **SNHL** | **Seizures** | **BD** | **Headaches** | **Fatigue** | **Ataxia** | **Myopathy** | **CM** |
| II/1 | 64 | F | Atypical | - | 91 | 15.73 | 44 | Y | n | n | n | Y | y | n | Y |
| II/2 # | 62 | F | Atypical | - | 30 | 15.28 | 42 | Y | y | n | n | N | y | y | Y |
| II/3 # | 53 | F | MIDD | - | 100 | 24.08 | 76 | Y | n | n | n | Y | n | y | N |
| III/1 | 39 | F | Atypical | 58 | 89 | - | 38 | Y | n | n | y | N | n | n | N |
| III/5 | 35 | M | MIDD | - | 100 | 29.50 | 69 | Y | n | n | y | N | n | n | n |

**Table 1**. Pedigree A demonstrating their gender, phenotypes, and tissue heteroplasmy levels. (\*) corrected heteroplasmy levels. (#) individual was deceased at time of analysis. (#) individual was deceased at time of analysis. ( - ) indicates if data was unavailable.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Individual** | **Age** | **Sex** | **Phenotype** | **Heteroplasmy (%)** | | **Clinical Features** | | | | | | | | | |
| **Urine** | **Corrected\*** | **BMI** | **HbA1c** | **SNHL** | **Seizures** | **BD** | **Headaches** | **Fatigue** | **Ataxia** | **Myopathy** | **CM** |
| I/1 | 67 | F | MIDD | 20 | - | 33.90 | 55 | y | n | y | y | Y | n | Y | n |
| II/1 | 43 | F | Atypical | 55 | 31 | 23.24 | 40 | n | n | n | y | N | y | Y | y |
| II/2 | 41 | M | Atypical | 62 | 24 | 31.18 | 33 | y | n | n | n | N | n | N | n |
| II/3 # | 31 | F | MELAS | 57 | 57 | 16.50 | - | y | y | y | y | Y | n | Y | n |
| II/4 | 33 | F | MELAS/MIDD | 87 | 87 | 18.86 | 38 | y | y | y | n | Y | y | Y | n |
| II/5 | 31 | M | Atypical | 88 | 34 | 22.80 | 31 | y | n | n | n | N | n | N | y |

**Table 2**: Pedigree B illustrating gender, phenotypes, and tissue heteroplasmy levels. (\*) corrected heteroplasmy levels. (#) individual was deceased at time of analysis. ( - ) indicates if data was unavailable.