



GOAL: CARDIORENAL RISK REDUCTION

GOAL: GLYCEMIC CONTROL AND WEIGHT MANAGEMENT

Established ASCVD or High Risk
(≥ 55yr with 2+ risk factors-obesity, HTN, smoking, dyslipidemia, albuminuria)

HF
Current or prior symptoms with HFrEF or HFpEF

CKD
eGFR <60ml/min OR albuminuria (>30mg/g)

GLP-1 or SGLT2 with proven CVD benefit*

SGLT2

SGLT2 with proven reduction in CKD progression

If A1c above goal

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Consider using GLP-1 and SGLT2 in combination or add low dose TZD

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If additional glycemic control is needed

Chose a regimen with efficacy to achieve goals-typically METFORMIN in combination with other agents below

Prioritize avoidance of hypoglycemia in high risk individuals

Efficacy for glucose lowering

Efficacy for weight loss

VERY HIGH:
Dulaglutide (high dose), Semaglutide, Tirzepatide, Insulin, Combination oral

VERY HIGH:
Semaglutide, Tirzepatide

HIGH:
Metformin, SGLT2, lower dose GLP1, sulfonylurea, TZD

HIGH:
Dulaglutide, Liraglutide

Intermediate:
DPP4

Intermediate:
SGLT2

Neutral:
DPP4, Metformin

If additional glycemic control is needed

1. Consider referral to DSMES
2. Consider CGM to identify BG pattern and tailor therapy/lifestyle choices
3. Address SDOH that could be impacting goal

*Most patients in trials showing CV benefit were also on metformin. Consider keeping metformin as key backbone medication for CV risk reduction

GLP-1 Receptor Agonists

Product	Dosing	eGFR Dose Adjustment
Exenatide (Byetta®)	5 mcg BID given 1 hour before meal, may titrate to 10 mcg BID after 4 weeks (Max dose 20 mcg/day)	CrCl <30 ml/min: Do not use
Exenatide ER (Bydureon®)	2mg once weekly (no titration)	eGFR <45 ml/min: Do not use
Dulaglutide (Trulicity®)	0.75mg weekly x 4-8 weeks, may increase dose no more often than every 4 weeks (Max dose 4.5mg)	none
Liraglutide (Victoza®)	0.6 mg daily x 1 week then increase to 1.2 mg (minimally effective dose). May increase up to 1.8mg after 1 week	none
Semaglutide (Ozempic®)	0.25 mg x 4 weeks, then increase to 0.5 mg weekly (minimally effective dose). May increase to next pen strength no more often than every 4 weeks (Max dose 2 mg)	none
Semaglutide (Rybelsus®)	3 mg daily x 4 weeks, then increase to 7mg (minimally effective dose). May increase to 14mg daily after 30 days (Max dose 14mg daily)	none
Tirzepatide (Mounjaro®) <small>(GLP-1/GIP agonist, CV trials in progress)</small>	2.5 mg weekly x 4 weeks, then increase to 5mg weekly (minimally effective dose). May increase in 2.5mg/week increments every 4 weeks to max 15mg/week.	none

Adverse Effects:

- Nausea, vomiting, diarrhea
- black box warning against use in patients with family history of medullary thyroid cancer or multiple endocrine neoplasia-2

Pearls:

- Eating smaller meals with lower fat content (avoid greasy foods) increases GI tolerability
- Be sure to optimize dosing beyond starting doses after 4 weeks. Continue to increase dose every 4 weeks if BG remain above goals
- May require lower doses of insulin to avoid hypoglycemia
- Discontinue if pancreatitis is suspected
- Avoid use with DPP-4 (no added glucose benefit with increased cost)

***Bolded** products have proven CVD benefit

SGLT-2 Receptor Antagonists/Inhibitors

Product	Dosing	eGFR Dose Adjustment	Additional Benefits in Co-morbidities
Canagliflozin (Invokana®)	100mg daily 300mg daily	eGFR 45-60 ml/min: 100mg/d eGFR <45 ml/min + >300 mg/d urine albumin: 100mg/d eGFR <45 ml/min + <300 mg/d urine albumin: do not use	<ul style="list-style-type: none"> • Decrease HF hospitalization • Reduction in CKD Progression • Cardiovascular endpoints
Dapagliflozin (Farxiga®)	5mg daily 10mg daily	eGFR 25-45 ml/min: recommend against use for DM, however safe to continue for diabetic kidney disease or HF	<ul style="list-style-type: none"> • Heart Decrease HF hospitalization • Reduction in CKD Progression
Empagliflozin (Jardiance®)	10mg daily 25mg daily	Discontinue if eGFR <30 ml/min (safely used in HF in eGFR>20)	<ul style="list-style-type: none"> • Decrease HF hospitalization • Reduction in CKD Progression • Cardiovascular endpoints
Ertugliflozin (Steglatro®)	5mg daily 15mg daily	Discontinue if eGFR <60 ml/min	<ul style="list-style-type: none"> • Decrease HF hospitalization

Adverse Effects:

- Genital mycotic infections, urinary tract infections, hypotension, volume depletion

Pearls:

- Encourage appropriate hygiene and hydration to minimize adverse effects
- May need dose reduction in other diuretic therapies
- Discontinue 3-4 days prior to surgery or any prolonged fasting state (minimize euglycemic DKA)

DPP-4 Inhibitors

Product	Dosing	eGFR Dose Adjustment
Alogliptin (Nesina[®])	25mg daily	CrCl \geq 30-60: 12.5mg daily CrCl <30: 6.25mg daily
Linagliptin (Tradjenta[®])	5mg daily	None
Saxagliptin (Onglyza[®])	5mg daily	eGFR <45: 2.5mg daily
Sitagliptin (Januvia[®])	100mg daily	eGFR \geq 30-45: 50mg daily eGFR <30: 25mg daily

Adverse Effects:

- Nasopharyngitis, pancreatitis (rare)

Pearls:

- Starting at max dose is recommended (titration not necessary)
- Avoid use with GLP-1 agonist (no added glucose control at increased cost)
- Saxagliptin associated with increased hospitalizations for HF in patients with CV disease or CV risk factors
- Less A1c lowering and no added CV or renal benefit seen with other classes

Insulin Regimen

- “Fix Fastings First”
 - Begin with Basal/long-acting insulin
 - Lantus (Basaglar), Levemir, Toujeo, Tresiba
 - Dosing options:
 - 0.1-0.2 units/kg/day OR 10 units daily
 - Titrations: increase 2 units every 3 days until fasting BG at goal (90-130)
 - Consider adding meal-time insulin when dose is ~0.5 units/kg
- Add Meal-time/rapid-acting insulin if goals not met
 - Novolog (insulin aspart), Humalog, Lyumjev, Ademelog
 - Dosing options:
 - Initiate 4-5 units before largest meal of the day
 - Titrate by 1-2 units as needed to goal post-prandial BG (<180)
 - Further intensify by adding to each meal if needed

2024 Stars/ACO Quality Metrics (updated 10.2023)

Measure	Program		Star Category & Weight		Thresholds <small>10/17/2023</small>		
	Stars	ACO	Part C or D?	Weight	4 Star	5 Star	
Care for Older Adults - Medication Review	✓		C	1	93%	98%	
Care for Older Adults - Pain Assessment	✓		C	1	91%	96%	
Medication Adherence for Diabetes	✓		D	3	88%	90%	
Medication Adherence for Hypertension (RAS)	✓		D	3	89%	91%	
Medication Adherence for Cholesterol (Statins)	✓		D	3	89%	93%	
TRC: Medication Reconciliation Post-Discharge	✓	✓	C	0.5	68%	82%	
TRC: Patient Engagement After Inpatient Discharge	✓		C	0.5	64%	78%	
Follow-Up After ED Visit for MCC	✓		C	1	60%	68%	
Plan All-Cause Readmissions	✓		C	1	10%	8%	
Osteoporosis Management in Women w/ Fracture	✓		C	1	55%	71%	
Kidney Health Evaluation for Patients with Diabetes	✓		C	1	TBD	TBD	
Statin Use in Persons with Diabetes	✓		D	1	88%	92%	
Diabetes Care - Eye Exam	✓		C	1	73%	81%	
Diabetes Care - Blood Sugar Controlled	✓		✓	C	3	80%	87%
Breast Cancer Screening	✓		✓	C	1	71%	79%
Colorectal Cancer Screening	✓		✓	C	1	71%	80%
Controlling Blood Pressure	✓	✓	C	3	74%	82%	
Statin Therapy for Cardiovascular Disease	✓	✓	C	1	86%	90%	
Reducing the Risk of Falling		✓					
Depression Screening		✓					
Influenza Immunization		✓					
Tobacco Screening and Cessation Intervention		✓					