

Advancing Primary and Endocrinology Care in Chronic Kidney Disease and Heart Failure: Guideline-Based Strategies to Improve Cardiorenal Outcomes



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- During this lecture, the faculty may mention the use of medications for both US Food and Drug Administration (FDA)-approved and non-FDA-approved indications

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Learning Objectives

- Apply guideline recommendations and CMD pathophysiology to aid in the screening, diagnosis, and specialty referral for patients with CKD and/or HF
- Employ the latest clinical evidence and guideline recommendations to create comprehensive treatment plans that provide cardiorenal benefits for patients with CKD and/or HF
- Practice SDM to incorporate the patient's perspective in therapy decisions and collaborate with the patient's MDT to create a comprehensive therapy plan when treating patients with CKD and/or HF

CASE STUDIES

Case 1: Bryan's Profile

Physical exam	Value
Height	68 inches
Weight	173 lbs
BMI	26.5
BP	134/82 mmHg

Lab	Value
BUN	16 mg/dL
Creatinine	1.09 mg/dL
eGFR	>60
A1C	6.5%
UACR	1520 mg/g
HDL	67 mg/dL
LDL	24 mg/dL
Triglycerides	44 mg/dL

Case #1: Bryan

- Bryan is a 67-year-old black male who has 4 children and 3 grandchildren and works as a security guard
- He was diagnosed with T2D 9 years ago; his past medical history also includes essential hypertension and hyperlipidemia
- Bryan was previously unable to afford an SGLT2 inhibitor
- He is at the clinic for his follow up appointment



**Bryan is a
67-year-old black male
with T2D**

A1C = glycated hemoglobin; AC = before meals; BMI = body mass index; BP = blood pressure; BUN = blood urea nitrogen; ER = extended release; HDL = high-density lipoprotein; K+ = potassium; LDL = low-density lipoprotein; prn = as needed; QHC = at bedtime; SGLT2 = sodium-glucose cotransporter 2; T2D = type diabetes mellitus.

Current medications	Dose
Trazodone	50 g QHC prn
Metformin ER	500 mg 2 tabs daily
Glimepiride	4 mg AC breakfast
Losartan	100 mg daily
Hydrochlorothiazide	25 mg daily
Amlodipine	5 mg daily
Atorvastatin	20 mg daily



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CASE STUDIES

Case 1: Bryan – Sequential Data

04/11/23: Follow-up after initiating finerenone, 10 mg daily.

Lab	Value
K+	4.2 mmol/L

Finerenone increased to 20 mg daily.

10/30/23

Lab	Value
K+	3.9 mmol/L
BUN	14 mg/dL
Creatinine	1.2 mg/dL
eGFR	60
A1C	6.4%
UACR	1217 mg/g

02/26/24

Lab	Value
UACR	415 mg/g

02/03/25

Lab	Value
K+	4.2 mmol/L
BUN	14 mg/dL
Creatinine	1.5 mg/dL
eGFR	53
UACR	414 mg/g

Added dapagliflozin, 10 mg daily; glimepiride decreased to 2 mg daily.

02/11/26

Lab	Value
K+	4.6 mmol/L
BUN	20 mg/dL
Creatinine	1.4 mg/dL
eGFR	54
UACR	247 mg/g

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CASE STUDIES

Case 1: Bryan – Question #1

1. Does Bryan have CKD? If so, what stage is it?

- ☐ a) No. eGFR is >60 mL/min/1.73 m²
- ☐ b) Yes. Stage 3a
- ☐ c) Yes. Stage 2
- ☐ d) Yes. Stage 3b

Case 1: Bryan – Question #2

2. What additional therapy can we include in Bryan's treatment plan?

- ☐ a) Add GLP-1 RA
- ☐ b) Add SGLT2 inhibitor
- ☐ c) Add spironolactone
- ☐ d) Add ns-MRA

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A1C = glycated hemoglobin; AC = before meals; BMI = body mass index; BP = blood pressure; BUN = blood urea nitrogen; ER = extended release; HDL = high-density lipoprotein; K⁺ = potassium; LDL = low-density lipoprotein; ns-MRA = nonsteroidal mineralocorticoid receptor agonist; prn = as needed; QHC = at bedtime; SGLT2 = sodium-glucose cotransporter 2; T2D = type diabetes mellitus.



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CASE STUDIES

Physical exam	Value
Height	65 inches
Weight	153 lbs
BMI	26.5
BP	140/82 mmHg

Lab	Value
K+	4.6 mmol/L
BUN	13 mg/dL
Creatinine	1.41 mg/dL
eGFR	39
A1C	7.2%
UACR	104 mg/g

Current medications	Dose
Lisinopril	20 mg daily
Furosemide	40 mg daily
Carvedilol	12.5 mg BID
Atorvastatin	40 mg daily
Dulaglutide	1.5 mg SQ weekly
Metformin	500 mg daily
Sertraline	100 mg daily

Case #2: Joana

- Joana is a 74-year-old woman with a 5-year history of T2D; she also has hypertension and dyslipidemia
- CKD presented following a recent hospitalization for HF after her symptoms, including dyspnea and pedal edema, had progressed over 1 week
- After successful diuresis, she feels markedly improved
- Joana's EF is 40% and she has non-obstructing coronary lesions



Joana is a 74-year-old woman with T2D, hypertension and dyslipidemia



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CASE STUDIES

Case 2: Joana – Question #1

1. What would be the first step in addressing GDMT for Joana?

- ☐ a) Changing the carvedilol to metoprolol
- ☐ b) Adding an SGLT2 inhibitor
- ☐ c) Stopping the furosemide
- ☐ d) Increasing the dose of dulaglutide

Case 2: Joana – Question #2

2. Which of the following options is an important consideration when deciding to make multiple medication changes simultaneously versus sequentially?

- ☐ a) Cost of medication
- ☐ b) Increased complexity of treatment regimen
- ☐ c) The desire to avoid therapeutic inertia
- ☐ d) Shared decision-making
- ☐ e) All of the above

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