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RESEARCH LETTER

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Impact of kidney function on the safety and efficacy of insulin degludec versus insulin glargine U300 in people with type 2 diabetes: A post hoc analysis of the CONCLUDE trial

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Chronic kidney disease (CKD) is a common complication of type 2 diabetes (T2D) that, in insulin-treated people can result in decreased insulin clearance and increased risk of hypoglycaemia.[1] Severe hypoglycaemia is associated with increased morbidity and mortality, particularly in relation to cardiovascular disease (CVD).[2,3] CKD is associated with an increased risk of hypoglycaemic events in people with or without diabetes,[1] and also independently increases the risk of CVD and death.[4] Careful titration of insulin is therefore required in people with reduced kidney function, to minimize the risk of hypoglycaemia.[5] Newer basal insulin analogues, such as insulin degludec 100 units/mL or 200 units/mL (degludec U100 or U200) and insulin glargine 300 units/mL (glargine U300), have more stable and prolonged pharmacokinetic/pharmacodynamic profiles than their first-generation predecessors[6,7] resulting in reduced glycaemic variability and allowing for more flexible dosing and reduced risk of hypoglycaemia.[8,9]

A post hoc analysis of the BRIGHT trial showed a greater difference in reduction of glycated haemoglobin (HbA1c) levels with glargine U300 versus degludec U100 in participants with poor kidney function at baseline (estimated glomerular filtration rate [eGFR] <60 mL/min/1.73 m^2) than in subgroups with less impaired kidney function.[10] The CONCLUDE trial (NCT03078478) investigated the effect of degludec U200 (degludec) and glargine U300 on hypoglycaemia in adults with basal insulin-treated T2D who had at least one risk criterion for hypoglycaemia,[11] one of which was

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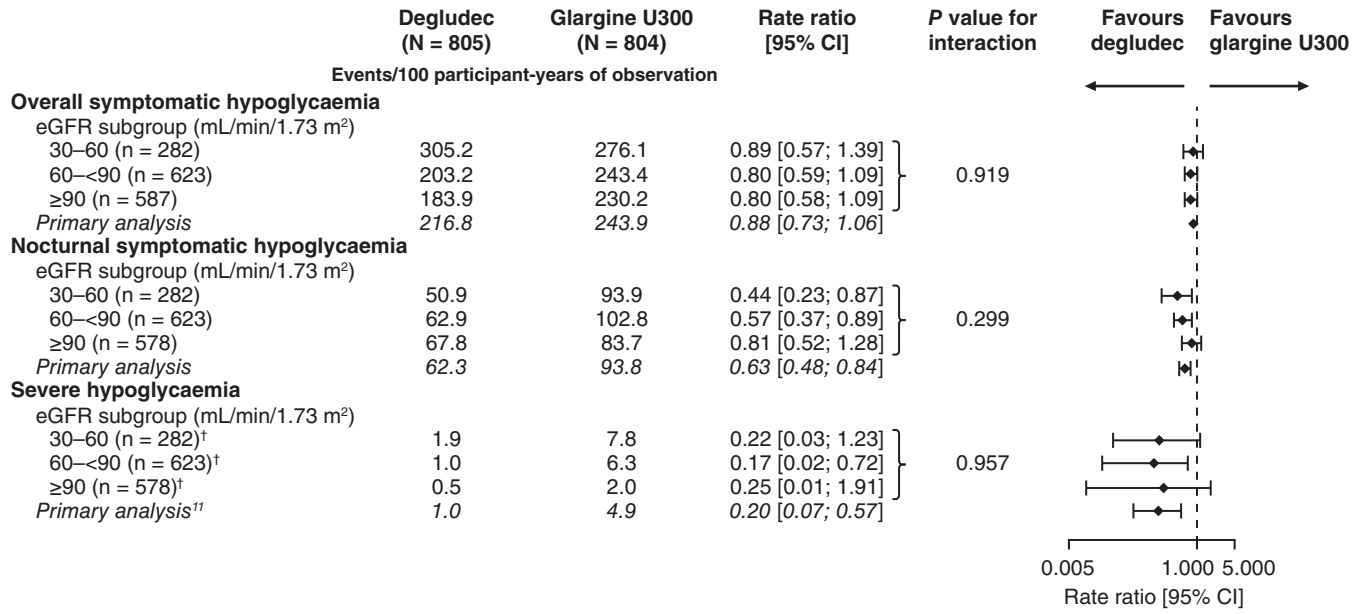

FIGURE 1 Hypoglycaemia endpoints, by baseline estimated glomerular filtration rate (eGFR) subgroup. Overall symptomatic hypoglycaemic events were defined as severe (requiring third-party assistance)[13] or confirmed blood glucose <3.1 mmol/L [with symptoms]). Nocturnal symptomatic hypoglycaemic events were defined as severe or blood-glucose confirmed with symptoms, occurring between 00:01 and 05:59 AM. The number of hypoglycaemic events was analysed using a negative binomial regression model (log link) with the logarithm of the time period in which a hypoglycaemic event was considered treatment emergent as offset. The model included treatment, number of oral antidiabetic drugs, region, gender, dosing time and interaction of kidney function group with treatment as fixed factors, and age as a covariate. †Because of a very low number of events, severe hypoglycaemia was analysed using a simplified model. CI, confidence interval; degludec, insulin degludec; glargine U300, insulin glargine 300 units/mL

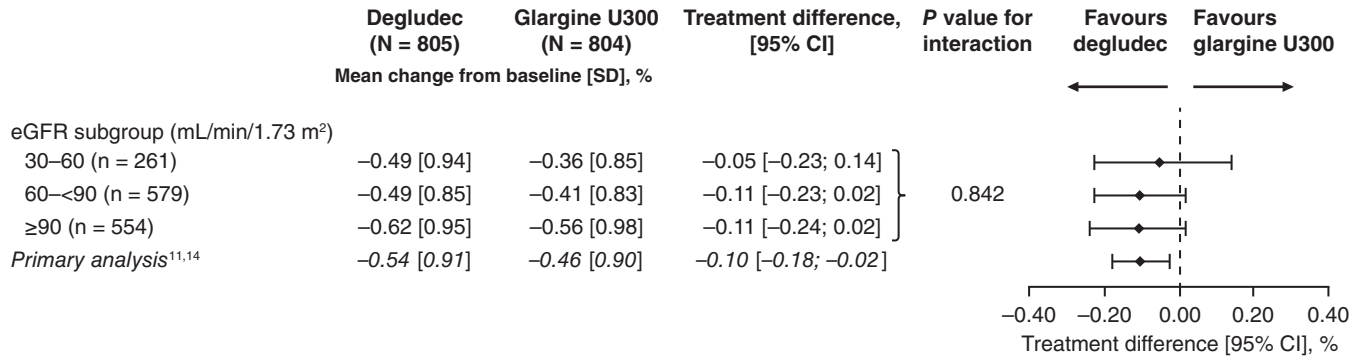

FIGURE 2 Change from baseline to end of treatment (EOT) in glycated haemoglobin (HbA1c), by baseline estimated glomerular filtration rate (eGFR) subgroup. Mean change in HbA1c from baseline to EOT was analysed using a mixed model for repeated measures with an unstructured residual covariance matrix. Treatment, number of oral antidiabetic drugs, region, sex, dosing time, and interaction between treatment and eGFR category were included as fixed factors. Age and baseline HbA1c were included as covariates. The model included the interaction between visit number and all explanatory variables. CI, confidence interval; degludec, insulin degludec 200 units/mL; glargine U300, insulin glargine 300 units/mL; SD, standard deviation

moderate CKD (eGFR 30-59 mL/min/1.73m^2). Participants with an eGFR lower than 30 mL/min/1.73 m^2 were excluded. The CONCLUDE study design and methods have previously been reported.[11,12] In February 2018, a protocol amendment led to a trial extension to a total duration of up to 94 weeks with up to 88 weeks of active treatment, including a maintenance period of 36 weeks.[12] The primary endpoint was not met, with the rate of symptomatic hypoglycaemia not significantly lower with degludec U200 versus glargine U300.[11] Other, exploratory post hoc analyses demonstrated lower rates of nocturnal symptomatic hypoglycaemic events and severe hypoglycaemia during the maintenance period and a significantly greater, but not clinically meaningful, reduction in mean HbA1c from baseline to end of treatment (EOT) with degludec versus glargine U300 (−5.9 vs. −5.0 mmol/mol [−0.54 vs. −0.46%]).[11] The mean (± standard deviation [SD]) dose of degludec was also lower than that for glargine U300 at the end of the trial (66.6 ± 48.5 U vs. 73.0 ± 48.5 U).[11]

As the risk criteria for hypoglycaemia in CONCLUDE included moderate CKD,[11] the study allowed additional analyses on the impact of renal function on the safety and efficacy of degludec versus glargine U300. Therefore, in a post hoc analysis, we assessed mean change in rates of overall symptomatic, nocturnal symptomatic and severe hypoglycaemia during the 36-week maintenance period (during which the data would not be confounded by effective differences in titration of two insulins with different unit potencies), HbA1c from baseline to EOT, and EOT total daily insulin dose, stratified by baseline eGFR (30-60, 60-<90 or ≥ 90 mL/min/1.73 m^2).

CONCLUDE randomized 805 participants to degludec and 804 to glargine U300. The eGFR 30 to 60 mL/min/1.73 m^2, 60 to <90 mL/min/1.73 m^2 and ≥ 90 mL/min/1.73 m^2 subgroups included 174, 325 and 306 participants, respectively, in the degludec treatment arm, and 149, 345 and 310 participants in the glargine U300 treatment arm. Baseline characteristics were generally similar between insulin treatment groups within each of the eGFR subgroups (Table S1). Participants with CKD stage III (eGFR 30-60 mL/min/1.73 m^2) tended to be older than those in the other eGFR subgroups, and to have had a longer duration of diabetes.

The rate of overall symptomatic hypoglycaemia increased progressively with declining eGFR in both treatment arms (Figure 1). The hypoglycaemia rate ratios in the eGFR subgroups were comparable with the primary analysis for all hypoglycaemia endpoints assessed, with numerically lower estimated rates of hypoglycaemia observed with degludec compared with glargine U300. No significant treatment-eGFR subgroup heterogeneity was observed for degludec and glargine U300 comparisons for any of the hypoglycaemia endpoints measured (overall symptomatic hypoglycaemia: *P* interaction = 0.919; nocturnal symptomatic hypoglycaemia: *P* interaction = 0.299; severe hypoglycaemia: *P* interaction = 0.957 [Figure 1]).

When comparing HbA1c change from baseline to EOT between the degludec and glargine U300 groups, the treatment difference was similar in the eGFR subgroups (*P* interaction = 0.842), and comparable to what was seen in the primary analysis: estimated treatment difference −1.07 (95% confidence interval [CI] −1.94, −0.20) mmol/mol (−0.10 [95% CI −0.18, −0.02]%),[11] with a slightly greater, although not clinically significant, decrease in HbA1c with degludec versus glargine U300 (Figure 2). The HbA1c treatment differences for degludec versus glargine U300 were −0.52 (95% CI −2.53, 1.48) mmol/mol (−0.05 [95% CI −0.23, 0.14]%), −1.18 (95% CI −2.52, 0.17) mmol/mol (−0.11 [95% CI −0.23, 0.02]%) and −1.20 (95% CI −2.59, 0.19) mmol/mol (−0.11% [95% CI −0.24, 0.02]) in the eGFR 30 to 60 mL/min/1.73 m^2, 60 to <90 mL/min/1.73 m^2 and ≥ 90 mL/min/1.73 m^2 subgroups, respectively.

The mean EOT total daily insulin dose was lower with degludec versus glargine U300 in all three eGFR subgroups, consistent with data reported in the primary analysis (Table S2). The mean (SD) dose ranged from 60.9 (40.6) U to 73.6 (56.5) U with degludec, and from 65.3 (43.3) U to 78.8 (52.5) U with glargine U300; higher doses of both insulins were used in patients in the higher eGFR subgroups. The treatment ratios for mean EOT total daily insulin dose ratios for degludec versus glargine U300 were 0.95 (95% CI 0.80, 1.12), 0.87 (95% CI 0.77, 0.97) and 0.90 (95% CI 0.80, 1.01) in the eGFR 30 to 60 mL/min/1.73 m^2, 60 to <90 mL/min/1.73 m^2 and ≥ 90 mL/min/1.73 m^2 subgroups, respectively, while the ratio was 0.88 (95% CI 0.83, 0.94) in the primary analysis.[11,14] No significant interaction was seen between insulin type and eGFR subgroup in terms of the EOT daily insulin dose (interaction $P = 0.688$).

In this post hoc analysis of CONCLUDE trial data, rate ratios for overall symptomatic hypoglycaemia did not differ significantly between insulin treatments by eGFR subgroup and were consistent with the primary analysis. Further, irrespective of renal function, there was a small but consistent greater reduction in HbA1c from baseline to EOT, and a lower total daily insulin dose with degludec versus glargine U300.

Our findings for change in HbA1c (a similar treatment difference between degludec and glargine U300 across the eGFR subgroups) are in contrast to those of the recently published post hoc analysis of the BRIGHT trial, which suggested a greater reduction in HbA1c from baseline to week 24 in insulin-naïve patients (least squares mean difference −4.7 [95% CI −8.1, −1.4] mmol/mol [−0.43 {95% CI −0.74, −0.12}%]) with glargine U300 versus degludec U100 in the lowest eGFR subgroup (<60 mL/min/1.73 m^2).[10] However, that result was based on a subgroup of only 47 (10.1%) participants in the glargine U300 arm and 49 (10.6%) participants in the degludec arm meeting the <60 mL/min/1.73 m^2 criterion. Our CONCLUDE analysis included more than three times the number of participants in the low eGFR 30 to 60 mL/min/1.73 m^2 subgroups (174 [21.6%] in the degludec arm and 149 [18.5%] in the glargine U300 arm), hence, in the absence of a dedicated trial comparing the two insulin analogues in moderate kidney insufficiency, this analysis may provide more accurate estimates. In addition, of the participants in BRIGHT who were treated with glargine U300, a greater proportion within the low eGFR <60 mL/min/1.73 m^2 subgroup were on a sulphonylurea medication at baseline (76.6%) than in the other subgroups (59.9% with eGFR 60 to <90 mL/min/1.73 m^2 and 65.4% with eGFR ≥90 mL/min/1.73 m^2). This could have disproportionately impacted end-of-trial HbA1c. In contrast, patients treated with sulphonylureas were excluded from CONCLUDE.

Similarly to our analysis, the incidence of hypoglycaemia was found to increase with decreasing eGFR in the BRIGHT trial, with no heterogeneity by treatment effect observed across eGFR subgroups for the incidence of confirmed hypoglycaemia (<3.0 mmol/L and ≤3.9 mmol/L) over 24 weeks. In addition, similarly to our analysis, mean insulin doses were higher for glargine U300 (range 0.47-0.61 units/kg) compared with degludec (range 0.35-0.44 units/kg) at 24 weeks, irrespective of eGFR subgroup, in the BRIGHT trial.

It is possible that some differences in results between the BRIGHT analysis and the present analysis may be attributable to differences in the patient populations and trial design. BRIGHT (N = 929) was a smaller study than CONCLUDE (N = 1609) with a shorter treatment period (24 weeks, compared with up to 88 weeks in CONCLUDE).[11,15] The BRIGHT trial included insulin-naïve people with T2D who were at lower risk of hypoglycaemia,[15] whereas CONCLUDE included insulin-experienced individuals with T2D and additional hypoglycaemia risk factors.[11] The mean duration of diabetes within the eGFR subgroups in

BRIGHT was also generally shorter than in CONCLUDE (range 9.3-15.4 years vs. 12.5-18.6 years, respectively). Moreover, the two trials had different titration algorithms, with an FBG target of 4.4 to 5.6 mmol/L in BRIGHT and 4.0 to 5.0 mmol/L in CONCLUDE.

Underlying mechanisms for any hypothetical differential effects of the two insulins based on kidney function are yet to be convincingly elucidated. Low serum albumin concentration has been associated with an increased risk of end-stage kidney disease.[16] As degludec, and not glargine U300, is albumin-bound,[17] it has been postulated that there could be a greater risk of hypoglycaemia with degludec in low albumin/eGFR conditions. Results from a small-scale crossover study suggested that degludec was associated with a higher risk of hypoglycaemia than glargine U300 in T2D participants with low albumin concentrations.[18] However, these data were limited by the short study period, lack of adjustment in starting insulin dose and heterogenous prior therapies in the study population.[19] Of note, neither BRIGHT nor CONCLUDE measured albumin levels. A post hoc analysis of the DEVOTE trial did not indicate an increased relative risk of hypoglycaemia for degludec versus glargine U100 in people with low albumin levels (<3.0 g/dL; n = 12) and did not demonstrate any albumin-related safety signal concerning degludec.[19,20] The hypothesis that degludec may have increased risk of hypoglycaemia in low albumin states appears improbable given that, at steady state, this insulin monomer occupies <0.01% of total albumin molecules, and the fraction occupied would remain negligible even in people with hypoalbuminaemia.[19] Furthermore, degludec, like any insulin, is individually titrated to the patient's glycaemic response. Therefore, for the free degludec fraction to increase significantly in an individual, there would need to be extreme acute changes in that person's albumin concentration.

In summary, this post hoc analysis of CONCLUDE found that rate ratios for hypoglycaemia were consistent with the primary analyses across kidney impairment subgroups. Furthermore, irrespective of kidney function, there was a small but consistent greater reduction in HbA1c from baseline and a lower total daily insulin dose with degludec versus glargine U300. It can therefore be concluded that degludec is a well-tolerated and efficacious treatment option for people with T2D and kidney impairment.

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CONFLICTS OF INTEREST

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AUTHOR CONTRIBUTIONS

Thomas R. Pieber contributed to the initial design of this post hoc analysis and Thomas R. Pieber and Harpreet S. Bajaj contributed to the data collection. All authors contributed to the analysis and interpretation of results, and the drafting and critical review of the manuscript, and all read and approved the final version. Thomas R. Pieber is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

PEER REVIEW

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DATA AVAILABILITY STATEMENT

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

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REFERENCES

1. Alsahli M, Gerich JE. Hypoglycemia, chronic kidney disease, and diabetes mellitus. *Mayo Clin Proc*. 2014;89:1564-1571.
2. Heller S, Lingvay I, Marso SP, et al. Risk of severe hypoglycaemia and its impact in type 2 diabetes in DEVOTE. *Diabetes Obes Metab*. 2020; 22:2241-2247.
3. Malik AH, Yandrapalli S, Aronow WS, et al. Severe hypoglycemia and risk of subsequent cardiovascular events: systematic review and meta-analysis of randomized controlled trials. *Cardiol Rev*. 2020;28: 244-249.
4. Lovre D, Shah S, Sihota A, Fonseca VA. Managing diabetes and cardiovascular risk in chronic kidney disease patients. *Endocrinol Metab Clin North Am*. 2018;47:237-257.
5. Rajput R, Sinha B, Majumdar S, Shunmugavelu M, Bajaj S. Consensus statement on insulin therapy in chronic kidney disease. *Diabetes Res Clin Pract*. 2017;127:10-20.
6. Becker RH, Nowotny I, Teichert L, Bergmann K, Kapitza C. Low within- and between-day variability in exposure to new insulin glargine 300 U/ml. *Diabetes Obes Metab*. 2015;17:261-267.
7. Heise T, Hermanski L, Nosek L, Feldman A, Rasmussen S, Haahr H. Insulin degludec: four times lower pharmacodynamic variability than insulin glargine under steady-state conditions in type 1 diabetes. *Diabetes Obes Metab*. 2012;14:859-864.
8. Haahr H, Heise T. A review of the pharmacological properties of insulin degludec and their clinical relevance. *Clin Pharmacokinet*. 2014;53: 787-800.
9. Riddle MC, Bolli GB, Home PD, et al. Efficacy and safety of flexible versus fixed dosing intervals of insulin glargine 300 U/mL in people with type 2 diabetes. *Diabetes Technol Ther*. 2016;18:252-257.
10. Haluzik M, Cheng A, Muller-Wieland D, et al. Differential glycaemic control with basal insulin glargine 300 U/mL versus degludec 100 U/mL according to kidney function in type 2 diabetes: a subanalysis from the BRIGHT trial. *Diabetes Obes Metab*. 2020;22:1369-1377.
11. Philis-Tsimikas A, Klonoff DC, Khunti K, et al. Risk of hypoglycaemia with insulin degludec versus insulin glargine U300 in insulin-treated patients with type 2 diabetes: the randomised, head-to-head CONCLUDE trial. *Diabetologia*. 2020;63:698-710.
12. Philis-Tsimikas A, Stratton I, Norgard Troelsen L, Anker Bak B, Leiter LA. Efficacy and safety of Degludec compared to glargine 300 units/mL in insulin-experienced patients with type 2 diabetes: trial protocol amendment (NCT03078478). *J Diabetes Sci Technol*. 2019;13:498-506.
13. Seaquist ERAJ, Childs B, Cryer P, et al. Hypoglycemia and diabetes: a report of a workgroup of the American Diabetes Association and the Endocrine Society. *Diabetes Care*. 2013;36:1384-1395.
14. Pieber TR, Bajaj HS, Heller SR, et al. HbA1c levels and rates of hypoglycemia with insulin degludec U200 and insulin glargine U300 stratified by estimated renal function in people with type 2 diabetes: a post hoc analysis from the CONCLUDE trial. Poster 1021-P. ADA 80th Scientific Sessions; June 12–16, 2020; Virtual meeting.
15. Rosenstock J, Cheng A, Ritzel R, et al. More similarities than differences testing insulin glargine 300 units/mL versus insulin Degludec 100 units/mL in insulin-naive type 2 diabetes: the randomized head-to-head BRIGHT trial. *Diabetes Care*. 2018;41:2147-2154.
16. Walther CP, Gutierrez OM, Cushman M, et al. Serum albumin concentration and risk of end-stage renal disease: the REGARDS study. *Nephrol Dial Transplant*. 2018;33:1770-1777.
17. Jonassen I, Havelund S, Hoeg-Jensen T, Steensgaard DB, Wahlund PO, Ribel U. Design of the novel protraction mechanism of insulin degludec, an ultra-long-acting basal insulin. *Pharm Res*. 2012; 29:2104-2114.
18. Kawaguchi Y, Sawa J, Hamai C, Kumeda Y. Differential effect of hypoalbuminemia on hypoglycemia on type 2 diabetes patients treated with insulin glargine 300 U/ml and insulin Degludec. *Diabetes Ther*. 2019;10:1535-1541.
19. Pieber TR, Bardtrum L, Isendahl J, Wagner L, Nishimura R. Commentary to "differential effect of hypoalbuminemia on hypoglycemia on type 2 diabetes patients treated with insulin glargine 300 U/mL and insulin degludec" by Kawaguchi et al. diabetes therapy 2019. *Diabetes Ther*. 2020;11: 561-567.
20. Amod A, Buse JB, McGuire DK, et al. Glomerular filtration rate and associated risks of cardiovascular events, mortality, and severe hypoglycemia in patients with type 2 diabetes: secondary analysis (DEVOTE 11). *Diabetes Ther*. 2020;11:53-70.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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