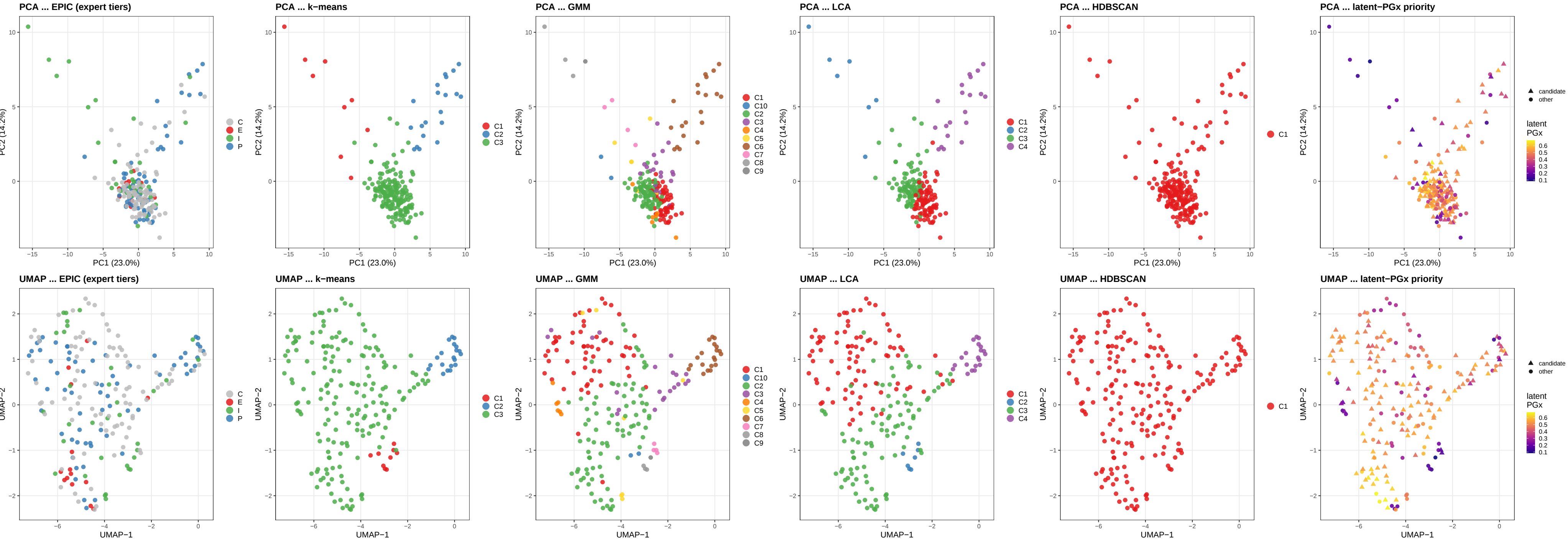
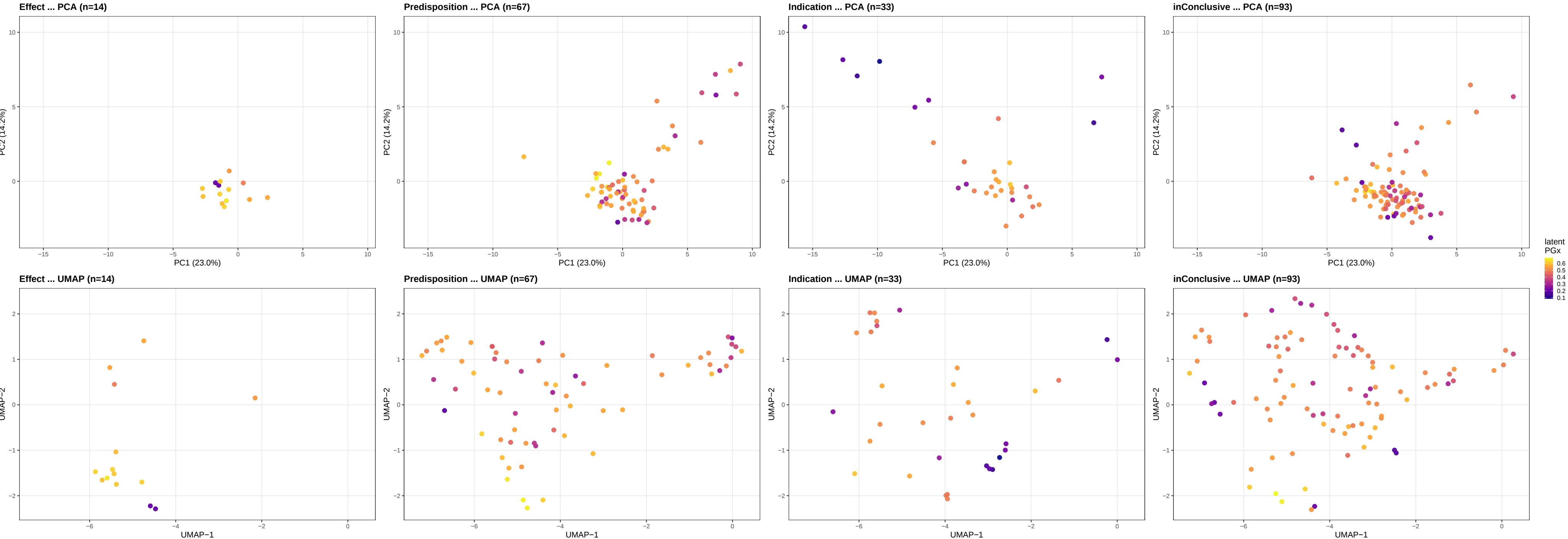


ABM Atlas ... PCA & UMAP projections of 207 locus×phenotype associations (27–feature self–contained model, locus–collapsed)

Top: PCA. Bottom: UMAP. Columns: expert EPIC tiers, four unsupervised classifiers, and the continuous latent–PGx prioritisation score (triangles = gated candidates).

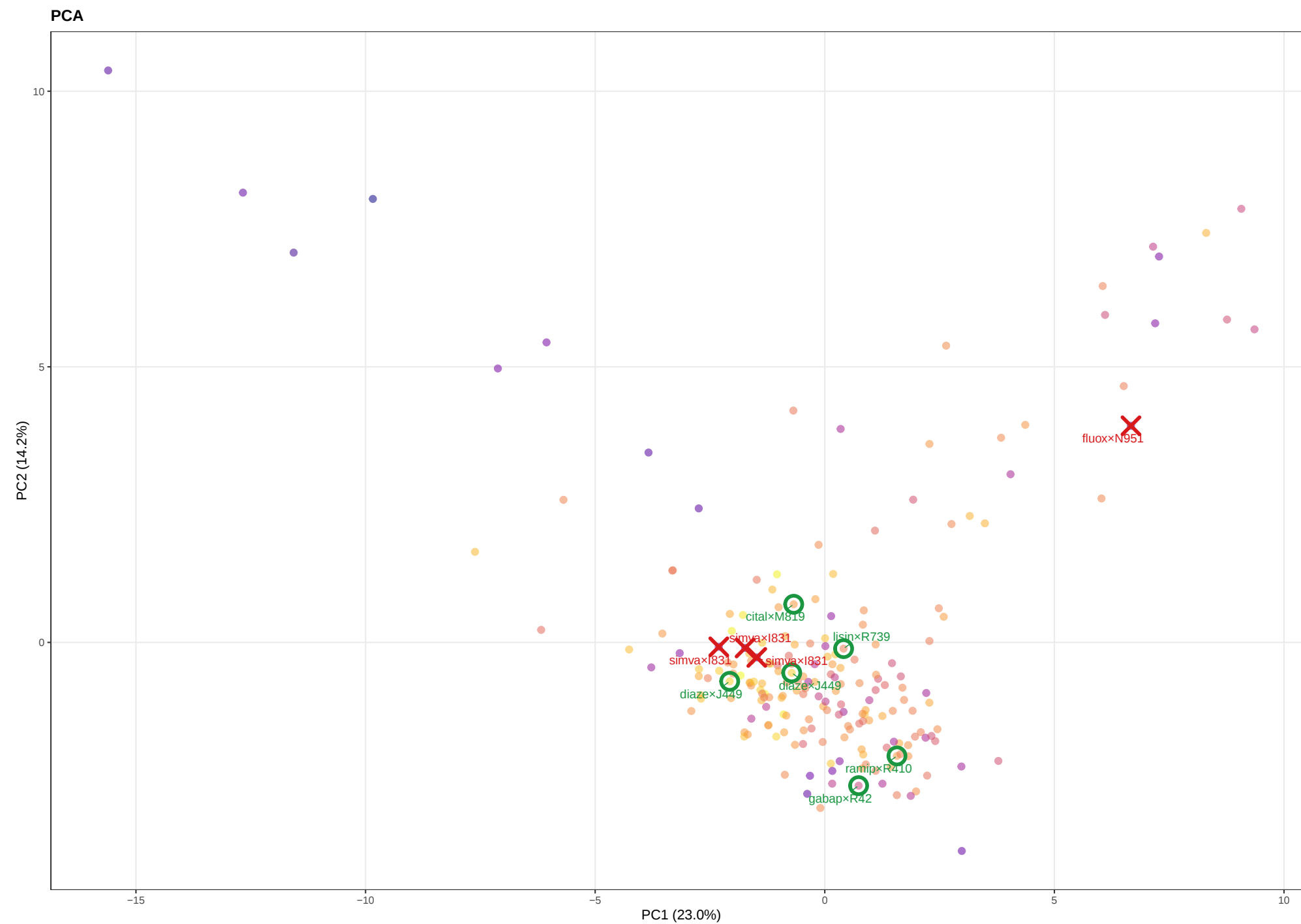


Expert EPIC classes coloured by latent-PGx score
Each panel shows only the named expert class (top: PCA, bottom: UMAP); shared latent-PGx colour scale and axes.



Curated associations marked on the latent-PGx landscape

Green circles = GOOD (target ADRs under review). Red crosses = BAD (expert-flagged comorbidity / indication). Fill = latent-PGx score.



ABM Atlas ... cluster names, EPIC overlap and description (v20, 34–feature model)

EPIC: E=Effect P=Predisposition I=Indication C=inConclusive. Overlap = % of each cluster's members falling in each expert EPIC tier.

Method	CI	n	Cluster name	EPIC	EPIC overlap % (E/P/I/C)	Description
KMEANS	C1	9	Indication (pleiotropic)	I	E 0 / P 11 / I 67 / C 22	NA
KMEANS	C2	20	Rare–variant predisposition	P	E 0 / P 65 / I 10 / C 25	NA
KMEANS	C3	178	Mixed background	P	E 8 / P 30 / I 14 / C 48	NA
GMM	C1	59	Predisposition–leaning	P	E 7 / P 39 / I 12 / C 42	NA
GMM	C2	84	Mixed background	P	E 11 / P 29 / I 11 / C 50	NA
GMM	C3	21	Weak–evidence residual	C	E 5 / P 24 / I 5 / C 67	NA
GMM	C4	6	Weak–evidence residual	C	E 0 / P 17 / I 17 / C 67	NA
GMM	C5	7	On–label indication	I	E 0 / P 0 / I 100 / C 0	NA
GMM	C6	20	Rare–variant predisposition	P	E 0 / P 65 / I 10 / C 25	NA
GMM	C7	4	Mixed background	I	E 0 / P 0 / I 50 / C 50	NA
GMM	C8	3	On–label indication	I	E 0 / P 0 / I 100 / C 0	NA
GMM	C9	1	On–label indication	I	E 0 / P 0 / I 100 / C 0	NA
GMM	C10	2	Predisposition–leaning	C	E 0 / P 50 / I 0 / C 50	NA
LCA	C1	86	Weak–evidence residual	P	E 4 / P 30 / I 9 / C 57	NA
LCA	C2	7	On–label indication	I	E 0 / P 14 / I 86 / C 0	NA
LCA	C3	94	Mixed background	I	E 12 / P 29 / I 18 / C 42	NA
LCA	C4	20	Rare–variant predisposition	P	E 0 / P 65 / I 10 / C 25	NA
HDBSCAN	C1	207	Mixed background	P	E 7 / P 32 / I 16 / C 45	NA