

Supplementary Table 1: cluster centroid values for males and females derived from the ANDIS cohort.

	Cluster	Hba1C	BMI	Age at onset	HOMA2-B	HOMA2-IR
Women	SIDD	1.8702613	-0.2415449	-0.1929637	-0.9744690	0.0564690
	SIRD	-0.2548480	0.5189057	0.3214557	1.3558191	1.1801933
	MOD	-0.3003478	0.6683606	-0.9388278	-0.0355686	-0.1405151
	MARD	-0.4582762	-0.5854255	0.5980588	-0.1455265	-0.4254893
Men	SIDD	1.5218580	-0.4284673	-0.4017103	-0.9839733	-0.1630751
	SIRD	-0.3908017	0.5396294	0.4235841	1.2905915	1.1801031
	MOD	-0.0691576	1.0305317	-1.0157681	0.1574222	0.1343923
	MARD	-0.5367578	-0.4776681	0.5031031	-0.0900434	-0.4233873

Supplementary Table 2: multivariable linear regression model with log transformed HOMA-IR at the last visit on study medication as outcome

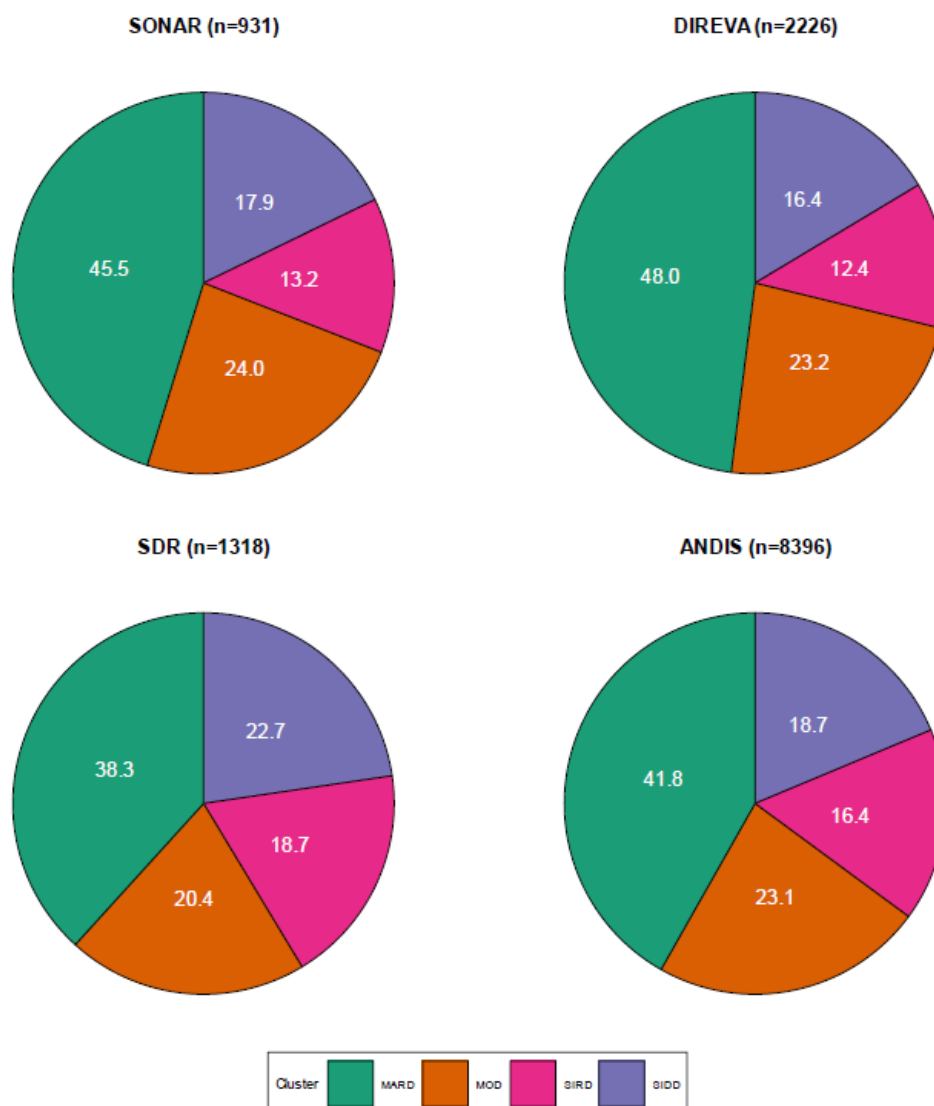
Characteristic	Beta (95% CI)	p-value
Baseline HOMA-IR, log transformed	0.57 (0.49, 0.66)	<0.001
Age, years	0.00 (-0.01, 0.01)	0.773
Atrasentan treatment	-0.20 (-0.32, -0.08)	0.002
eGFR, ml/min/1.73m ²	0.00 (0.00, 0.01)	0.072
Insulin started after randomization	0.32 (0.17, 0.48)	<0.001
Oral antihyperglycemic medication	-0.45 (-0.90, 0.00)	0.051
Cluster		
MARD	<i>Reference</i>	
MOD	0.24 (0.07, 0.41)	0.006
SIDD	0.21 (0.02, 0.39)	0.029
SIRD	0.04 (-0.15, 0.23)	0.651

Note: Abbreviations: eGFR = estimated Glomerular Filtration Rate, MARD = mild age-related diabetes, MOD = mild obesity-related diabetes, SIDD = severe insulin-deficient diabetes, SIRD = severe insulin-resistant diabetes

Supplementary Table 3: number of patients per cluster who initiated insulin therapy after trial enrollment.

Cluster	Treatment		Total (n/N, %)
	Atrasentan (n/N, %)	Placebo (n/N, %)	
SIDD	16/69 (23.2%)	29/92 (31.5%)	45/161 (28.0%)
SIRD	5/59 (8.5%)	8/64 (12.5%)	13/123 (10.6%)
MOD	24/112 (21.4%)	20/111 (18.0%)	44/223 (19.7%)
MARD	19/214 (8.9%)	26/210 (12.4%)	45/424 (10.6%)

Supplementary Figure 1: patient distribution for different study cohorts



Note: Abbreviations: SONAR = Study Of Diabetic Nephropathy With AtRasentan; DIREVA = Diabetes Registry Vaasa; SDR = Scania Diabetes Registry; ANDIS = All New Diabetics in Scania. For the DIREVA, SDR, and ANDIS participants were categorized according to k-means clustering. For comparison, patients with GAD antibodies (Severe Autoimmune Diabetes) were excluded from the analysis.

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Supplementary Figure 2: the change in glucose during the SONAR clinical trial stratified by treatment assignment and phenotypic cluster

