

Supplementary Table 1 – Case summaries

Case	ELSA outcome	Age at ELSA entry (years)	Ethnicity	Gender	ELSA auto-antibodies	ELSA HbA1c % (mmol/mol)	Fasting glucose (mmol/L)	2-hr glucose (mmol/L)	Family History of type 1 diabetes	Co-morbidity	Time to stage 3b onset (symptomatic type 1 diabetes, insulin commenced)	DKA at diagnosis	Hospital admission at stage 3 identification	Details of hospital admission	HbA1c at treatment onset % (mmol/mol)	Treatment regimen
1	Stage 3a	7	White British	Female	IA-2A, ZnT8	6.0 (42)	4.6	12.6	Sibling		8 Months after stage 3a OGTT	No	No		6.6 (49)	Commenced 1 unit insulin detemir and then added 1 unit insulin aspart with evening meal added
2	Stage 3a	9	White British	Female	IAA, GAD	6.0 (42)	5.3	12.9	No		Remained asymptomatic, insulin commenced 4 months after stage 3a OGTT	No	No		6.0 (42)	Started 0.5 units insulin aspart with breakfast and split dose 0.5 and 0.5units pre and post evening meal
3	Stage 3b	9	White British	Male	IA-2A, ZnT8	6.3 (45)	4.3	12.1	Parent	Vestibular/abdominal migraines	Immediately	No	Yes, 1 night	Admitted for education	6.4 (46)	Commenced insulin immediately. Started insulin 19/09/23 at 0.3U/kg/day = insulin detemir 4 units at 2000 (detemir reduced to 3 units on 20/09/23), insulin aspart 2 units with meals three times daily (19/09/23)
4	Stage 3b	3	White British	Male	GAD, ZnT8	5.7 (39)	4.7	13.6	Sibling		Immediately, 10 days of thirst and hyperphagia prior to ELSA OGTT	No	Yes, 3 nights	Admitted for glucose monitoring	5.7 (39)	First night of admission, commenced on 1 unit insulin detemir leading to hypoglycaemia. Admitted for 3 nights for glucose

															monitoring. On discharge, advised insulin aspart 0.5-1 unit with evening meal (1:20). Mum also giving correction doses.
5	Stage 2	5	White British	Female	IA-2A, GAD, ZnT8	5.9 (41)	4.1	9.9	Parent	Constipation	3 months after stage 2 OGTT	No	No (2 paediatric assessment unit attendances pre-stage 3)	6.7 (50)	Commenced 0.5 units ultra-rapid acting insulin aspart with evening meal and increased to 0.5 units ultra-rapid acting insulin aspart with breakfast and 1 unit with evening meal
6	Stage 1	3	White British	Male	IA-2A, GAD, ZnT8	5.6 (38)	4.7	7	Sibling		4 months after stage 1 OGTT	No	Yes, 1 night		Now on omnipod pump with automated insulin delivery
7	Single Aab	8	White British	Male	IA-2A				Grandparent		1 month after completing ELSA	No	Yes	6.7 (50)	Commenced insulin degludec 6 units (initially reduced down to 2.5 units and then to 4.5 units) and insulin aspart 1:30 (reduced to 1:35)
8	Single Aab	3	Asian or British Pakistani	Male	GAD				Sibling		1-2 months after completing ELSA	No	No		
9	Multiple Aab	5	White British	Male	IA-2A, GAD, ZnT8				Parent and sibling		Whilst awaiting OGTT	No	Yes	6.6 (49)	
10	DBS positive	8	White British	Male					Sibling			No	Yes	5.5 (37)	Commenced 1 unit insulin glargine and 0.5 units fixed dose insulin aspart

																	with meals.
11	DBS positive	9	White British	Male				Cousin	Juvenile Idiopathic Arthritis (on Methotrexate), Psoriasis, Vitiligo	4 months pre diagnosis	No	Yes, 3 nights			10.6 (92)	Commenced insulin detemir (BD) 3.5 units and 2.5 units and insulin aspart 1:25-35, changed to ultra-rapid acting insulin aspart 1:25-35	
12	DBS positive	7	White British	Female				Sibling		2 weeks pre-diagnosis	No	Yes, 3 nights			15.1 (142)	Commenced insulin degludec and insulin aspart	
13	DBS positive	11	White British	Male				Parent	Coeliac disease	4 weeks pre-diagnosis	Yes, mild	Yes, 1 night	pH 7.21, ketones 6.4 mmol/L		6.5 (47)	Commenced insulin aspart and insulin detemir and changed to ultra-fast acting insulin aspart, but experienced frequent hypoglycaemia. Commenced automated insulin delivery T-Slim within 4 months of diagnosis	
14	DBS positive	12	Black or British Black African	Male				No		2 months pre-diagnosis/prior to ELSA venous confirmation	Yes, mild	Yes, 7 nights	pH 7.21, ketones 6.8 mmol/L; prolonged admission due to language barriers		12.9 (118)	Commenced insulin glargine 16 units at night and insulin aspart 1:10-20 with meals (reduced insulin doses)	

Key: DBS – dried blood spot, Aab – autoantibody

