Type 2 Diabetes and Renal Impairment – Drug Adjustment

For Liraglutide the green box should extend to include 4 (29-15). Add Semaglutide which would also be green up to and including 4 (29-15) and red for 5 (<15).

Worsening renal function (GFR range in ml/min)							Hepatic impairment	
Drug	**CKD1 (eGFR >90)**	**2 (60-90)**	**3a (59-45)**	**3b (44-30)**	**4 (29-15)**	**5 (<15 or RRT)**	**Mild-moderate**	**Severe**
Acarbose	✔	✔	✔	✔	✖ eGFR <25 ml/min		✔	✖Contraindicated
Metformin	✔	✔	✔	✔ (review regularly)	✖		✖ Contraindicated in hepatic insufficiency	
Gliclazide	✔	✔	✔	✔	✔ (use lowest effective dose)	✖	✔	✖Contraindicated
Sitagliptin	100mg		50mg (GFR <50ml/min)		25mg		✔	✖Not studied in severe hepatic impairment
Linagliptin	✔	✔	✔	✔	✔	✔	✔ No dose adjustment required, but clinical experience is lacking in hepatic impairment	
Alogliptin	25mg		12.5mg (GFR <50ml/min)		6.25mg		✔	✖Not studied in severe hepatic impairment
Pioglitazone	✔	✔	✔	✔	✔	✔(not if dialysis)	✖Contraindicated	✖Contraindicated
Lixisenatide	✔	✔	✔ (caution if GFR <50ml/min)		✖		✔	✔
Exenatide	✔	✔	✔	✔ (conservative dose escalation)	✖		✔	✔
Exenatide mr	✔	✔	✔ (not if GFR<50ml/min)	✖			✔	✔
Liraglutide	✔	✔	✔	✔	✖		✖Not recommended	✖Not recommended
Dulaglutide	✔	✔	✔	✔	✔	✔(No data)	✔	✔
Empagliflozin	✔	✔	✖				✔	✔ Start at 5mg & increase to 10mg if well tolerated
Dapagliflozin	✔	✔	✖ (Do not initiate if GFR <60ml/min, max dose 10mg od if GFR persistently falls below 60ml/min after initiation)				✔	✖Not recommended
Canagliflozin	✔	✔	✖ (Do not initiate if GFR <60ml/min, max dose 100mg od if GFR persistently falls below 60ml/min after initiation)				✔	✖Not recommended
Insulin	✔	✔	✔	✔	✔ Requirements may be reduced in severe renal impairment. Monitor and adjust dose accordingly		✔ Requirements may be altered in hepatic impairment. Monitor and adjust dose accordingly	

N.B. In patients at extremes of weight (BMI <18.5 kg/m^2 or >30 kg/m^2) or age (>70yr), calculate renal function using Cockcroft and Gault equation (see calculator available here)

Reviewed by Dr Merza Jan 20201