

Supplementary Table S1. Statistical criteria for LCA model selection in BS patients at Ibn Sina University Hospital (Rabat, Morocco, 2012-2022).

Class	Log-likelihood	AIC	BIC	Entropy	<i>p</i>
2	-2830	5725	5868	0.996	<.001
3	-2758	5615	5831	0.968	<.001
4	-2715	5565	5854	0.854	<.001
5	-2697	5562	5924	0.874	<.001
6	-2680	5562	5998	0.856	<.001

AIC: Akaike information criterion; BIC: Bayesian information criterion.

Supplementary Table S2. Key comparative features of LCA and traditional cluster analysis.

Latent class analysis (LCA)	Traditional cluster analysis (CA)
Model-based clustering	Distance-based clustering
Probabilistic classification	Deterministic classification
Includes observed+unobserved variables	Uses only observed variables
Captures intricate patterns	Assumes groups are clearly separated
Choice of class number (clinical relevance+statistical criteria)	Automatic selection of cluster number (hypothesis-free)