

HFpEF in Women: From the First Symptom to Coordinated Treatment

Complete three-module lesson and workbook

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Complete teaching and question workbook for the expanded three-module review edition. These fictional cases use Lisa Zahakos's authorized synthetic narration. The written teaching uses standard abbreviations and minor grammar corrections. Separately labeled required reading supplements the recording and applies to both routes. Verbatim narration transcripts are linked separately. No CME/CE credit is designated.

Complete the three opening decisions before each lesson, read or watch its teaching and read any required notes, work through all three formative cases, then answer the three final questions and evaluation. The draft threshold is 2 of 3 final answers per module; all three modules are required. This printable workbook does not save responses or issue a certificate. Use the interactive activity for the reference workflow. The host must implement secure records and provider-approved completion rules.

Recorded narration: 38:48. Total learning design estimate: 90-110 minutes; timed pilot and provider review pending.

Learning objectives

1. Select an appropriate next diagnostic step for a woman with possible HFpEF, including when resting findings are inconclusive.
2. Match treatment choices to the studied population, endpoint, current indication and individual safety considerations.
3. Select a medication-monitoring and follow-up plan with a named owner, a defined interval and appropriate escalation.

Module 1 | Renee

Breathlessness With a Preserved EF

Objective: Select a defensible next diagnostic step when symptoms and resting findings do not agree.

Opening decisions

E1-recognition-pre

Renee, 58, has BMI 37, progressive exertional dyspnea, EF 63% and NT-proBNP 88 pg/mL. No acute warning symptoms are present. What is the best next step?

- A. Attribute limitation to obesity and prescribe exercise alone.
- B. Review complete cardiac findings and competing causes; a low peptide does not exclude HFpEF.
- C. Confirm HFpEF from the BMI and symptoms.
- D. Close cardiac evaluation and obtain pulmonary testing only.

Your first response: _____ Date/time: _____

E1-confirmation-pre

A complete HFA-PEFF assessment is 3 and exertional symptoms persist. Which step is most appropriate?

- A. Confirm HFpEF because the score is above zero.
- B. Assign zero to any missing variable and repeat the total.
- C. Arrange appropriate functional assessment or specialist evaluation.
- D. Repeat a resting EF in a year.

Your first response: _____ Date/time: _____

E1-alternatives-pre

A woman with suspected HFpEF now reports new resting chest pressure and breathlessness. What should happen?

- A. Continue the planned exercise-test appointment next month.
- B. Arrange emergency assessment now.
- C. Try an extra diuretic dose and wait for improvement.
- D. Use an outpatient peptide result before deciding.

Your first response: _____ Date/time: _____

Renee | Complete written lesson

Her ejection fraction is sixty-three percent. She still cannot finish the walk she used to enjoy. A reassuring number has not explained what changed.

Welcome to HEART RESERVE Clinical Conversations. I'm Lisa Zahakos, a physician assistant and founder of HEART RESERVE.

In this episode, we'll follow Renee with unexplained breathlessness, Angela with a treatment decision, and Teresa after a hospitalization. These are fictional teaching cases for clinicians.

You can listen straight through, or use the chapters to return to a case. I'll ask you to consider a few decisions and then walk through the reasoning. The activity page has the objectives, references and online questions.

This episode focuses on heart failure with preserved ejection fraction. The syndrome requires more than a pumping percentage: symptoms or signs must be connected to objective cardiac evidence. Ejection fraction categories, trial entry criteria and product indications are related but are not interchangeable. Under the 2022 U S guideline and historical trial terminology, heart failure with preserved ejection fraction refers to a left ventricular ejection fraction of at least 50 percent; heart failure with mildly reduced ejection fraction refers to 41 to 49 percent. The 2026 European Society of Cardiology guideline instead uses reduced ejection fraction for values below 50 percent and preserved ejection fraction for values of at least 50 percent, removing the separate mildly reduced category. Identify the guideline framework. These naming changes do not alter completed trials or U S product-label boundaries. Several trials and the finerenone heart-failure indication include left ventricular ejection fraction of at least 40 percent. Always read the actual study or label boundary.

The women's-health focus is a reason to ask a fuller history and examine care gaps. It is not a claim that every woman has the same phenotype or that a medicine works better simply because the patient is a woman. Pregnancy history, blood pressure, metabolic disease, kidney health, function and access belong in one clinical story.

Let's begin with Renee.

Renee used to walk the school track while her daughter practiced. Over six months she has begun stopping after one lap. The report says left ventricular ejection fraction 63 percent. She was told the result was reassuring. She wants to know why activity has become harder.

Presentation. Stable exertional dyspnea; no new chest pain, syncope or breathlessness at rest.

Context. Body mass index 37 kilograms per square meter; hypertension; remote severe preeclampsia.

Available tests. left ventricular ejection fraction 63 percent; NT-proBNP 88 picograms per milliliter; full echo parameters not yet reviewed.

Clinical task. Keep the differential open and obtain the evidence needed to explain the symptom.

Begin with the change in her life.

Ask Renee to describe a usual day before and after the symptoms began. A comparison with her own baseline is more useful than asking only whether she can exercise. How far does she walk? Does she stop because of breathlessness, fatigue, chest discomfort, pain or fear of falling? Is the limitation reproducible? Has the pace of decline changed? Establish the timeline before interpreting any single result.

Then separate a stable outpatient problem from a potentially unstable one. New breathlessness at rest, chest pressure, syncope, severe hypoxemia or rapidly progressive symptoms require urgent assessment according to the presentation. The reassuring wording on an old echocardiogram must not override a new concerning symptom. Renee's initial presentation is stable; that permits a structured evaluation, not a dismissal.

Ask about orthopnea, waking breathless, edema, weight change, palpitations, sleep-disordered breathing and exertional chest symptoms. Reconcile prescribed and nonprescribed medicines. Review blood pressure history, atrial fibrillation, kidney disease, diabetes, valve disease and previous cardiovascular testing. A description such as 'deconditioned' may eventually be reasonable, but it should not replace the assessment needed to support it.

What a preserved ejection fraction can, and cannot, tell you.

Ejection fraction is the proportion of end-diastolic ventricular volume ejected with a beat. It does not directly measure filling pressure, reserve during exercise or the total burden of a multisystem illness. A woman can have preserved left ventricular ejection fraction and still have a clinically important limitation in filling, vascular function or the response to exertion. Conversely, an ejection fraction of 63 percent is not evidence by itself that heart failure with preserved ejection fraction is present.

Read the entire echocardiogram in clinical context. Review chamber size, left atrial volume, wall thickness, tissue Doppler measurements, estimated filling-pressure indices, right-sided findings and valve assessment. Image quality and rhythm matter. A report of 'diastolic dysfunction' does not automatically establish symptomatic heart failure; an apparently normal resting study does not necessarily explain exertional symptoms.

Do not calculate a diagnostic score with missing inputs. Renee's ejection fraction and NT-proBNP do not supply the information required for a complete H2FPEF or HFA-PEFF assessment. A score can organize uncertainty when used in the population and context for which it was designed. Its output should help decide the next step, not substitute for reasoning.

Here is the decision. Which information would most help determine whether Renee's evaluation is on the right track?

Pause here if you would like a moment to think it through.

The best next step in this case is: Review the symptom trajectory, examination, full echo findings and competing causes.

These findings connect her functional change to a focused diagnostic plan.

Use biomarkers without letting them close the case.

Natriuretic peptides are useful, but obesity can lower their concentrations. An unflagged value is therefore less reassuring when the clinical question is heart failure with preserved ejection fraction in a woman with obesity and exertional symptoms. Other conditions, including atrial fibrillation and kidney dysfunction, can also alter interpretation. Use the actual value, units, assay and context rather than the laboratory flag alone.

A selected 2024 research cohort illustrates this problem. Among 78 volunteers with obesity and dyspnea, 65 percent were women. Forty qualified for invasive exercise testing; 24 were found to have heart failure with preserved ejection fraction. That is 60 percent of those tested and 31 percent of the full sample. Resting NT-proBNP and echocardiographic measures did not clearly separate the groups. These findings support a diagnostic concern; they are not a population prevalence estimate for all women with obesity.

For Renee, the practical response is to obtain the missing information and reconsider the competing explanations. It is not to diagnose heart failure with preserved ejection fraction from body mass index, start every heart failure medicine empirically, or reassure her solely because the laboratory result was not flagged.

Make the differential explicit.

Heart failure with preserved ejection fraction is one explanation for breathlessness, not the only one. The first evaluation commonly includes a focused examination, ECG, appropriate laboratory testing and review of imaging. Testing should be selected to answer the clinical question: anemia, pulmonary disease, rhythm disturbance, ischemia, significant valve disease and other causes may need consideration. Obesity can coexist with each of these conditions.

Some disorders can resemble heart failure with preserved ejection fraction yet require a different diagnostic and treatment pathway. Clues to infiltrative cardiomyopathy, constrictive physiology or important valve disease should prompt directed evaluation. Do not label every thickened ventricle as ordinary hypertensive remodeling. Equally, do not send every patient with dyspnea for every advanced test; use the history and first-line findings to choose what will resolve the uncertainty.

Document both the leading hypothesis and the reason it remains uncertain. 'Possible heart failure with preserved ejection fraction; full echo and alternate causes under review' is more useful than a premature definitive diagnosis. That distinction also protects later treatment decisions from being based on a diagnosis that was never confirmed.

When resting data leave an intermediate probability.

The HFA-PEFF framework uses clinical assessment, echocardiographic and natriuretic-peptide evidence, functional testing when uncertainty remains, and a final search for the underlying cause. The H2FPEF approach estimates diagnostic likelihood from clinical and echocardiographic features. These tools answer related questions with different inputs; disagreement or an intermediate result is a reason to review the evidence, not average the scores.

In a symptomatic patient whose resting findings do not resolve the question, specialist assessment may lead to exercise echocardiography or invasive exercise hemodynamics. The choice depends on the remaining uncertainty, local expertise, feasibility and the patient's circumstances. A normal resting

pressure cannot necessarily answer what happens during the activity that produces symptoms.

Explain the purpose of the referral in the order: 'Persistent exertional dyspnea with obesity and hypertension, preserved ejection fraction, nondiagnostic resting assessment; please evaluate for heart failure with preserved ejection fraction and mimics.' Include the actual tests, symptom trajectory and question. This gives the receiving clinician a starting point and makes it easier to recognize whether the referral has answered the question.

Bring the history forward without overinterpreting it.

Renee remembers severe preeclampsia but has never been asked about it in a general medical visit. Record the condition and timing as part of her cardiovascular history. It may strengthen the prevention conversation, but it cannot establish the cause of her current dyspnea. Pregnancy complications are not interchangeable with a past diagnosis of peripartum cardiomyopathy, and neither should be inferred without evidence.

Ask what she understood from the earlier test: 'When you heard that the pumping percentage was normal, did you think that meant there could not be a heart problem?' Then correct the misunderstanding without creating unnecessary certainty: 'The pumping percentage is preserved. We still need to understand why activity has become harder. We are checking heart and nonheart causes.'

Close with a concrete plan: the next test or consultation, who tracks it, how she receives the result and which new symptoms change the urgency. If transportation or cost makes the planned test unrealistic, address that before ending the visit. The outcome of this encounter is an explained next step, not simply a referral entered in the chart.

Here is the decision. After reviewing the resting data, uncertainty remains. Which referral best communicates the clinical need?

Pause here if you would like a moment to think it through.

The best next step in this case is: Describe persistent exertional symptoms, available findings, alternatives and the question of exercise evaluation.

A focused referral makes the uncertainty and desired next decision clear.

The takeaway: Preserved ejection fraction and a low natriuretic peptide do not end the evaluation of persistent exertional symptoms. Confirm the syndrome, examine alternatives and track the next diagnostic step.

Before we move on, let's apply that reasoning in more detail.

Test the reassurance: a worked diagnostic reveal.

Return to Renee after the complete resting evaluation. There is no major valve lesion, no clear anemia and no sustained tachyarrhythmia. A complete HFA-PEFF assessment is intermediate. This does not turn a nondiagnostic study into a negative study. Her symptom occurs during exertion; a resting measurement may not reproduce the physiology causing it. The next question is which functional assessment can resolve the uncertainty and change management.

If specialist exercise echocardiography remains inconclusive or is not feasible, invasive exercise hemodynamics may be appropriate in a center with the required expertise. Explain what the additional test will answer, its burdens and the alternatives. Do not assume that everyone with obesity needs catheterization; persistent symptoms, the probability of disease and the consequences of the result drive the decision.

A 2025 study using selected outpatient diagnostic cohorts found that the usual NT-proBNP threshold of 125 picograms per milliliter had sensitivity of 82 percent when body mass index was below 35 and 67 percent when body mass index was at least 35. This supports caution about a low value in Renee. It does not establish a new universal threshold or a screening test for asymptomatic people. Atrial fibrillation and kidney dysfunction can raise concentrations, while obesity can lower them. A single laboratory flag cannot resolve those competing influences.

Before referral, write one sentence describing the clinical uncertainty and another describing the functional loss. Then attach the actual echo measurements, rhythm, biomarker value, blood pressure history and relevant testing. Ask the receiving team to report both the diagnostic conclusion and the next treatment or follow-up responsibility. A referral succeeds when its answer returns to the clinician and patient who need it.

Formative case decisions

E1-practice-1

Renee can no longer finish her usual walk. She recalls being told that EF 63% was normal. Her symptoms remain stable. Which response best keeps the evaluation on track?

- A. Reassure her that normal EF rules out a cardiac explanation.
- B. Connect her functional decline to the full examination, echo and differential.
- C. Diagnose HFpEF because obesity and hypertension are present.

Answer B: Connect her functional decline to the full examination, echo and differential. A preserved pumping percentage does not explain the symptom or establish HFpEF. The next decision depends on the complete clinical picture.

E1-practice-2

A complete resting evaluation gives Renee an HFA-PEFF score of 3. Important alternatives have been assessed, but exertional limitation persists. What is the next diagnostic aim?

- A. Confirm HFpEF from this score alone.
- B. Stop testing because resting results are not diagnostic.
- C. Resolve the intermediate probability with appropriate specialist functional assessment.

Answer C: Resolve the intermediate probability with appropriate specialist functional assessment. The score is intermediate. Select functional testing that can resolve the uncertainty; feasibility and specialist expertise matter. Inconclusive noninvasive assessment may lead to selected invasive exercise testing.

E1-practice-3

Before the planned outpatient assessment, Renee develops chest pressure and severe breathlessness at rest. What changes?

- A. The new symptoms require urgent assessment.
- B. The earlier EF makes the new symptoms reassuring.
- C. Wait for the scheduled functional test.

Answer A: The new symptoms require urgent assessment. The new presentation takes priority over a stable outpatient pathway. Prior reassuring measurements must not delay urgent evaluation.

Renee | Final decisions

E1-recognition-post

A 66-year-old woman with BMI 39 has declining walking tolerance, EF 61% and NT-proBNP 96 pg/mL. Which conclusion best guides care?

- A. The laboratory value makes cardiac disease unlikely enough to stop testing.
- B. Her EF confirms that the symptoms are noncardiac.
- C. The findings remain inconclusive and require structured evaluation in context.
- D. HFpEF is established and all HF therapies should start immediately.

Your first response: _____ Date/time: _____

E1-confirmation-post

Resting testing is nondiagnostic. Exercise echocardiography is also inconclusive, and knowing whether HFpEF is present would change treatment. What should be considered?

- A. Referral for invasive exercise hemodynamics at an experienced center.
- B. Averaging two different diagnostic scores.
- C. Using symptom response to a diuretic as diagnostic proof.
- D. Diagnosing HFpEF because the patient has hypertension.

Your first response: _____ Date/time: _____

E1-alternatives-post

A woman awaiting outpatient HFpEF testing develops severe breathlessness at rest and chest pressure. What is the best next step?

- A. Keep the planned outpatient test as the next step.
- B. Arrange emergency assessment now.
- C. Increase the diuretic and wait until the next morning.
- D. Wait for a new NT-proBNP result before escalating.

Your first response: _____ Date/time: _____

Module evaluation

How useful was this module?

Very useful / Somewhat useful / Not useful

How confident are you applying the objective?

Confident / Somewhat confident / Need more support

What is your next step?

Use this decision process in an eligible encounter / Discuss the workflow with my team / Review a source or seek specialist support / No change planned

Module 2 | Angela

What Changes After HFpEF Is Confirmed?

Objective: Select an evidence-based treatment discussion and monitoring plan without overstating trial or label claims.

Opening decisions

E2-sglT2-pre

Angela has confirmed symptomatic HFpEF, no diabetes, adequate renal function and stable volume status. Which plan is best supported?

- A. Wait for diabetes before considering an SGLT2 inhibitor.
- B. Discuss an eligible SGLT2 inhibitor with product-specific safety and access review.
- C. Increase diuretic therapy despite euvolemia as the only treatment.
- D. Use a beta-blocker solely to reproduce HFrEF therapy.

Your first response: _____ Date/time: _____

E2-endpoints-pre

Angela asks whether SUMMIT proves tirzepatide prevents cardiovascular death in HFpEF. Which answer is most accurate?

- A. Yes; every component of a positive composite must improve.
- B. It proves superiority over semaglutide.
- C. The composite improved, driven by fewer worsening-HF events; isolated mortality reduction was not demonstrated.
- D. The study assessed weight only.

Your first response: _____ Date/time: _____

E2-finenone-pre

For the HF indication, a stable patient has EF 55%, eGFR 45 mL/min/1.73 m² and potassium 4.8 mEq/L, without a contraindicated interaction. Which initial plan matches the label?

- A. Start 40 mg and check labs at the annual visit.
- B. Start 10 mg daily and arrange potassium/eGFR review at four weeks.
- C. Start the 20 mg target immediately for every patient.
- D. Use only the CKD dose-adjustment table.

Your first response: _____ Date/time: _____

Angela | Complete written lesson

Now meet Angela. Her heart failure diagnosis has been confirmed.

Angela has confirmed heart failure with preserved ejection fraction. A diuretic helped her edema, but she still stops on the walk to her mailbox. She asks whether heart-failure medicines can help when she does not have diabetes.

Established diagnosis. Heart failure with preserved ejection fraction confirmed after clinical and objective assessment; left ventricular ejection fraction 58 percent.

Current context. Body mass index 35 kilograms per square meter; A1C 5.8 percent; no diabetes.

Safety starting point. eGFR 48 milliliters per minute per one point seven three square meters; potassium 4.6 milliequivalents per liter; review current volume status.

Patient goal. Walk to the mailbox with fewer stops; preserve strength and independence.

Match each treatment to the problem it is meant to solve.

Begin with current congestion, blood pressure, kidney function, rhythm, comorbidities, medication access and Angela's goal. A drug that relieves fluid overload and a therapy that reduces future heart failure events may both have a role, but their purposes should be clear. Do not use improved edema as evidence that the overall risk has disappeared.

Contemporary heart failure with preserved ejection fraction care integrates heart failure-directed treatment with management of obesity, diabetes when present, hypertension, kidney disease, atrial fibrillation and coronary disease. The 2026 American College of Cardiology update incorporates newer evidence for SGLT2 inhibitors, nonsteroidal mineralocorticoid receptor antagonists and incretin-based therapies within that broader approach. This is not a direction to give every agent to every patient in a fixed sequence.

Ask what Angela is already taking, what she has previously stopped and why. A medication list may contain an agent she never obtained or a dose she no longer uses. Explain the expected benefit in terms that match the evidence: symptoms, worsening heart failure events, hospitalization or another measured endpoint. Avoid promising an individual outcome from an average trial result.

SGLT2 inhibition is not restricted to patients with diabetes.

In EMPEROR-Preserved, 5,988 participants with symptomatic heart failure and left ventricular ejection fraction above 40 percent received empagliflozin or placebo. The primary composite of cardiovascular death or heart failure hospitalization occurred in 13.8 percent versus 17.1 percent; the hazard ratio was 0.79 (95 percent confidence interval 0.69 to 0.90). The effect was largely driven by fewer heart failure hospitalizations and was observed with and without diabetes.

DELIVER tested dapagliflozin in 6,263 participants with left ventricular ejection fraction above 40 percent. Worsening heart failure or cardiovascular death occurred in 16.4 percent versus 19.5 percent, with a hazard ratio of 0.82 (95 percent confidence interval 0.73 to 0.92). The trials support heart failure treatment beyond glucose lowering. They do not show that one SGLT2 inhibitor is superior to the other.

Angela's absence of diabetes is therefore not a reason by itself to exclude an appropriate SGLT2 inhibitor. Review the selected product's heart failure indication, renal-use instructions, volume status, contraindications and access. Discuss genital infection symptoms, volume depletion and the possibility of ketoacidosis even without marked hyperglycemia. Provide individualized instructions for illness, fasting and procedures; empagliflozin's label specifies withholding for at least three days before surgery or procedures associated with prolonged fasting, when possible.

Do not turn a monitoring conversation into a list the patient cannot use. Ask Angela which instruction she would follow if she were unable to eat or drink. Clarify whom she calls and when. Coordinate any diuretic adjustment with her volume assessment and the prescribing team rather than giving a universal instruction to reduce or stop it.

Here is the decision. Angela asks why a medicine commonly discussed for diabetes is being considered. Which answer is most accurate?

Pause here if you would like a moment to think it through.

The best next step in this case is: It is being considered for heart failure benefit; the evidence includes people without diabetes.

The indication and evidence should be explained in heart failure terms.

What the newer obesity trials actually establish.

STEP-HFpEF studied semaglutide 2.4 milligrams in 529 participants with obesity and heart failure with preserved ejection fraction without diabetes. At 52 weeks, the between-group improvement in Kansas City Cardiomyopathy Questionnaire clinical summary score was 7.8 points, and weight reduction was greater with semaglutide. The main lesson is improvement in symptoms, physical limitations and weight in the studied population. It was not a mortality trial.

SUMMIT studied tirzepatide in 731 participants with obesity and left ventricular ejection fraction of at least 50 percent. Cardiovascular death or worsening heart failure occurred in 9.9 percent versus 15.3 percent (hazard ratio 0.62, 95 percent confidence interval 0.41 to 0.95). Fewer worsening heart failure events drove the result; cardiovascular death alone was not shown to be reduced.

These trials ask different questions and cannot be used as a head-to-head ranking. Their effect sizes use different endpoints, populations and follow-up. Weight loss, symptom improvement and clinical event reduction should not be collapsed into a single claim that all incretin therapies do the same thing.

Current US product indications also matter. The reviewed Wegovy and Zepbound labels contain obesity-related indications; the reviewed Zepbound label also includes obstructive sleep apnea in adults with obesity. Neither should be described here as carrying a specific heart failure with preserved ejection fraction indication. A clinician may use a medicine for an approved obesity indication in a patient who also has heart failure with preserved ejection fraction, while discussing heart failure with preserved ejection fraction trial evidence accurately. Verify the current exact label at prescribing and at course release.

What belongs in an individualized obesity conversation.

Ask permission to discuss weight and the symptoms that matter to Angela. Her goal is not simply a lower number: she wants to reach the mailbox and manage her daily responsibilities. Discuss treatment options in the context of access, preferences, other conditions and the ability to sustain nutrition and function.

Review the selected agent's contraindications, precautions and interactions. For semaglutide and tirzepatide, the relevant labeling includes the medullary thyroid carcinoma/multiple endocrine neoplasia type 2 contraindication and important gastrointestinal, gallbladder, pancreatitis and other precautions. This case is not a dose-escalation protocol. Use the product-specific prescribing information and the patient's clinical context.

Ask whether nausea, food insecurity, dental problems or living alone interfere with intake. A registered dietitian can help individualize nutrition while protecting function. Do not assign a universal protein, fluid or sodium prescription from this vignette; heart failure symptoms, kidney disease and nutritional status can change what is appropriate. Adapt physical activity to stability, symptoms and ability, and revisit strength and daily function as weight changes.

At follow-up, ask what was obtained, what was tolerated and what changed. Include symptoms and a functional goal alongside weight, blood pressure and laboratory findings. A change in weight could reflect fluid, nutritional intake or intentional loss; interpreting it requires context.

Read mineralocorticoid receptor antagonist evidence without assuming a class effect.

Mineralocorticoid receptor antagonists are not interchangeable evidence packages. Spironolactone and eplerenone are steroidal mineralocorticoid receptor antagonists; finerenone is nonsteroidal. Receptor selectivity and pharmacologic properties differ, but a mechanistic difference does not establish comparative clinical superiority.

In TOPCAT, spironolactone did not significantly reduce the overall primary composite endpoint in the studied heart failure with preserved ejection fraction population. Heart failure hospitalization was lower, and hyperkalemia was more frequent. Important regional differences complicate interpretation. Selected patients may still have reasons for a steroidal mineralocorticoid receptor antagonist, but the result should not be described as an unequivocally positive overall heart failure with preserved ejection fraction trial.

In FINEARTS-HF, 6,001 participants with left ventricular ejection fraction of at least 40 percent were randomized to finerenone or placebo. The composite rate of total worsening heart failure events and cardiovascular death was lower with finerenone (rate ratio 0.84, 95 percent confidence interval 0.74 to 0.95). Cardiovascular death alone was not significantly reduced. Hyperkalemia was more frequent. Its current heart failure indication and monitoring requirements are addressed in Teresa's case.

Do not compare TOPCAT and FINEARTS-HF as though patients were randomized between spironolactone and finerenone. Do not stack two mineralocorticoid receptor antagonists without a specific specialist-directed reason and a careful safety review. The treatment decision should identify the indication, the evidence and the monitoring burden.

Separate a pooled analysis from a heart failure with preserved ejection fraction trial.

FINE-HEART pooled participant-level data from FIDELIO-DKD, FIGARO-DKD and FINEARTS-HF. Its 18,991 participants span chronic kidney disease with type 2 diabetes and heart failure with mildly reduced or preserved ejection fraction. It is not a new head-to-head trial and is not a heart failure with preserved ejection fraction-only population. Its primary cardiovascular-death result did not reach statistical significance (hazard ratio 0.89, 95 percent confidence interval 0.78 to 1.01).

A 2026 sex analysis included 6,664 women, 35 percent of the pooled population. Women had a greater multimorbidity burden and were less likely to receive several commonly indicated CKM therapies at baseline. No evidence of treatment-effect heterogeneity by sex was found for the assessed finerenone outcomes. This supports attention to treatment access and equitable assessment; it does not establish a special female-only drug effect.

For Angela, close the treatment discussion by listing the clinical problem, the option chosen or deferred, the reason, the safety plan and her own goal. A defensible decision may include a reason not to use a therapy. Educational success is appropriate selection and follow-through, not the number of prescriptions or adoption of a particular brand.

Here is the decision. Angela reads that one trial improved symptoms and another reduced a composite event outcome. What should the clinician clarify?

Pause here if you would like a moment to think it through.

The best next step in this case is: Confirm each study's population, endpoint and current product label before applying the result.

This avoids converting different evidence into an unsupported drug ranking.

The takeaway: Use heart failure evidence even without diabetes, distinguish symptom and event endpoints, and individualize obesity treatment. Compare each option with its own evidence and current label.

Before we move on, let's apply that reasoning in more detail.

A treatment gap is a prompt to assess eligibility.

A US registry study published in 2025 examined 759,915 patients at 191 outpatient cardiovascular practices using records from July 2019 through June 2023. In the combined heart failure with mildly reduced ejection fraction/heart failure with preserved ejection fraction group, recorded SGLT2-inhibitor prescribing reached 12.8 percent in the final quarter. Female sex was associated with lower prescribing across the overall heart failure cohort. This is a historical observational finding, not a current 2026 rate or proof that every untreated patient should receive a medicine.

Use the gap to improve the decision process: confirm the syndrome, assess clinical and product-specific eligibility, explain the expected benefit and limits, review safety and cost, and document the agreed plan. A balanced education program measures the quality of those decisions. It does not set a target for prescriptions of a particular product or assume that education alone removes insurance, laboratory or referral barriers.

For heart failure, empagliflozin and dapagliflozin are each given at 10 milligrams daily when appropriate, but their renal-use instructions are not identical. Dapagliflozin initiation is not recommended below an eGFR of 25 milliliters per minute per one point seven three square meters; empagliflozin heart failure studies enrolled patients down to 20 and did not enroll those below 20. Review the current complete label and clinical context rather than applying a single class cutoff. Assess volume status and correct depletion before initiation; the loop-diuretic plan may need adjustment.

Review genital symptoms, serious urinary symptoms, poor intake and the possibility of ketoacidosis without marked hyperglycemia. Both labels direct withholding for at least three days before surgery or procedures associated with prolonged fasting, when possible. Restarting requires clinical stability and resumed oral intake. Give the patient an actionable instruction and a contact route rather than an unexplained list of adverse effects.

Separate guidance, approval and the woman in front of you.

Evidence evolves after a course is written. The 2026 European Society of Cardiology guideline adds contemporary European recommendations across ejection fraction categories and discusses obesity therapies in symptomatic heart failure. US indication, dosing and safety decisions still require the current US product label and applicable US guidance. A guideline recommendation and a regulatory indication answer different questions.

In the STEP-HFpEF pooled sex analysis, health-status improvement with semaglutide was similar in women and men, despite greater weight reduction in women. A women-focused case therefore does not justify claiming a uniquely larger heart failure treatment effect in women. Explain the population studied and the outcome measured, and avoid turning a subgroup description into a superiority claim.

Build an individualized plan that also addresses blood pressure, atrial fibrillation when present, kidney health, sleep-disordered breathing, physical function, nutrition and access. Diuretics treat congestion; disease-modifying treatment and comorbidity management have distinct purposes. Neither weight loss nor relief of edema is a reason to stop asking whether the complete heart failure plan is appropriate.

Finerenone in heart failure: required reading before the decisions

This written note supplements the recording and is required for both the video and reading routes.

For an otherwise eligible adult with heart failure and LVEF at least 40%, the US label starts finerenone at 10 mg once daily when baseline eGFR is 25 to less than 60 mL/min/1.73 m². The target is 20 mg once daily when the HF dose-adjustment table permits. For baseline eGFR at least 60 mL/min/1.73 m², the starting dose is 20 mg and the target is 40 mg once daily. A target dose is not the starting dose.

Do not initiate if serum potassium is above 5.0 mEq/L; initiation with eGFR below 25 mL/min/1.73 m² is not recommended. Measure potassium and eGFR four weeks after initiation and after dose adjustment, with earlier assessment when clinically needed. Review contraindications, interactions and the current HF-specific adjustment table before prescribing.

Source: Finerenone US prescribing information, September 2026. |
https://labeling.bayerhealthcare.com/html/products/pi/Kerendia_PI.pdf

Formative case decisions

E2-practice-1

Angela has confirmed HFpEF and asks why a medicine often associated with diabetes is being considered when her A1c is 5.8%. Which explanation is appropriate?

- A. HF benefit depends on lowering her glucose.
- B. Discuss HF trial evidence and individual eligibility even without diabetes.
- C. Use an SGLT2 inhibitor only after diabetes develops.

Answer B: Discuss HF trial evidence and individual eligibility even without diabetes. The HF evidence is not restricted to diabetes. Review product-specific eligibility, renal function, volume, precautions and access, and explain the relevant HF outcomes.

E2-practice-2

Angela reads that a positive composite outcome in SUMMIT means tirzepatide was proven to prevent cardiovascular death in HFpEF. How should you respond?

- A. The composite proves equal benefit for each component.
- B. Comparing separate trials proves which obesity drug is best.
- C. Explain the composite benefit and its components without asserting a proven cardiovascular-mortality benefit.

Answer C: Explain the composite benefit and its components without asserting a proven cardiovascular-mortality benefit. Separate symptoms, function, weight and clinical-event outcomes. The positive composite does not establish benefit for every component, and separate trials are not a head-to-head comparison.

E2-practice-3

For an otherwise eligible finerenone HF candidate with EF 58%, baseline eGFR 42 mL/min/1.73 m² and potassium 4.7 mEq/L, which plan matches the current HF label?

- A. Start 10 mg daily and check potassium/eGFR at four weeks; use the full HF table for adjustment.
- B. Start at the 40 mg target without checking renal category.
- C. Start 20 mg and omit monitoring unless symptoms develop.

Answer A: Start 10 mg daily and check potassium/eGFR at four weeks; use the full HF table for adjustment. For this baseline renal category the start is 10 mg and the HF target is 20 mg when eligible. Review interactions and contraindications and reassess potassium/eGFR four weeks after initiation or a dose change; earlier review may be needed clinically.

Angela | Final decisions

E2-sglT2-post

A woman without diabetes has confirmed HFpEF and asks why an SGLT2 inhibitor is being discussed. Which explanation is accurate?

- A. It is required only to prevent future diabetes.
- B. All SGLT2 agents have interchangeable HF labels.
- C. Trials support HF benefit beyond glucose lowering; select a suitable agent and monitoring plan.
- D. A standalone cardiovascular mortality benefit was proven in every HFpEF trial.

Your first response: _____ Date/time: _____

E2-endpoints-post

Which explanation best distinguishes STEP-HFpEF from an HF mortality trial?

- A. It demonstrated symptom, function and weight benefits; it was not designed to establish a mortality reduction.
- B. Its weight effect proves longer survival.
- C. Its findings establish superiority over tirzepatide.
- D. The result means all obesity drugs treat HFpEF identically.

Your first response: _____ Date/time: _____

E2-finenone-post

A woman with EF 58%, eGFR 42 mL/min/1.73 m² and potassium 4.7 mEq/L is an appropriate finerenone HF candidate after full review. Which plan is correct?

- A. Start 20 mg because that is her target.
- B. Start 10 mg and check potassium only after symptoms develop.
- C. Start 10 mg, check potassium/eGFR at four weeks, and consider the 20 mg HF target when eligible.
- D. Start 40 mg because the HF label differs from CKD.

Your first response: _____ Date/time: _____

Module evaluation

How useful was this module?

Very useful / Somewhat useful / Not useful

How confident are you applying the objective?

Confident / Somewhat confident / Need more support

What is your next step?

Use this decision process in an eligible encounter / Discuss the workflow with my team / Review a source or seek specialist support / No change planned

Module 3 | Teresa

Keeping the Plan Working

Objective: Respond appropriately to medication-related warning symptoms and complete a named monitoring and follow-up handoff.

Opening decisions

E3-acute_safety-pre

After SGLT2 initiation, Teresa has vomiting, poor intake, abdominal pain and breathlessness. Glucose is 146 mg/dL. What is the best action?

- A. Reassure her because glucose is below 200.
- B. Wait for her scheduled four-week panel.
- C. Temporarily stop the medicine and arrange urgent assessment for ketoacidosis, depletion and acute illness.
- D. Increase the dose to improve glucose control.

Your first response: _____ Date/time: _____

E3-lab_action-pre

Before planned finerenone initiation, potassium returns at 5.3 mEq/L. What is the best action?

- A. Start because the value is below 5.5.
- B. Do not initiate; assess potassium and contributing factors and reassess eligibility.
- C. Start at the target dose with no further checks.
- D. Use a different indication table to permit initiation.

Your first response: _____ Date/time: _____

E3-ownership-pre

Teresa's ordered four-week potassium/eGFR result is absent. What completes the monitoring task?

- A. Leave the order active.
- B. Send a reminder and close the task.
- C. Wait until the next refill.
- D. Find out whether testing occurred, resolve barriers and ensure clinician review and patient contact.

Your first response: _____ Date/time: _____

Teresa | Complete written lesson

For our last case, Teresa is going home with a changed treatment plan.

Teresa is home after a hospitalization for worsening heart failure. Her discharge list includes medication changes. A cardiology visit is planned, but she does not know who will review her next blood test.

Clinical context. Confirmed heart failure with preserved ejection fraction; left ventricular ejection fraction 55 percent; chronic kidney disease and type 2 diabetes.

At the stable follow-up. eGFR 42 milliliters per minute per one point seven three square meters; potassium 4.7 milliequivalents per liter.

Current task. Reconcile therapy and assess eligibility and safety before adding a mineralocorticoid receptor antagonist.

Coordination gap. Laboratory date and responsible result reviewer are not documented.

Reconstruct what is happening at home.

Ask Teresa to bring the medicines she is actually taking, or review them by a reliable remote method. Compare the hospital list, the outpatient record, pharmacy information when available and her account. Resolve duplicate therapies, stopped medicines that remain in the record and prescriptions that were never filled. Ask about supplements, salt substitutes and nonprescription agents as part of the safety review.

Do not interpret a missed dose as lack of interest without asking why. Cost, transportation, language, vision, manual dexterity and unclear instructions may all affect the plan. If the medicine is unaffordable, record the barrier and the action needed to address it. A plan that depends on a nonexistent supply is not an implemented treatment.

Review symptoms, volume status, blood pressure and the trajectory of kidney function. The decision to add treatment must consider stability and the existing regimen. This fictional stable follow-up is an opportunity to close the monitoring gap; it is not permission to initiate therapy in a patient with acute deterioration without reassessment.

Use the heart-failure label, not a remembered kidney schedule.

Finerenone's current US labeling includes adults with heart failure and left ventricular ejection fraction of at least 40 percent. Baseline potassium and eGFR are required. Do not initiate when potassium is above 5.0 milliequivalents per liter; initiation below eGFR 25 milliliters per minute per one point seven three square meters is not recommended. Strong CYP3A4 inhibitors and adrenal insufficiency are contraindications. Review interactions and the entire regimen.

For the heart failure indication, starting and target doses depend on baseline eGFR, with subsequent decisions guided by potassium and kidney function. At Teresa's stated baseline eGFR of 42, the label's starting dose is 10 milligrams daily and target is 20 milligrams daily, subject to subsequent laboratory results and tolerability. Do not replace the heart failure dosing table with the chronic kidney disease-with-diabetes table.

The heart failure label calls for potassium and eGFR four weeks after initiation and four weeks after dose adjustment, then periodically. Clinical changes may require earlier assessment. Use the current label for exact hold, restart and adjustment rules. The course does not replace those tables or a clinician's judgment.

Here is the decision. Teresa's potassium is 4.7 and eGFR 42. After other eligibility and interaction checks, what completes a finerenone initiation plan?

Pause here if you would like a moment to think it through.

The best next step in this case is: Use the heart failure dosing instructions, arrange four-week potassium/eGFR testing, and name the reviewer and patient-contact process.

The dose, tests, owner and communication process belong together.

A laboratory order needs an owner.

'Repeat labs' is not a complete plan. Specify the tests, date, location and responsible reviewer. The reviewer needs a process for acting on abnormal values and contacting Teresa. The team also needs a way to detect a test that was not completed; a missing result is not a normal result.

For this case, the plan could read: 'Basic metabolic panel at four weeks after initiation, with potassium and eGFR review by the prescribing clinician; earlier clinical assessment if symptoms or intercurrent illness warrant. Nurse care coordinator checks completion and contacts the prescriber for missing or abnormal results. Results and instructions communicated to Teresa and documented.' The local team must assign real names and workable escalation thresholds.

Confirm that the testing site is reachable and the order can be used there. Give Teresa a short written summary of when to go and whom to call. With her permission, include a support person. If a dose changes, the laboratory date must change with it; otherwise the chart can appear complete while the relevant monitoring is missed.

Record that the result was reviewed and the patient informed. Sending a message into a portal that Teresa does not use may not complete the loop. Ask which contact method works for her and follow the organization's privacy and communication policies.

Explain benefit and risk in the same conversation.

Teresa asks, 'Will this medicine keep me out of the hospital?' A useful answer respects both evidence and uncertainty: 'In a large trial, this treatment reduced the combined rate of worsening heart-failure events and cardiovascular death. It cannot promise that you will never need hospital care. We also need to watch potassium and kidney function.'

Use the relevant population and endpoint when explaining a result. FINEARTS-HF included mildly reduced and preserved ejection fraction; it counted recurrent worsening-heart failure events as well as cardiovascular death. A rate ratio for total events is not an individual patient's chance of avoiding every event. The trial's lack of a significant cardiovascular-death result alone should not be hidden.

Ask Teresa to explain why the blood test matters. If she says it is only to see whether the drug is working, clarify the safety purpose. Hyperkalemia may not announce itself with a clear symptom.

Monitoring is part of the treatment, even when she feels well.

Do not let the routine pathway absorb an emergency.

Now change the vignette. Teresa calls with new breathlessness at rest and chest pressure. This is a different decision from arranging the next routine blood test. Arrange emergency assessment; in the United States, severe or potentially life-threatening symptoms warrant calling 911. Do not ask her to wait for the scheduled visit or simply repeat an outpatient laboratory test.

For nonemergency worsening symptoms, the care plan should explain how to reach the clinical team and when same-day advice is needed. Any individualized weight or symptom action plan should be provided by the treating team. Do not invent a universal diuretic self-adjustment rule from this case.

Use teach-back while she is stable: 'If you develop chest pressure and cannot catch your breath at rest, what will you do?' Then ask whom she contacts for a nonemergency concern and when her next test and visit occur. Correct the plan in plain language rather than testing whether she can repeat clinical terminology.

Turn a handoff into a completed action.

A referral, order or discharge document is the start of a handoff. A completed handoff identifies the receiving clinician, the question to resolve, the current medicines and doses, recent results, pending tasks and the next contact. If no appointment is available, someone needs to address that gap rather than leaving an open-ended instruction to follow up.

Evidence from STRONG-HF supports the value of structured, closely monitored care after acute heart failure, but the trial was not restricted to heart failure with preserved ejection fraction. Its exact titration approach should not be transplanted wholesale to every woman with preserved ejection fraction. The transferable lesson here is to design follow-up that actively checks treatment and safety.

For Teresa, the final note should make four things easy to find: what changed, what must be monitored, who will act and when she will hear from the team. At the next contact, confirm the test happened, the result was reviewed and the instruction reached her. The clinical outcome is not an order in the system; it is a patient who knows and can complete the next step.

Here is the decision. The four-week result is missing. Which response best closes the care gap?

Pause here if you would like a moment to think it through.

The best next step in this case is: Check whether testing occurred, resolve access barriers, arrange needed testing and ensure clinician review.

The team needs to track completion as well as interpret results.

The takeaway: Monitoring and coordination are treatment tasks. Pair every medication change with a test date, a responsible reviewer, a communication plan and clear symptom escalation.

Before we move on, let's apply that reasoning in more detail.

A safety call that cannot wait for the next blood test.

Consider a separate development in Teresa's story: after starting an SGLT2 inhibitor she develops vomiting, poor intake, abdominal discomfort and breathlessness. Her home glucose is 146 milligrams per deciliter. This value does not rule out ketoacidosis associated with SGLT2 treatment. Temporarily stop the medicine and arrange urgent clinical assessment for ketoacidosis, dehydration and other acute illness. Do not use a routine follow-up appointment or reassurance about the glucose value as the response.

For a stable finerenone heart failure candidate with eGFR 42 and potassium 4.7, the current label begins at 10 milligrams daily, after the remaining eligibility and interaction checks. The heart failure target associated with that baseline renal category is 20 milligrams daily, if the follow-up potassium, kidney function and full dose-adjustment instructions support titration. A target is not an instruction to start at the target. For baseline eGFR at least 60, the heart failure starting and target doses differ again.

Do not initiate finerenone with potassium above 5.0 milliequivalents per liter; initiation below eGFR 25 is not recommended. Check contraindications, including strong CYP3A4 inhibitors and adrenal insufficiency. Use the heart failure-specific table when laboratory values change. A newly prescribed interacting medicine, dehydration, falling blood pressure or an acute illness can make a previously appropriate plan unsafe and may require assessment before the scheduled four-week review.

Close the visit by asking Teresa to show how she will follow the plan: which medicine she is taking, when and where testing will occur, who will contact her, and which symptoms need immediate help. If a laboratory appointment or medication cannot be obtained, make the barrier visible to the responsible team. The plan is incomplete until it is feasible.

Before you go, bring the three cases back to one question: what will you do differently at the next visit?

Explain the symptom, use the endpoint the study actually measured, and give every monitoring plan an owner.

You'll find the source references, transcript and clinical resources beside this episode. To record your answers and complete the learning activity, return to the activity page for the questions and brief evaluation.

This has been HEART RESERVE Clinical Conversations. I'm Lisa Zahakos. Thank you for listening.

Formative case decisions

E3-practice-1

After starting an SGLT2 inhibitor, Teresa has vomiting, poor intake, abdominal pain and breathlessness. Her glucose is 146 mg/dL. Which response is safest?

- A. Wait because the glucose is not markedly elevated.
- B. Hold the SGLT2 inhibitor and arrange urgent assessment for possible ketoacidosis and other acute causes.
- C. Wait for her routine four-week blood test.

Answer B: Hold the SGLT2 inhibitor and arrange urgent assessment for possible ketoacidosis and other acute causes. Ketoacidosis may occur without marked hyperglycemia. Concerning symptoms and poor intake require urgent assessment; a routine monitoring schedule is not the appropriate pathway.

E3-practice-2

At a later stable visit, a baseline potassium result of 5.3 mEq/L returns before Teresa has taken her first finerenone dose. What should happen?

- A. Give the first dose and recheck at four weeks.
- B. Ignore potassium because the eGFR is eligible.
- C. Do not initiate; review the result, contributing factors and complete eligibility.

Answer C: Do not initiate; review the result, contributing factors and complete eligibility. The current label says not to initiate when baseline potassium is above 5.0 mEq/L. This is an initiation decision, not a maintenance-dose adjustment.

E3-practice-3

After a subsequent eligible start, the ordered potassium/eGFR result is absent. Teresa could not arrange transportation. What closes the gap?

- A. Assign a reviewer and backup, resolve access, obtain/retrieve the test and communicate the reviewed plan.
- B. Place another order and mark the task complete.
- C. Assume no abnormality because no result was received.

Answer A: Assign a reviewer and backup, resolve access, obtain/retrieve the test and communicate the reviewed plan. A named owner must track the test through interpretation and communication. Resolve the practical barrier and retain responsibility until the receiving clinician or team accepts it.

Teresa | Final decisions

E3-acute_safety-post

A patient on an SGLT2 inhibitor reports abdominal pain, vomiting and rapid breathing during an illness. Glucose is 158 mg/dL. Which plan is safest?

- A. Continue treatment until glucose exceeds 250 mg/dL.
- B. Withhold temporarily and obtain urgent clinical assessment.
- C. Arrange a routine appointment in two weeks.
- D. Treat the symptoms as an expected adjustment effect.

Your first response: _____ Date/time: _____

E3-lab_action-post

A new finerenone HF prescription is awaiting dispensing. Baseline potassium is 5.2 mEq/L. Which response matches the label?

- A. Hold initiation, evaluate the result and contributing medicines, and reassess the plan.
- B. Start 10 mg because that avoids hyperkalemia.
- C. Start and repeat potassium in six months.
- D. Treat the result as irrelevant because EF is preserved.

Your first response: _____ Date/time: _____

E3-ownership-post

Which discharge-to-primary-care handoff is most actionable?

- A. Medication changed; follow up as needed.
- B. Check labs sometime next month.
- C. Specify medication/indication, test date, named result reviewer, contact plan and escalation instructions.
- D. Ask the patient to decide which clinician should manage the results.

Your first response: _____ Date/time: _____

Module evaluation

How useful was this module?

Very useful / Somewhat useful / Not useful

How confident are you applying the objective?

Confident / Somewhat confident / Need more support

What is your next step?

Use this decision process in an eligible encounter / Discuss the workflow with my team / Review a source or seek specialist support / No change planned

Evidence and review status

The clinical source register supports independent review. Complete-label adjudication, faculty/disclosure review, assessment approval, human listening, a timed pilot and native host/accessibility testing remain required before accredited release. The five time-stamped narration flags are documented in the reviewer package. No case-response score establishes observed practice change or patient benefit.

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step | STEP-HFpEF primary report.

<https://pubmed.ncbi.nlm.nih.gov/37622681/>

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sex | STEP-HFpEF prespecified pooled sex analysis.

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topcat | TOPCAT: Spironolactone for heart failure with preserved ejection fraction (2014)

<https://pubmed.ncbi.nlm.nih.gov/24716680/>

fineheart | FINE-HEART: Finerenone in heart failure and chronic kidney disease with type 2 diabetes (2024)

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<https://pubmed.ncbi.nlm.nih.gov/41884984/>

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<https://pubmed.ncbi.nlm.nih.gov/36356631/>