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**Supplementary Table 1.** Distribution of classes.

<b>Approach</b>	<b>Oval (orthogonal to tonotopic axis)</b>	<b>Spherical</b>	<b>Oval (along to tonotopic axis)</b>
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.