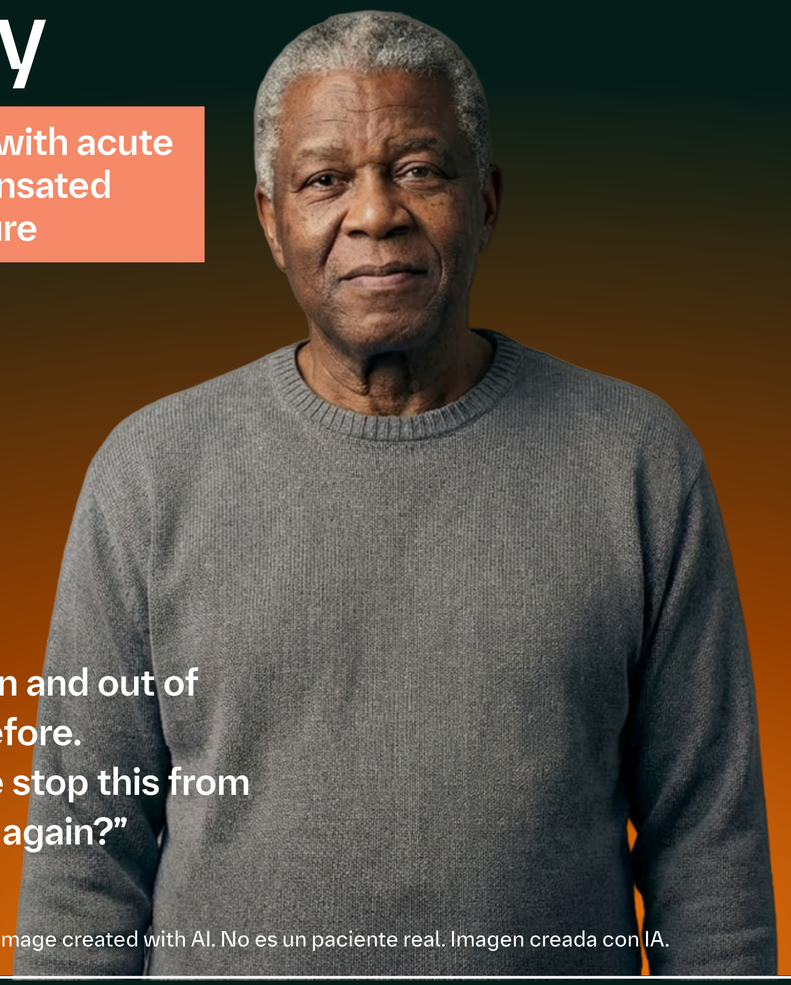
Meet Jerry

A patient with acute decompensated heart failure

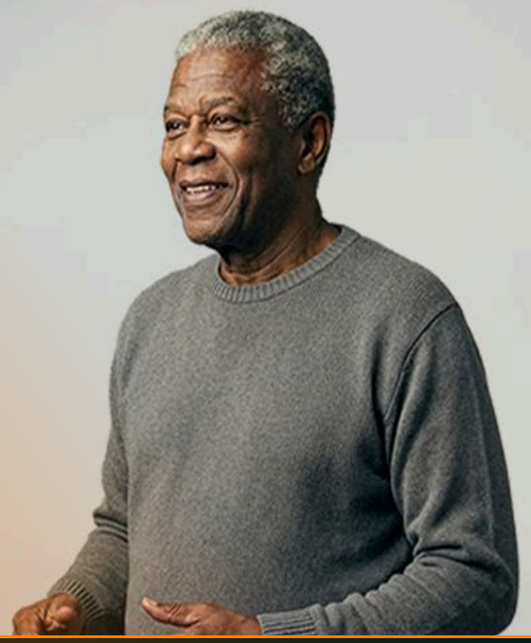


“I’ve been in and out of hospital before. How do we stop this from happening again?”

Not a real patient. Image created with AI. No es un paciente real. Imagen creada con IA.

Hear from Jerry

Play video



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A patient withHFrEF, CKD and T2D

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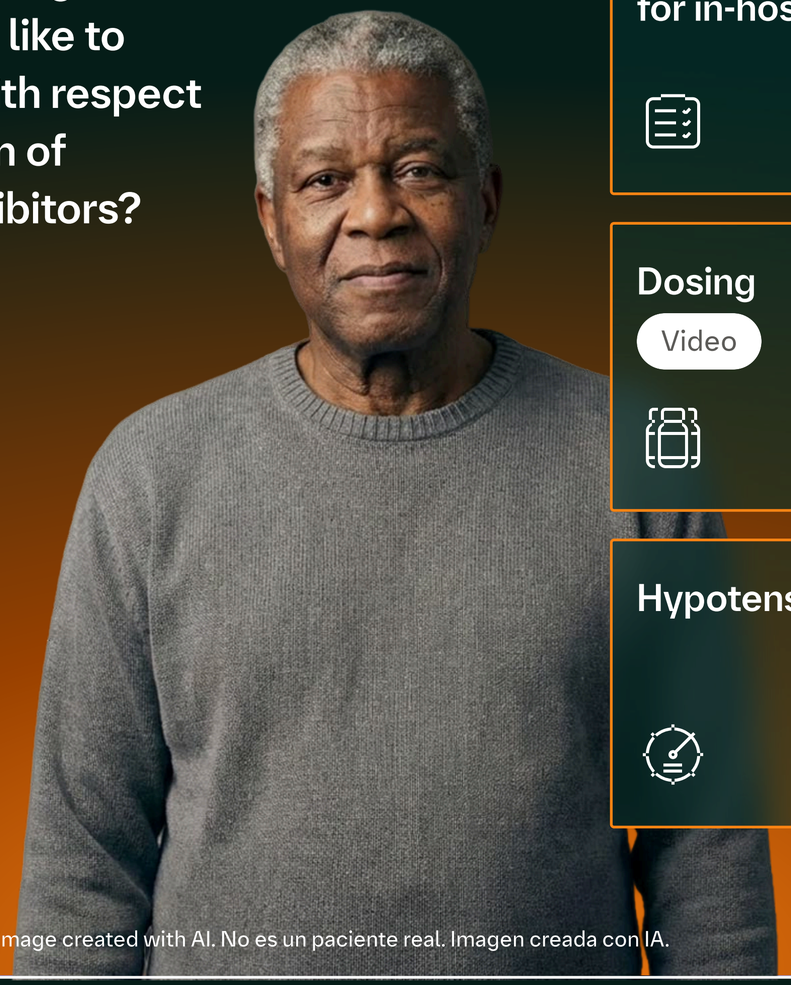
Which aspect of Jerry's management would you like to explore with respect to initiation of SGLT2 inhibitors?



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- Guideline implementation for in-hospital treatment
- Barriers to in-hospital SGLT2 inhibitor initiation
- Elderly patients
- Dosing — Video
- Concomitant HF medications
- Urinary tract infections/ genital tract infections
- Hypotension
- When to stop, pause and restart treatment
- Collaborating with Primary Care

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What treatment(s) would you initiate first for this patient?

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- Guideline implementation for in-hospital treatment
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SGLT2 inhibitors are foundational disease-modifying treatments in heart failure, recommended across the LVEF spectrum[1,2]

HFrEF (LVEF ≤40%)	HFmrEF (LVEF 41–49%)	HFpEF (LVEF ≥50%)

SGLT2 inhibitors are the **only treatment** with a **class IA recommendation to reduce heart failure hospitalisation and cardiovascular death across the LVEF spectrum,[1,2]** and are the **only foundational therapy** with a **class IA recommendation for HFpEF in Europe[2]**

2021 ESC guidelines[1]

Diuretics, as needed (1A)	**SGLT2i* (1A)**	ARNi/ACEi† (1A)	MRA (1A)	Beta-blocker (1A)

2021/2023 ESC guidelines[1,2]

Diuretics, as needed (1C)	**SGLT2i* (1A)**	ACEi, ARB, ARNi (2bC)	MRA (2bC)	Beta-blocker (2bC)

2021/2023 ESC guidelines[1,2]

Diuretics, for fluid retention (1C)	**SGLT2i* (1A)**	Treatment for aetiology, CV and non-CV comorbidities (1C)

The parentheses refer to the class of recommendation and level of evidence in the guidelines. Classes of recommendations: **class 1**, is recommended or is indicated; **class 2a**, should be considered; **class 2b**, may be considered; **class 3**, is not recommended. Levels of evidence: **A**, data derived from multiple randomised clinical trials or meta-analyses; **B**, data derived from a single randomised clinical trial or large non-randomized studies; **C**, consensus of opinion of the experts and/or small studies, retrospective studies, registries[2]

*Dapagliflozin or empagliflozin; †ARB is recommended in those unable to tolerate an ACEi or ARNi

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin II receptor blocker; ARNi, angiotensin receptor–neprilysin inhibitor; CV, cardiovascular; ESC, European Society of Cardiology; HFmrEF, heart failure with mildly reduced ejection fraction; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction; LVEF, left ventricular ejection fraction; MRA, mineralocorticoid receptor antagonist; SGLT2i, sodium-glucose co-transporter-2 inhibitor

1. McDonagh TA *et al. Eur Heart J* 2021;42:3599; 2. McDonagh TA *et al. Eur Heart J* 2023;44:3627

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2023 ESC recommendation for predischarge and early post-discharge follow-up of patients hospitalised for acute heart failure

COR	LOE	Recommendation
I	B	An **intensive strategy of initiation and rapid uptitration** of evidence-based treatment before discharge and during frequent and careful follow-up visits in the first 6 weeks following a HF hospitalisation is recommended to reduce the risk of HF rehospitalisation or death

COR, class of recommendation; ESC, European Society of Cardiology; LOE, level of evidence
McDonagh T *et al. Eur Heart J* 2023;44:3627

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What barriers do you face to starting GDMT in hospital for patients with heart failure?

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- Guideline implementation for in-hospital treatment
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Delay or omission of heart failure GDMT is associated with higher mortality and rehospitalisation

HF with EF ≤40%
Lack of initiation, titration, or persistence of:

Beta-blocker
- ↑ 34%–35% relative risk of all-cause mortality
- ↑ 19%–24% relative risk of all-cause mortality or hospitalisation

MRA
- ↑ 24%-35% relative risk of all-cause mortality
- ↑ 35%-42% relative risk of HF hospitalisation

ARNi
- ↑ ~25% relative risk of all-cause mortality vs putative placebo
- ↑ ~30% relative risk of CV mortality or HF hospitalisation vs putative placebo

SGLT2 inhibitor
- ↑ 13% relative risk of all-cause mortality
- ↑ 31% relative risk of HF hospitalisation

HF with EF >40%
Lack of initiation, titration, or persistence of:

SGLT2 inhibitor
- ↑ 20% relative risk of CV mortality or HF hospitalisation
- ↑ 26% relative risk of HF hospitalisation

Delaying or omitting GDMT in eligible patients with heart failure associated with:
- Patient never being initiated on GDMT, or substantial delay
- Worse quality of life and health status
- Excess risk of disease progression
- Preventable deaths and hospitalisations

ARNi, angiotensin receptor–neprilysin inhibitor; CV, cardiovascular; EF, ejection fraction; GDMT, guideline-directed medical therapy; HF, heart failure; MRA, mineralocorticoid receptor antagonist; RR, relative risk; SGLT2, sodium-glucose co-transporter-2

Fonarow GC & Greene SJ. *J Am Coll Cardiol* 2023;81:2145
Figure adapted from: Fonarow GC & Greene SJ. 2023

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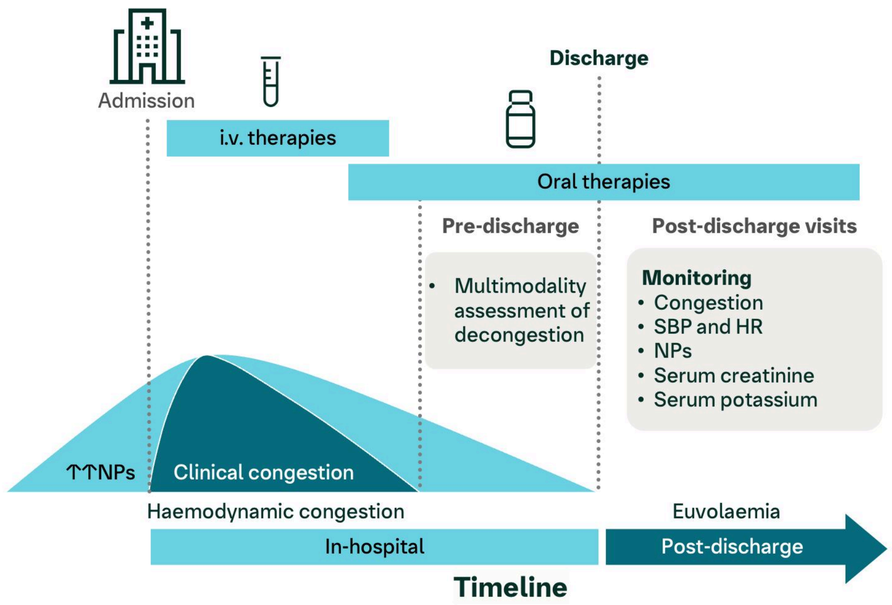
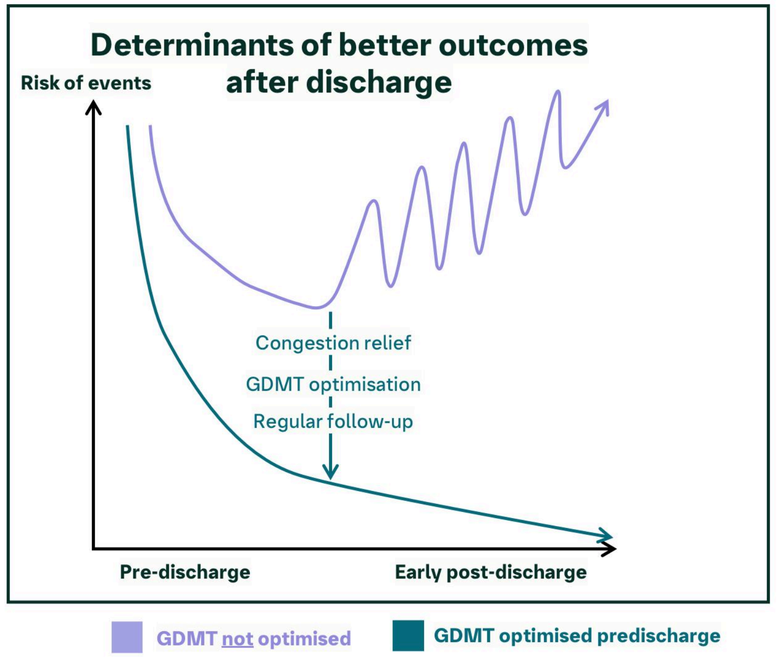
Hospitalisation is a key opportunity to optimise GDMT

Management of patients with heart failure according to hospitalisation phase





GDMT, guideline-directed medical therapy; HR, heart rate; i.v., intravenous; NP, natriuretic peptide; SBP, systolic blood pressure
Metra M *et al. Eur J Heart Fail* 2023;25:1115
Figures adapted from: Metra M *et al.* 2023

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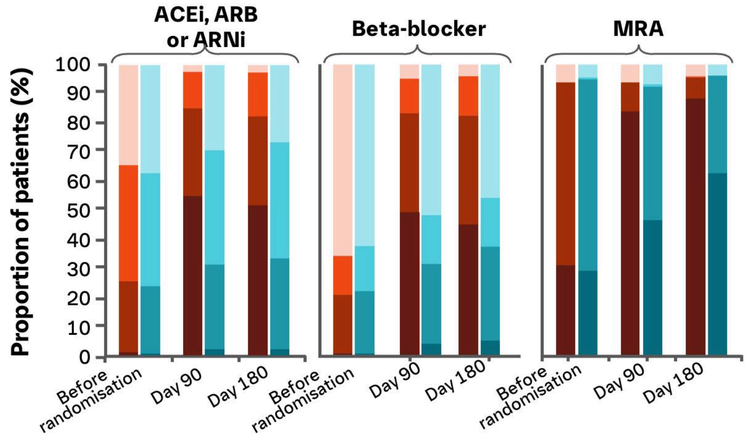
STRONG HF: intensive follow-up with a rapid uptitration strategy can increase the proportion of patients receiving optimal GDMT

Increase in GDMT through intervention...

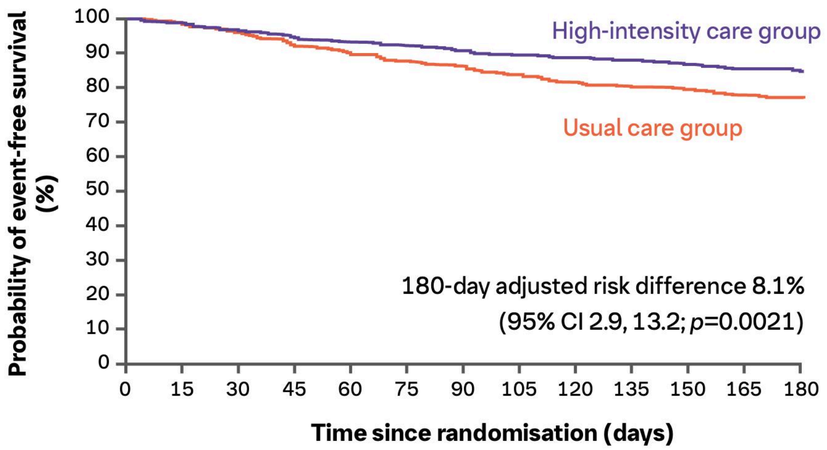


Oral GDMT for heart failure prescribed in high-intensity care and usual care groups by visit

Usual care group	High-intensity care group
None	None
Less than half of a full optimal dose	Less than half of a full optimal dose
Half to less than a full optimal dose	Half to less than a full optimal dose
Full optimal dose or more	Full optimal dose or more

...translating into better outcomes

*All-cause death or heart failure readmission**



No. at risk

Usual care group	502	494	474	454	439	423	410	394	381	373	366	353	329
High-intensity care group	506	497	484	466	449	440	430	419	415	408	397	384	345

*Deaths due to COVID-19 were excluded

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin II receptor blocker; ARNi, angiotensin receptor–neprilysin inhibitor; GDMT, guideline-directed medical therapy; MRA, mineralocorticoid receptor antagonist

Mebazaa A et al. *Lancet* 2022;400:1938

Figures adapted from: Mebazaa A *et al.* 2022

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How do you approach the use of SGLT2 inhibitors in elderly patients with heart failure?

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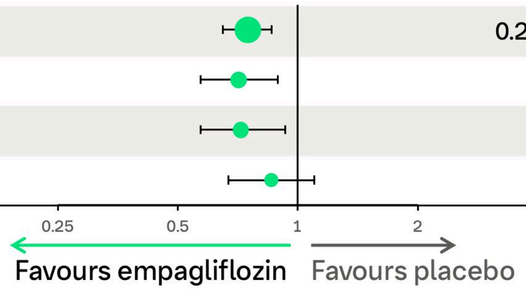
Empagliflozin improves outcomes compared with placebo in patients with HFrEF across the spectrum of age

EMPEROR-Reduced (LVEF ≤40%): impact of age on CV death or HHF

	Empagliflozin		Placebo			
Endpoint	**n/N**	**Events/ 100 PY**	**n/N**	**Events/ 100 PY**	**Hazard ratio (95% CI)**	***p*-value for trend**
CV death or first HHF						
All patients	361/1863	15.8	462/1867	21.0	0.75 (0.65, 0.86)	0.25
<65 years	128/675	15.7	193/740	22.6	0.71 (0.57, 0.89)	
65 to <75 years	118/685	13.7	140/631	18.4	0.72 (0.57, 0.93)	
≥75 years	115/503	18.9	129/496	22.0	0.86 (0.67, 1.10)	



CV, cardiovascular; HFrEF, heart failure with reduced ejection fraction; HHF, hospitalisation for heart failure; LVEF, left ventricular ejection fraction; PY, patient-years;
Filippatos G *et al. Eur J Heart Fail* 2022;24:2297
Figure adapted from: Filippatos G *et al.* 2022

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Empagliflozin has a consistent safety profile in patients with HFrEF across the spectrum of age

EMPEROR-Reduced (LVEF ≤40%): impact of age on CV death or HHF

Category of AEs, n (%)	<65 years				65 to <75 years				≥75 years			
	Placebo		Empagliflozin		Placebo		Empagliflozin		Placebo		Empagliflozin	
	n=739	IR per 100 PY	n=675	IR per 100 PY	n=628	IR per 100 PY	n=685	IR per 100 PY	n=496	IR per 100 PY	n=503	IR per 100 PY
Patients with any AEs	558 (75.5)	158.3	493 (73.0)	136.4	501 (79.8)	156.1	525 (76.6)	148.5	404 (81.5)	195.1	402 (79.9)	169.2
AE leading to drug discontinuation	113 (15.3)	12.6	92 (13.6)	11.2	101 (16.1)	13.1	115 (16.8)	13.6	114 (23.0)	19.8	115 (22.9)	19.4
Serious AE	340 (46.0)	53.5	249 (36.9)	38.3	302 (48.1)	53.5	289 (42.2)	44.1	254 (51.2)	59.9	234 (46.5)	51.4
Hypotension	63 (8.5)	7.5	64 (9.5)	8.3	45 (7.2)	6.0	60 (8.8)	7.5	55 (11.1)	10.3	52 (10.3)	9.2
Acute renal failure	78 (10.6)	9.2	57 (8.4)	7.2	60 (9.6)	8.2	68 (9.9)	8.4	54 (10.9)	9.8	50 (9.9)	8.9
Confirmed hypoglycaemic event*	18 (2.4)	2.0	10 (1.5)	1.2	5 (0.8)	0.7	12 (1.8)	1.4	5 (1.0)	0.9	5 (1.0)	0.8
Volume depletion	70 (9.5)	8.4	66 (9.8)	8.6	52 (8.3)	7.0	68 (9.9)	8.5	62 (12.5)	11.8	63 (12.5)	11.3
Urinary tract infection	24 (3.9)	2.7	13 (1.9)	1.6	21 (3.3)	2.8	29 (4.2)	3.5	27 (5.4)	4.7	27 (5.4)	4.7
Genital tract infection	7 (0.9)	0.78	10 (1.5)	1.23	2 (0.3)	0.26	10 (1.5)	1.19	3 (0.6)	0.57	11 (2.2)	1.87
Hyperkalaemia	35 (4.7)	4.0	30 (4.4)	3.8	41 (6.5)	5.5	42 (6.1)	5.2	39 (7.9)	7.1	29 (5.8)	5.0
Hypokalaemia	12 (1.6)	1.4	16 (2.4)	2.0	11 (1.8)	1.4	10 (1.5)	1.2	5 (1.0)	0.9	7 (1.4)	1.2

No clinically relevant differences in AEs between empagliflozin and placebo **across the age groups***

*Hypoglycaemic AEs with plasma glucose ≤70 mg/dl or requiring assistance
AE, adverse event; CV, cardiovascular; HHF, hospitalisation for heart failure; IR, incidence rate; LVEF, left ventricular ejection fraction; PY, patient-years; SGLT2, sodium-glucose co-transporter-2
Filippatos G *et al. Eur J Heart Fail* 2022;24:2297
Table adapted from: Filippatos G *et al.* 2022

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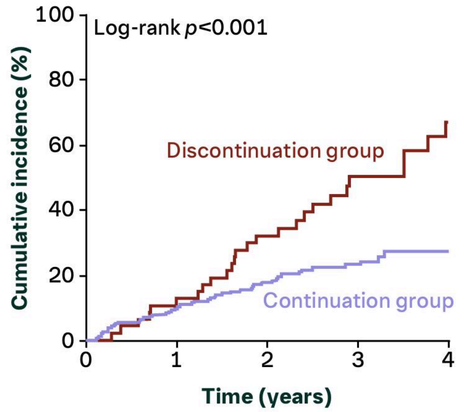
Patients aged ≥80 years face higher rates of CV death or worsening heart failure* but may miss out on GDMT due to age-related bias or comorbidities

A retrospective study evaluated the efficacy and safety of **SGLT2 inhibitors in adults aged ≥80 years**

Patients who discontinued SGLT2 inhibitors showed a significantly higher incidence of CV death or worsening heart failure
(sHR 2.54; 95% CI 1.67, 3.85; $p<0.001$)

The difference was maintained after balancing baseline covariates
(n=64; sHR 1.89; 95% CI 1.01, 3.55; $p<0.05$)

Cumulative incidence of CV death or worsening heart failure in patient groups



Number at risk					
Continuation	238	190	127	58	17
Discontinuation	0	40	29	13	3

*Worsening heart failure was defined as either unplanned HHF or an urgent visit for heart failure
CV, cardiovascular; GDMT, guideline-directed medical therapy; HHF, hospitalisation for heart failure; SGLT2, sodium-glucose co-transporter-2; sHR, subdistribution hazard ratio
Noiri J *et al. Int J Cardiol* 2025;439:133647
Figure adapted from: Noiri J *et al.* 2025

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What are the benefits to empagliflozin's dosing approach in patients with heart failure?

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Guideline implementation for in-hospital treatment

Barriers to in-hospital SGLT2 inhibitor initiation

Elderly patients

Dosing

Video

Concomitant HF medications

Urinary tract infections/ genital tract infections

Hypotension

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SGLT2 inhibitors are initiated at a single, fixed dose without the need for titration

- Single dose[1,2]
- Once daily[1,2]
- No titration[1,2]
- With or without food[1,2]
- Any time of day but regularly[1,2]

Early benefits with SGLT2 inhibitors[3]

The **beneficial effects of SGLT2 inhibitors occurred early after randomisation** in clinical trials and were associated with improvements in QoL and symptoms[3]

Due to the benefits observed, irrespective of LVEF or background heart failure therapy, **early administration of SGLT2 inhibitors is recommended**[3]

Pharmacokinetics of SGLT2 inhibitors are not influenced by co-administration with a wide range of drugs*[1,2]

*Other heart failure/CV medications also do not need to be adjusted when initiating SGLT2 inhibitors in most patients with heart failure[1,2]
CV, cardiovascular; LVEF, left ventricular ejection fraction; QoL, quality of life; SGLT2, sodium-glucose co-transporter-2
1. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 2. AstraZeneca. Forxiga® (dapagliflozin) summary of product characteristics. Apr 2026; 3. Metra M *et al. Eur J Heart Fail* 2023;25:1115

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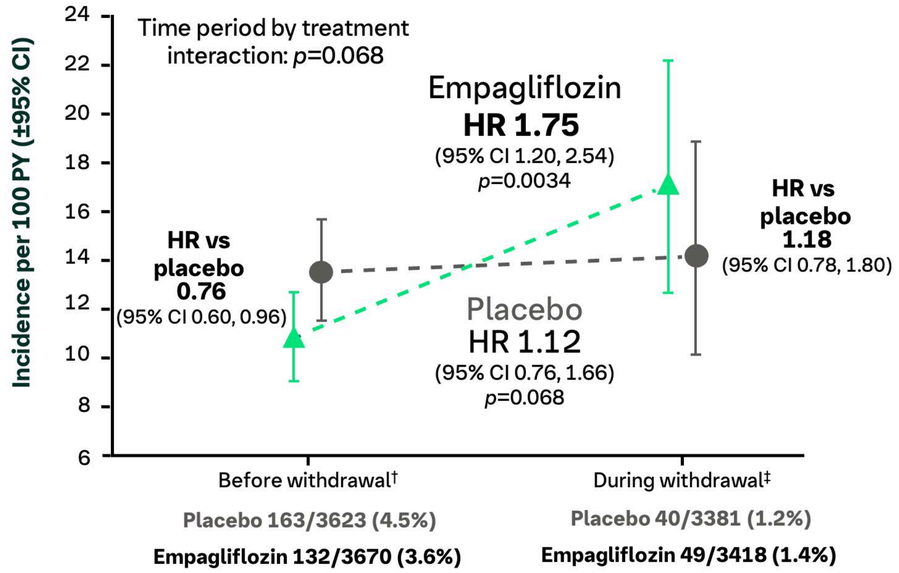
Why is continuation of therapy important?

Discontinuation of empagliflozin translated into increased clinical events in EMPEROR-Pooled*



75% RR

Withdrawal of empagliflozin increased the risk of CV death or first HHF during the 30-day period **versus on treatment (HR 1.75)**

*Pooled analysis of the EMPEROR-Reduced (patients with heart failure and LVEF ≤40%) and EMPEROR-Preserved (patients with heart failure and LVEF >40%) trials; †From 90 days before start of closeout up to planned end of double-blind treatment; ‡During 30-day withdrawal period
CV, cardiovascular; HHF, hospitalisation for heart failure; LVEF, left ventricular ejection fraction; PY, patient-years; RR, relative risk
Packer M *et al. Circulation* 2023;148:1011
Figure adapted from: Packer M *et al.* 2023

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How would you manage this patient's concomitant medications?

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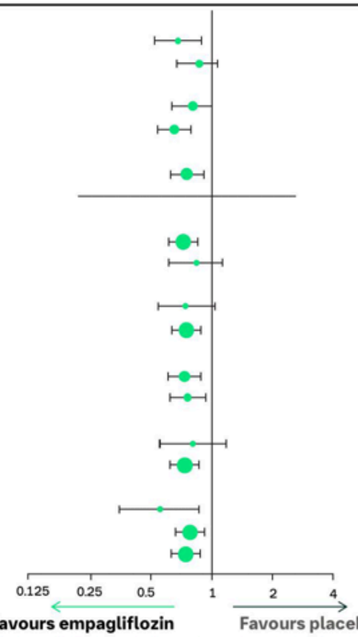
Concomitant heart failure medications

For patients with **HFrEF**, SGLT2 inhibitors can be used with **any combination of the other foundational therapies**[1,2]

	Empagliflozin (n/N)	Placebo (n/N)	Hazard ratio (95% CI)	Interaction *p*-value
ACEi or ARB				
≥50% of target dose	96/602	132/589	0.67 (0.52, 0.88)	0.18
<50% of target dose	156/699	171/676	0.85 (0.69, 1.06)	
Beta-blocker				
≥50% of target dose	165/893	204/932	0.81 (0.66, 1.00)	0.15
<50% of target dose	168/872	229/836	0.66 (0.54, 0.80)	
MRA				
≥50% of target dose	239/1279	323/1322	0.75 (0.63, 0.88)	0.96
<50% of target dose	4/27	7/33	0.77 (0.22, 2.63)	
ACEi, ARB, ARNi plus beta-blocker (at any dose)				
Yes	281/1564	373/1574	0.73 (0.62, 0.85)	0.42
No	80/299	89/293	0.84 (0.62, 1.13)	
ACEi, ARB, ARNi plus beta-blocker (both ≥50% of target dose)				
Yes	63/372	83/383	0.74 (0.54, 1.03)	0.96
No	298/1491	379/1484	0.75 (0.64, 0.87)	
ACEi, ARB, ARNi plus beta-blocker plus MRA (at any dose)				
Yes	194/1117	272/1163	0.73 (0.61 , 0.88)	0.77
No	167/746	190/704	0.76 (0.62, 0.94)	
ACEi, ARB, ARNi plus beta-blocker plus MRA (both ≥50% of target dose)				
Yes	47/289	60/301	0.80 (0.55, 1.17)	0.71
No	314/1574	402/1566	0.74 (0.64, 0.86)	
ARNi plus beta-blocker plus MRA (all at any dose)				
Yes	28/227	64/274	0.55 (0.35, 0.86)	0.15
No	333/1636	398/1593	0.77 (0.67, 0.89)	
Overall	**361/1863**	**462/1867**	**0.75 (0.65, 0.86)**	



ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin II receptor blocker; ARNi, angiotensin receptor–neprilysin inhibitor; HFrEF, heart failure with reduced ejection fraction; MRA, mineralocorticoid receptor antagonist; SGLT2, sodium-glucose co-transporter-2

1. McDonagh TA *et al. Eur Heart J* 2023;44:3627; 2. Verma S *et al. Lancet Diabetes Endocrinol* 2022;10:35

Figure adapted from: Verma S *et al.* 2022

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Concomitant heart failure medications

SGLT2 inhibitor use has been associated with decreased background diuretic dosing[1–3]

- The dose of loop diuretic **may not need to be routinely reduced: ~5% of patients** will require a reduction[4]

Other heart failure/CV medications do not need to be adjusted when initiating SGLT2 inhibitors in most patients with heart failure[5,6]

SGLT2 inhibitors may **mitigate the occurrence of hyperkalaemia** associated with MRAs[7,8]

Careful attention to volume status is required when SGLT2 inhibitors, ARNis and loop diuretics are used in combination because of their concomitant effects to promote diuresis[9]

ARNi, angiotensin receptor–neprilysin inhibitor; CV, cardiovascular; MRA, mineralocorticoid receptor antagonist; SGLT2, sodium-glucose co-transporter-2

1. Butler J *et al. JAMA Cardiol* 2023;8:640; 2. Jackson AM *et al. Circulation* 2020;142:1040; 3. Chatur S *et al. Eur Heart J* 2023;44:2930; 4. Docherty KF & Petrie MC. *Heart* 2022;108:312; 5. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 6. AstraZeneca. Forxiga® (dapagliflozin) summary of product characteristics. Apr 2026; 7. Ferreira JP *et al. J Am Coll Cardiol* 2021;77:397; 8. Moller SH *et al. J Hypertens* 2024;;42:564; 9. McDonald M *et al. Can J Cardiol* 2021;37:531

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Susan
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Your patient has developed a urinary tract infection/genital tract infection. What do you advise them?

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Infections are often mild, responsive to treatment and do not usually require SGLT2 inhibitor discontinuation[1]

Similar rates **(<6%)** of genital tract infections are observed with different SGLT2 inhibitors[2,3]

Complicated genital tract infections are uncommon*[4,5]

Urinary tract infection rates were **generally comparable between SGLT2 inhibitor treatment and placebo groups**†[2,3]

How to manage[1]:

Genital tract infections

- **Raise awareness** at initiation of SGLT2 inhibitor treatment to manage expectations and promote early intervention[1]
- **Provide practical hygiene advice** to patients (and their partners) to prevent infections[1]
- **Topical treatments** or **appropriate oral treatments** can be used for mild to moderate infections[1]

Urinary tract infections

- **Encourage** patients to maintain good personal **hygiene** to reduce the risk of urinary tract infections[1]
- Treat with **standard oral antibiotics**[1]
- In patients with complicated urinary tract infections (including pyelonephritis and urosepsis), **temporary interruption of treatment should be considered**[2,3]

*Evidence from empagliflozin trials; †The overall frequency of urinary tract infection reported as adverse event was similar in patients treated with empagliflozin 25 mg and placebo (7.0% and 7.2%) and higher in empagliflozin 10 mg (8.8%); urinary tract infections were more frequently reported for dapagliflozin 10 mg compared to placebo (4.7% versus 3.5%, respectively)[2,3]
SGLT2, sodium-glucose co-transporter-2

1. Wilding J *et al. Diabetes Ther* 2018;9:1757; 2. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 3. AstraZeneca. Forxiga® (dapagliflozin) summary of product characteristics. Apr 2026; 4. Packer M *et al. N Engl J Med* 2020;383:1413; 5. Anker SD *et al. N Engl J Med* 2021;385:1451

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Summary

Susan
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Your patient has developed hypotension. What do you do?

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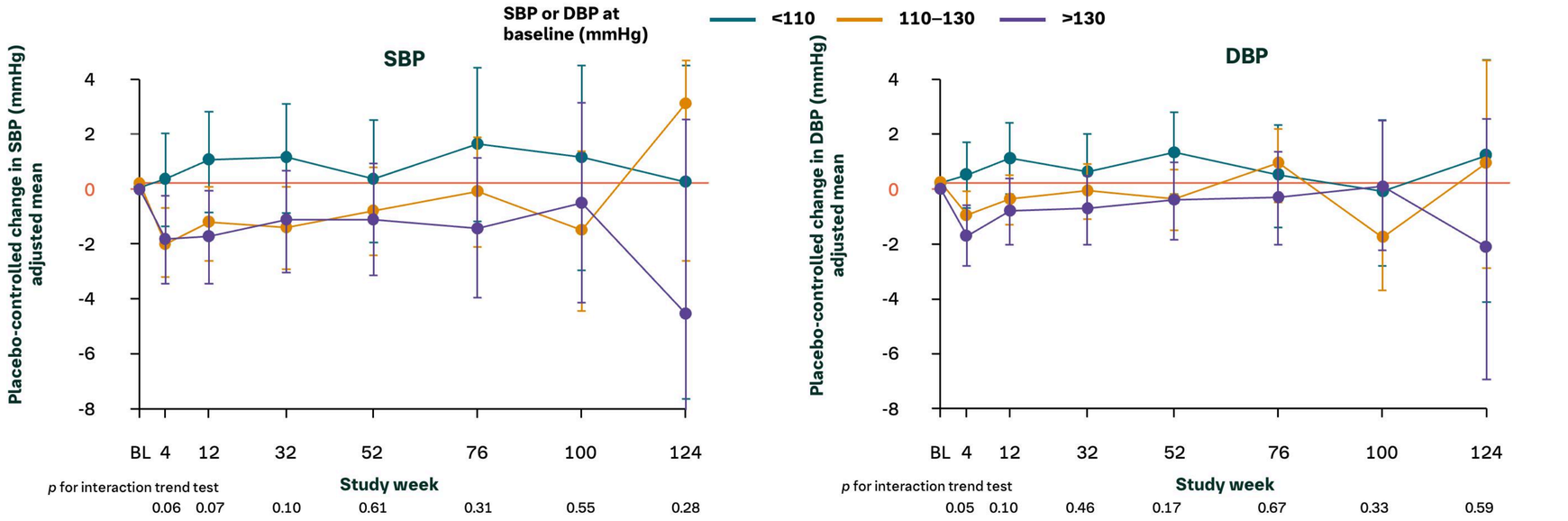
- Guideline implementation for in-hospital treatment
- Barriers to in-hospital SGLT2 inhibitor initiation
- Elderly patients
- Dosing
  Video
- Concomitant HF medications
- Urinary tract infections/ genital tract infections
- Hypotension
- When to stop, pause and restart treatment
- Collaborating with Primary Care

EMPEROR-Reduced: BP lowering with SGLT2 inhibitors and placebo was primarily observed in those with a higher baseline SBP

Placebo-corrected change in BP from baseline in patients treated with empagliflozin



Between-group differences were of borderline significance after 4 and 12 weeks but were not significant at later time points

BL, baseline; BP, blood pressure; DBP, diastolic blood pressure; SBP, systolic blood pressure; SGLT2, sodium-glucose co-transporter-2

Böhm M *et al. J Am Coll Cardiol* 2021;78:1337

Figure adapted from: Böhm M *et al.* 2021

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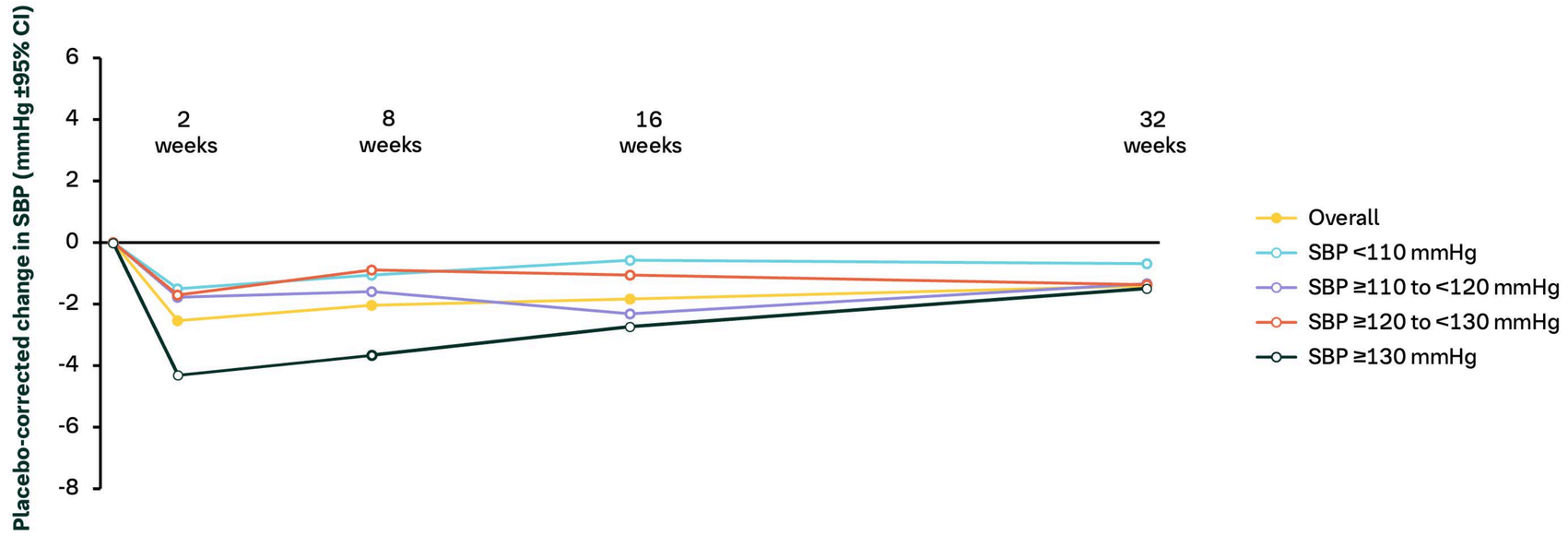
DAPA-HF: BP lowering with SGLT2 inhibitors versus placebo was primarily observed in those with a higher baseline SBP

DAPA-HF



BP, blood pressure; DAPA-HF, Dapagliflozin and Prevention of Adverse Outcomes in Heart Failure; SBP, systolic blood pressure; SGLT2, sodium-glucose co-transporter-2
Serenelli M *et al. Eur Heart J* 2020;41:3402
Figure adapted from: Serenelli M *et al.* 2020

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When is it appropriate to stop, pause or restart treatment?

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When to pause SGLT2 inhibitor therapy

SGLT2 inhibitors should be paused in patients:

- If they have an acute **serious medical illness** (e.g. sepsis)[1,2]
- If they have a condition that leads to **volume depletion or dehydration**, e.g. unable to eat and drink normally, persistent vomiting[1,2]

- Patients who are **not eating and drinking** should **discontinue SGLT2 inhibitors and only restart when normal eating and drinking are resumed**[1,2]
  - If a patient is to undergo a prolonged period of fasting, additional precautions apply[3]:

Ensure dose stabilisation prior to the fasting period

Increase fluid intake during non-fasting hours, if applicable

- Treatment should be interrupted at least 72 hours before all major surgeries[2,4]
  - In patients with diabetes, blood glucose may be higher than usual – blood sugar should be checked more regularly until their levels are within range and **have stabilised**[5,6]

Restart SGLT2 inhibitor therapy once the patient's condition has stabilised and blood ketone levels have returned to normal[1,2]

SGLT2, sodium-glucose co-transporter-2

1. AstraZeneca. Forxiga® (dapagliflozin) summary of product characteristics. Apr 2026; 2. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 3. Hassanein M *et al. Diabetes Res Clin Pract* 2020;169:108465; 4. Mazer C *et al. Curr Opin Cardiol* 2020;35:178; 5. Sreedharan R *et al. Perioper Med (Lond)* 2023;12:13; 6. Sudhakaran S & Surani SR. *Surg Res Pract* 2015;2015:284063

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How can you collaborate with your Primary Care colleagues to support ongoing care for your patients with heart failure?

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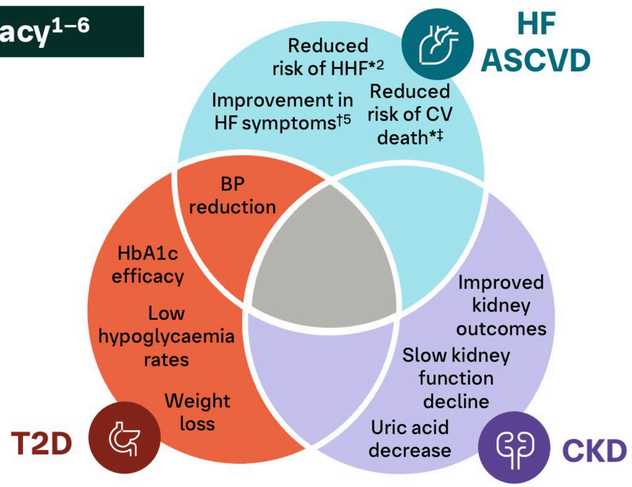
International guidelines increasingly and strongly recommend the use of SGLT2 inhibitors for their benefits across the cardio, renal and metabolic spectrum[1–15]

Efficacy[1–6]



International CKD, HF and T2D guidelines recommend the use of SGLT2 inhibitors as early as **foundational therapy**

HF ASCVD
ESC[7–9]
AHA/ACC/HFSA[10]
CCS/CHFS[11]

T2D
ADA–EASD[12]
ADA[13]

CKD
ADA–KDIGO[14]
ADA–EASD[12]
ADA[13]
KDIGO[15]

*In people with T2D and ASCVD or multiple risk factors for ASCVD (as reported in EMPA-REG OUTCOME,[2] CANVAS Programme[3] and DECLARE-TIMI 58[4]); †Improvements in KCCQ symptom scores[5]; ‡Significant reductions in the risk of CV death were observed only with empagliflozin in the EMPA-REG OUTCOME[2] trial. Empagliflozin is indicated to reduce the risk of CV death in people with T2D and established CV disease in the EU[2,6]

ACC, American College of Cardiology; ADA, American Diabetes Association; AHA, American Heart Association; ASCVD, atherosclerotic cardiovascular disease; BP, blood pressure; CCS, Canadian Cardiovascular Society; CHFS, Canadian Heart Failure Society; CV, cardiovascular; EASD, European Association for the Study of Diabetes; ESC, European Society of Cardiology; EU, European Union; HbA1c, glycated haemoglobin; HFSA, Heart Failure Society of America; KCCQ, Kansas City Cardiomyopathy Questionnaire; KDIGO, Kidney Disease: Improving Global Outcomes; SGLT2, sodium-glucose co-transporter-2

1. Scheen AJ. *Curr Diab Rep* 2016;16:92; 2. Zinman B *et al. N Engl J Med* 2015;373:2117; 3. Neal B *et al. N Engl J Med* 2017;377:644; 4. Wiviott SD *et al. N Engl J Med* 2019;380:347; 5. Butler J *et al. Eur Heart J* 2021;42:1203; 6. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 7. McDonagh TA *et al. Eur Heart J* 2023;44:3627; 8. McDonagh TA *et al. Eur Heart J* 2021;42:3599; 9. Marx M *et al. Eur Heart J* 2023;44:4043; 10. Heidenreich PA *et al. Circulation* 2022;145:e895; 11. McDonald M *et al. Can J Cardiol* 2021;37:531; 12. Davies MJ *et al. Diabetes Care* 2022;45:2753; 13. American Diabetes Association. *Diabetes Care* 2026;49:S1; 14. de Boer IH *et al. Diabetes Care* 2022;45:3075; 15. Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group. *Kidney Int* 2024;105:S117

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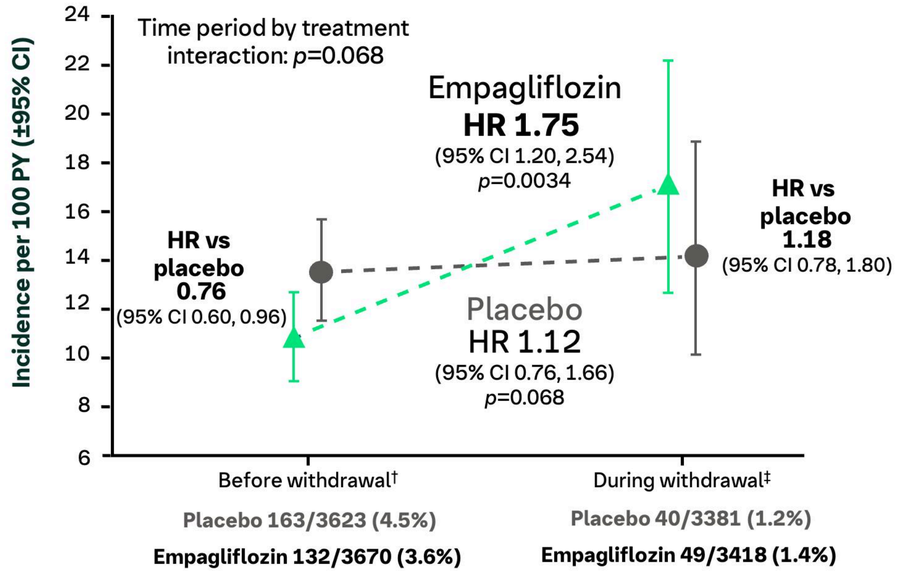
Why is continuation of therapy important?

Discontinuation of empagliflozin translated into increased clinical events in EMPEROR-Pooled*



75% RR

Withdrawal of empagliflozin increased the risk of CV death or first HHF during the 30-day period **versus on treatment (HR 1.75)**

*Pooled analysis of the EMPEROR-Reduced (patients with heart failure and LVEF ≤40%) and EMPEROR-Preserved (patients with heart failure and LVEF >40%) trials; †From 90 days before start of closeout up to planned end of double-blind treatment; ‡During 30-day withdrawal period
CV, cardiovascular; HHF, hospitalisation for heart failure; LVEF, left ventricular ejection fraction; PY, patient-years; RR, relative risk
Packer M *et al. Circulation* 2023;148:1011
Figure adapted from: Packer M *et al.* 2023

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SGLT2 inhibitors for eligible patients with heart failure*

Early benefit on **CV outcomes** and **QoL**[1–3]

For inpatient and/or outpatient initiation regardless of LVEF[4–7]

For patients **with or without CKD**, with an eGFR ≥20 ml/min/1.73 m^2 (empagliflozin) or ≥25 ml/min/1.73 m^2 (dapagliflozin)[8,9]

Kidney benefits: SGLT2 inhibitors are indicated for the treatment of adults with CKD[8,9]

For patients with or without **T2D**, secondary metabolic benefits[8,9,12]

Simple[8–10]**:**
- One pill, one dose, once a day
- Recommended irrespective of background heart failure therapy

Consistent safety profile across the full heart failure spectrum[11]

Do <u>not</u> use empagliflozin or dapagliflozin in the following cases[8,9]**:**
- T1D
- Previous DKA while on SGLT2 inhibitors†
- Breastfeeding
- Pregnancy, as a precautionary measure

*Empagliflozin and dapagliflozin are indicated for patients with symptomatic chronic heart failure (HFrEF and HFpEF)[8,9]; †Unless another clear precipitating factor is identified and resolved[8,9]
CV, cardiovascular; DKA, diabetic ketoacidosis; eGFR, estimated glomerular filtration rate; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction; LVEF, left ventricular ejection fraction; QoL, quality of life; SGLT2, sodium-glucose co-transporter-2; T1D, type 1 diabetes

1. Butler J *et al. Eur J Heart Fail* 2022;24:245; 2. Packer M *et al. Circulation* 2021;143:326; 3. Shah YR & Turgeon RD. *CJC Open* 2023;6:639; 4. Vaduganathan M *et al. JAMA Cardiol* 2022;7:1259; 5. Berg DD *et al. JAMA Cardiol* 2021;6:499; 6. McDonagh TA *et al. Eur Heart J* 2021;42:3599; 7. McDonagh TA *et al. Eur Heart J* 2023;44:3627; 8. Jardiance® (empagliflozin) summary of product characteristics. Apr 2026; 9. AstraZeneca. Forxiga® (dapagliflozin) summary of product characteristics. Apr 2026; 10. Metra M *et al. Eur J Heart Fail* 2023;25:1115; 11. Greene SJ *et al. Am J Med* 2024;137:S25; 12. Shafiq A *et al. Ann Med Surg (Lond)* 2022;81:104555

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Thank you for attending!

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