

Supplementary Material for:

A Japanese Study Assessing Glycemic Control with use of IDegAsp

Co-formulation in Patients with Type 2 Diabetes in Clinical Practice:

the JAGUAR study

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Hypoglycemic events were taken from the administrative database and identified by the following billable International Classification of Diseases (ICD), tenth edition, clinical modification (CM) (ICD-10-CM) codes (ICD.Codes):

- E16.0: a diagnosis of drug-induced hypoglycemia without coma
- E16.1: a diagnosis of other hypoglycemia
- E162: a diagnosis of hypoglycemia, unspecified

A diagnosis of type 2 diabetes was identified using ICD-10-CM code E11 subtypes (ICD.Codes):

- E11.0: type 2 diabetes mellitus with hyperosmolarity
- E11.2: type 2 diabetes mellitus with kidney complications
- E11.3: type 2 diabetes mellitus with ophthalmic complications
- E11.4: type 2 diabetes mellitus with neurological complications
- E11.5: type 2 diabetes mellitus with circulatory complications

- E11.6: type 2 diabetes mellitus with other specified complications
- E11.8: type 2 diabetes mellitus with unspecified complications
- E11.9: type 2 diabetes mellitus without complications

Table S1 Patient demographics and baseline clinical characteristics for patients according to their previous insulin therapy

	Pre-mixed insulin (n=4847)	Basal–bolus insulin (n=4400)	Basal insulin (n=1551)	Total population (n=10,798)
Age, mean \pm SD (years)	70.7 \pm 10.6	71.3 \pm 11.7	66.7 \pm 12.4	70.4 \pm 11.4
Female, n (%)	2086 (43.0)	1853 (42.1)	686 (44.2)	4625 (42.8)
Inpatient setting, n (%)	2151 (44.4)	3553 (80.8)	504 (32.5)	6208 (57.5)
BMI, mean \pm SD (kg/m ²) ^a	23.7 \pm 4.5	23.2 \pm 4.6	24.4 \pm 4.5	23.4 \pm 4.6
Duration of type 2 diabetes, mean \pm SD (years)	10.9 \pm 8.5	6.4 \pm 7.7	9.5 \pm 7.7	8.9 \pm 8.3
HbA _{1c} , mean \pm SD (%) ^b	7.9 \pm 1.4	8.7 \pm 2.2	8.7 \pm 1.5	8.4 \pm 1.9
History of hypertension, n (%)	3669 (75.7)	3149 (71.6)	1100 (70.9)	7918 (73.3)
History of dyslipidemia, n (%)	3397 (70.1)	2592 (58.9)	1171 (75.5)	7160 (66.3)
History of nephropathy, n (%)	2114 (43.6)	1566 (35.6)	763 (49.2)	4443 (41.1)
History of retinopathy, n (%)	2049 (42.3)	1562 (35.5)	685 (44.2)	4296 (39.8)
History of neuropathy, n (%)	1264 (26.1)	1020 (23.2)	448 (28.9)	2732 (25.3)
Total number of concomitant medications, mean \pm SD	12.2 \pm 8.4	17.9 \pm 11.1	10.6 \pm 6.1	14.3 \pm 9.8

^aBaseline BMI measurements: total population (n=4928); pre-mixed insulin (n=1486); basal–bolus insulin (n=3142); basal insulin (n=300). ^bBaseline HbA_{1c} measurements: total population (n=913); pre-mixed insulin (n=370); basal–bolus insulin (n=443); basal insulin (n=100).

BMI, body mass index; SD, standard deviation.

Table S2 Patient demographics and baseline clinical characteristics for patients with an HbA_{1c} value at baseline

	HbA_{1c} recorded at baseline^a (n=913)	No HbA_{1c} recorded at baseline (n=9885)	Total population (n=10,798)
Age, mean ± SD (years)	70.4 ± 11.8	70.4 ± 11.4	70.4 ± 11.4
Female, n (%)	398 (43.6)	4227 (42.8)	4625 (42.8)
Inpatient setting, n (%)	589 (64.5)	5619 (56.8)	6208 (57.5)
BMI, mean ± SD (kg/m ²) ^b	23.8 ± 4.3	23.4 ± 4.6	23.4 ± 4.6
Duration of type 2 diabetes, mean ± SD (years)	9.3 ± 9.2	8.9 ± 8.3	8.9 ± 8.3
History of hypertension, n (%)	688 (75.4)	7230 (73.1)	7918 (73.3)
History of dyslipidemia, n (%)	619 (67.8)	6541 (66.2)	7160 (66.3)
History of nephropathy, n (%)	449 (49.2)	3994 (40.4)	4443 (41.1)
History of retinopathy, n (%)	385 (42.2)	3911 (39.6)	4296 (39.8)
History of neuropathy, n (%)	271 (29.7)	2461 (24.9)	2732 (25.3)
Insulin therapy, n (%)			
Pre-mixed insulin	370 (40.5)	4477 (45.3)	4847 (44.9)
Basal–bolus insulin	443 (48.5)	3957 (40.0)	4400 (40.7)
Basal insulin	100 (11.0)	1451 (14.7)	1551 (14.4)

^aMean \pm SD baseline HbA_{1c} was 8.4% \pm 1.9; [‡]Baseline BMI measurements: total population (n=4928); patients with HbA_{1c} recorded at baseline (n=484); patients without HbA_{1c} recorded at baseline (n=4444).

BMI, body mass index; SD, standard deviation.

Table S3 HbA_{1c} (%) at 12 months by baseline insulin therapy (descriptive data).

	Pre-mixed insulin (n=200)	Basal–bolus insulin (n=184)	Basal insulin (n=58)	Total population (n=442)
Mean \pm SD	7.5 \pm 1.2	7.5 \pm 1.2	8.0 \pm 1.1	7.6 \pm 1.2
Median	7.4	7.3	7.9	7.4
Minimum; maximum	5.4; 15.5	4.5; 12.3	5.5; 11.7	4.5; 15.5

SD, standard deviation.

Table S4 Rates of hypoglycemia at 12 months by baseline insulin therapy (descriptive data).

	N	Number of events after IDegAsp treatment	Rate after IDegAsp treatment [events per participant-year]	Number of events at baseline	Rate at baseline [events per participant-year]
Total	10,798	659	0.09	1005	0.10
Pre-mixed insulin	4847	205	0.06	412	0.09
Basal–bolus insulin	4400	412	0.15	510	0.15
Basal insulin	1551	42	0.04	83	0.06

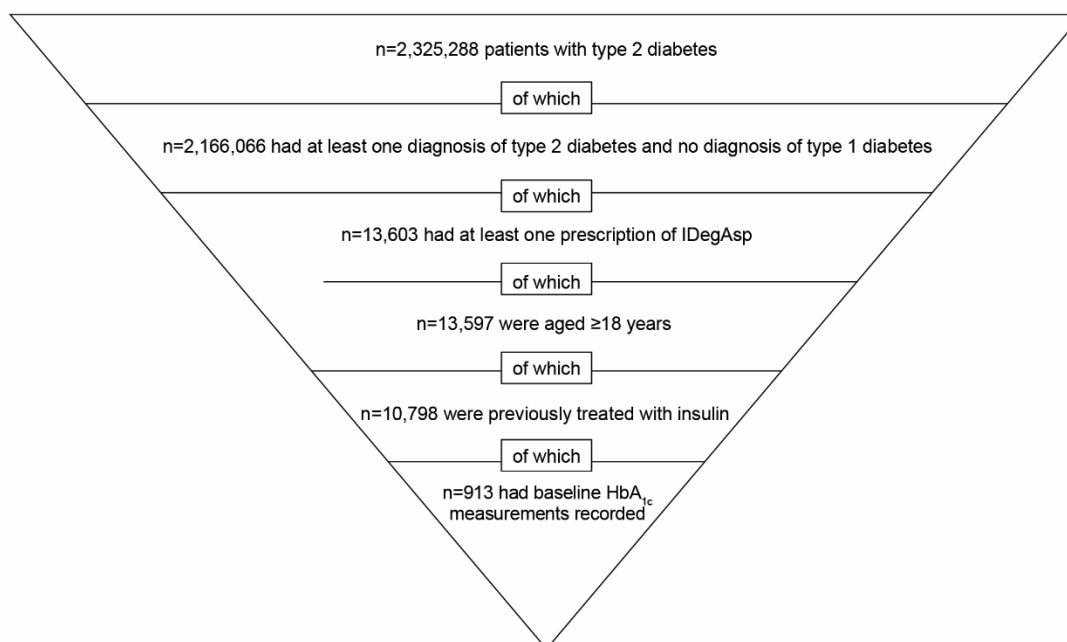
IDegAsp, insulin degludec/insulin aspart

Table S5 Total number of concomitant medications at 12 months by baseline insulin therapy.

	Pre-mixed insulin (n=4847)	Basal–bolus insulin (n=4400)	Basal insulin (n=1551)	Total population (n=10,798)
Mean ± SD	12.8 ± 8.9	17.3 ± 11.2	11.2 ± 7.0	14.4 ± 10.0

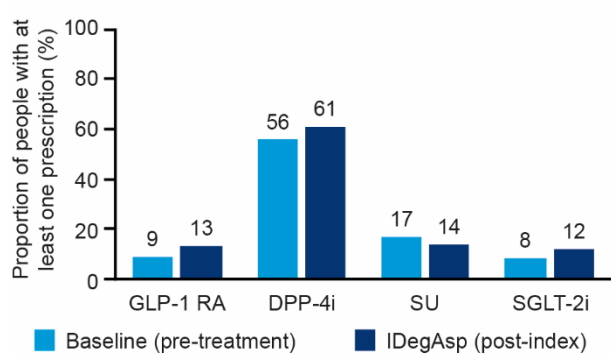
SD, standard deviation.

Figure S1 Selection of patients from the MDV database for inclusion in the analysis



IDegAsp, insulin degludec/insulin aspart; MDV, Medical Data Vision.

Figure S2 Proportion of patients receiving at least one concomitant medication, before IDegAsp treatment and 12 months after treatment.



DPP-4i, dipeptidyl peptidase 4 inhibitor; GLP-1 RA, glucagon-like peptide-1 receptor agonist;

IDegAsp, insulin degludec/insulin aspart; SGLT-2i, sodium–glucose co-transporter 2 inhibitor; SU, sulfonylurea.

References for Supplementary Material:

- ICD.Codes. (2019, December). ICD-10-CM Code E11.0. Retrieved from <https://icd.codes/icd10cm/E11>
- ICD.Codes. (2019, December). ICD-10-CM Code E16.0. Retrieved from <https://icd.codes/icd10cm/E160>