Letter from Novo Nordisk Ltd

To the Editor,

Novo Nordisk (UK) Limited have been made aware of a potential issue (via a UK healthcare professional) in the following review article:

Knezevich E, Kueser A (2016) Utility of antidiabetes medications in chronic kidney disease: A review. *Journal of Diabetes Nursing* **20**: 358–63

The issue concerns the use of the drug liraglutide in patients with a creatinine clearance rate of <30 mL/min. *Table 1* (page 362) reports that liraglutide is indicated in patients with a creatinine clearance rate of <30 mL/min. Furthermore, the article mentions that liraglutide can be used in patients undergoing haemodialysis – with caveats, in *Table 2* (page 363).

The above are not in accordance with the UK Summary of Product Characteristics which states:

> *"There is no therapeutic experience in patients with severe renal impairment (creatinine clearance below 30 mL/min). Victoza can currently not be recommended for use in patients with severe renal impairment including patients with end-stage renal disease."*

We acknowledge the authors are from the US, and whilst the article is correct in terms of the US prescribing information there are important differences between the US and EU label regarding the use of liraglutide in patients with severe renal impairment/ESRD. As the *Journal of Diabetes Nursing* is a UK-based journal and is predominantly targeted towards UK healthcare professionals, we felt it was appropriate to bring this to your attention.

Yours sincerely,

Charlotte Mason
Medical Information Specialist
Novo Nordisk Ltd

Publisher's response:

The publisher and the editorial board are grateful to Novo Nordisk for bringing this issue to our attention. We regret any confusion that may have resulted.

We agree that the content should be changed to reflect the journal's UK focus. Therefore, in consultation with the authors, we have amended the tables in the online version of the article. We have also reproduced the corrected tables alongside, as a convenient reference for our readers.

In addition, we have added more information to the text of the original article (page 359). The paragraph now states:

> *"Liraglutide has also been studied in patients with dialysis-dependent ESRD and was found to be efficacious in this population; however, the patients studied required much lower doses with slower titration to avoid excessive gastrointestinal adverse effects (Idorn et al, 2016). Within the EU, however, liraglutide's SPC does not recommend use in people with severe renal disease, including people with ESRD."*

OmniaMed SB
London
13 April 2017

Table 1. Indications and dose adjustment recommendations of antidiabetes medications at varying creatinine clearance levels.

Medication	Creatinine clearance rate (mL/min)			
	≥60	45–59	30–44	<30
Linagliptin	◆	◆	◆	◆
Sitagliptin	◆	◆ ≥50 ◇ <50 *	◇*	◇†
Saxagliptin	◆	◆ >50 ◇ ≤50 ‡	◇‡	◇‡
Alogliptin	◆	◆ >50 ◇ ≤50 §	◇§	◇‖
Vildagliptin	◆	◆ ≥50 ◇ <50 *	◇*	◇*
Exenatide	◆	◆	◆	◆
Liraglutide	◆	◆	◆	◆¶
Dulaglutide	◆	◆	◆	◆¶
Albiglutide	◆	◆	◆	◆¶
Lixisenatide	◆	◆	◆	◆¶
Insulin	◇	◇	◇	◇
Repaglinide	◆	◆	◆ >40 ◇ 20–39	◇ 20–39 ◆ <20
Nateglinide	◆	◆	◆	◆
Metformin	◆	◇	◇	◆
Glipizide	◇	◇	◇	◇
Gliclazide	◇	◇	◇	◇
Glimepiride	◇	◇	◇	◇
Glibenclamide	◇	◇ ≥50 ◆ <50	◆	◆
Canagliflozin**	◆	◇‡‡	◆	◆
Dapagliflozin**	◆	◆	◆	◆
Empagliflozin**	◆	◇§§	◆	◆
Pioglitazone	◆	◆	◆	◆

◆=The drug can be given at this creatinine clearance rate; ◇=Dose reductions are recommended at this creatinine clearance rate; ◆=The drug is not recommended with this creatinine clearance rate, or no data are available.

* 50 mg once daily.

† 25 mg once daily.

‡ 2.5 mg once daily.

§ 12.5 mg once daily.

‖ 6.25 mg once daily.

¶ Limited or no clinical experience in patients with severe renal impairment or end-stage renal disease; therefore, not recommended.

** These agents are assessed according to estimated glomerular filtration rate (not creatinine clearance rate).

‡‡ Do not exceed 100 mg/day. Agent can be continued, but should not be started, at estimated glomerular filtration rates <60 mL/min/1.73 m^2.

§§ Do not exceed 10 mg/day. Agent can be continued, but should not be started, at estimated glomerular filtration rates <60 mL/min/1.73 m^2.

Table 2. Indications of antidiabetes agents in people undergoing haemodialysis.

Medication	Use acceptable in dialysis recipients
Linagliptin	◆
Saxagliptin	◇ *
Sitagliptin	◇ †
Alogliptin	◇ ‡
Vildagliptin	◇ ‖
Exenatide	◆ §
Liraglutide	◆ ‖
Dulaglutide	◆ ‖
Albiglutide	◆ ‖
Lixisenatide	◆ ‖
Insulin	◆
Nateglinide	◆
Repaglinide	◆
Metformin	◆
Glipizide	◆
Gliclazide	◆
Glimepiride	◆
Glibenclamide	◆
Canagliflozin	◆
Dapagliflozin	◆
Empagliflozin	◆
Pioglitazone	◆

◆=The drug can be used in people on dialysis; ◇=The drug can be used, with caveats; ◆=The drug is not recommended in people on dialysis.

* Administer 2.5 mg once daily after dialysis.

† Administer 25 mg once daily without regard to timing of dialysis.

‡ 6.25 mg once daily.

§ Use is not recommended in people with creatinine clearance <30 mL/min; intermittent and continuous haemodialysis will reduce clearance to 0.9 L/hour compared to the normal 9.1 L/hour.

‖ Limited clinical experience in people with severe renal impairment or end-stage renal disease.