A

TUK Audiogram Dataset
(N = 159 subjects)
ages 56-86 years

Audiograms missing in one ear
(N = 2)

Metabolic and Sensory Estimates, Line-fit Error

Poorly-fit audiograms
(N = 12)
Line-fit Error ≥ 15

Well-Fit Audiograms
(N = 145)
Line-fit Error < 15

Category Assignment N = 145

Unselected
(N = 14)
Ages 55 to 78

Category Assignment:

Older-Normal
(N = 53)
Ages 55 to 73

Metabolic
(N = 66)
Ages 55 to 86

Sensory
(N = 7)
Ages 57 to 84

Unclassified
(N = 19)
Ages 55 to 83

**DEFINITION:**
- M + S < 20
- M-Asym < 10
- S-Asym < 10
- 2 added

**DEFINITION:**
- Not O-N
- Met ≥ 20
- M-Asym ≤ 15
- Sens < 20
- Met > Sen
- 1 added
- 1 removed

**DEFINITION:**
- Not O-N or Met
- Sen ≥ 15
- S-Asym ≤ 20
- Met ≤ 25
- Sen > Met

**DEFINITION:**
- Not included in any category

B

![Sensory Estimate vs Metabolic Estimate](image)

- ▼ ▲ Classified (N = 126)
- • Unclassified (N = 19)

Blue shading: metabolic estimate
Red shading: sensory estimate

C

![Threshold vs Frequency](image)

Older-Normal Category (N = 53)
Metabolic Hearing Loss Category (N = 66)
Sensory Hearing Loss Category (N = 7)
S8 Fig. TwinsUK cohort classification. A) Schematic showing the classification process and numbers at each stage. B) Plot of the sensory estimate against the metabolic estimate for each well-fit case, with the blue/red shading indicating the magnitude of each estimate. The small dots are the Unclassified cases. C) shows the mean audiograms for the cases assigned to each category (error bars are standard error of the mean).