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Supplementary Table 1. Distribution of classes.

| Approach | Oval (orthogonal to tonotopic axis) | Spherical | Oval (along to tonotopic axis) |
|-------------------------|--|------------------|---------------------------------------|
| YX ratio (manual) | 63% | 29% | 8% |
| YX ratio (automatic) | 54% | 33% | 13% |
| Intensity + coordinates | 79% | 8% | 13% |
| Intensity profiles | 46% | 54% | 0% |
| Vector means | 58% | 38% | 4% |

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The “Vector sum” approach is omitted here, as its results are not based on ratios. $n = 24$ slices/19 animals.