Multimedia Appendix 3. Data extraction form and detailed information for coding of subgroups.

Domain (number, name)	Extracted items	Initial coding (categorizing)	Subgroup (number, name)	Subgroup coding for meta-analysis or quality assessment
D1, primary information domain	First author	N/A	N/A	N/A
	Publication year	N/A	N/A	N/A
	Publication type	Research article, Letter, Brief communication (report), Conference proceeding, Dissertation, Others	D1-S1, Publication type	Research article (Journal)/others subgroup
D2, participations or dataset domain	Data subset	Training dataset	N/A	N/A
		Internal validation (cross or split validation), external validation dataset	D2-S1, Validation dataset-1	Internal/external/unknown subgroup
			D2-S2, Validation dataset-2	Internal-cross/internal-split/external/unknown subgroup
	Dataset type (for validation)	Public, Private, Others	D2-S3, Dataset type	Public/Private/Others or unknown subgroup
	Number of sample	Per patients	N/A	N/A
		Per cases (images, genes etc.)	N/A	N/A
	Mean age	< 6 years, 6 to 18 years, > 18 years	D2-S4, Age (6/18)	< 6 /6 to 18/> 18 years/ unknown subgroup
			D2-S5, Age (6)	< 6/> 6 years/ unknown subgroup
			D2-S6, Age (18)	< 18/> 18 years/ unknown subgroup
	Infant study	Infant study or not	D2-S7, Infant study	Infant study/not infant study/unknown subgroup
	Gender distribution	Male or female only, mixed or unknown	D2-S8, Gender distribution	Male only/female only/mixed/unknown subgroup
	Age or gender matched	Matched or not	D2-S9, Age or gender matched	Matched/not-Matched/unknown subgroup
	ASD subtype	Autistic disorder, Asperger's syndrome, Rett Syndrome, pervasive developmental disorder	N/A	N/A

		not otherwise specified (PDD-NOS)		
	Psychiatric function	Intelligence, verbal ability etc.	-	-
	Quality parameters	Slice thickness, calibration data etc.	-	-
D3 (performance and validation condition domain)	Acquisition or pre-processing	Yes or no	D3-S1, Acquisition	Acquisition (Y)/ Acquisition (N) subgroup
	Segmentation	Manually, not machine learning algorithm based, machine learning algorithm based segmented	D3-S2, Segmentation	Manually/not machine learning algorithm based/machine learning algorithm based/Not applicable/unknown subgroup
	Extraction	Filter, wrapper, embedded, manually or others	D3-S3, Extraction	Filter/wrapper/embedded/manually/others subgroup
	Predictor (for classification)	Structural MRI, functional MRI, biochemical markers, behavior assessment, voice, electroencephalography (EEG), others	D3-S4, Predictor	Structural MRI/functional MRI/biochemical markers/behavior assessment/voice/EEG/text subgroup
	Classification type	Support vector machine (SVM), neural network, decision tree, regression, ensemble, random forest, fuzzy etc.	D3-S5, Classifier tech-tree-1	SVM/deep-neural network(DNN)/ Probabilistic neural network/decision tree/regression/ensemble/random forest/fuzzy subgroup
		Supervised, unsupervised, reinforce, mixed or others	D3-S6, Classifier tech-tree-2	Supervised/unsupervised/others subgroup
	Reference standard	DSM or others	D3-S7, Reference standard	DSM/others subgroup
	Disease positive	Autistic disorder, Asperger's syndrome, Rett Syndrome, pervasive developmental disorder not otherwise specified (PDD-NOS)	D3-S8, Autism characters	ASD/others subgroup
	Disease negative	Control (not-otherwise specified), typically developing, developing delayed, other psychiatric disorders etc.	D3-S9, Control characters	Typically developing/Others subgroup
D4 (accuracy indices domain)	Accuracy indices	True-positive/true-negative/false-positive/false-negative	D4S1 to D4S4	TP/FP/FN/TN
		Area Under the Curve, diagnostic odds ratio,	N/A	N/A

Note: N/A, Not Applicable.