



# SGLT2 INHIBITORS: SUMMARY OF HEART FAILURE TRIALS

**DAPA-HF**  
2019

**EMPEROR-Reduced**  
2020

**DELIVER**  
2022

**EMPEROR-Preserved**  
2021

DRUG	Dapagliflozin 10 mg daily	Empagliflozin 10 mg daily	Dapagliflozin 10 mg daily	Empagliflozin 10 mg daily
# RANDOMIZED	4744 (active, n=2373; placebo, n=2371)	3730 (active, n=1863; placebo, n=1867)	6263 (active, n=3131; placebo, n=3132)	5988 (active, n=2997; placebo, n=2991)
INCLUSION CRITERIA	<ul style="list-style-type: none"> <li>LVEF ≤40% (reduced HF)</li> <li>NYHA class II-IV</li> <li>NT-proBNP ≥ 600 pg/mL</li> <li>Receiving standard HF therapy</li> </ul>	<ul style="list-style-type: none"> <li>LVEF ≤40% (reduced HF)</li> <li>NYHA class II-IV</li> <li>Receiving standard HF therapy</li> </ul>	<ul style="list-style-type: none"> <li>LVEF &gt;40% (preserved HF)</li> <li>Stable HF</li> <li>Structural heart disease</li> <li>Elevated natriuretic peptide level</li> </ul>	<ul style="list-style-type: none"> <li>LVEF &gt;40% (preserved HF)</li> <li>NYHA class II-IV</li> <li>NT-proBNP level &gt;300 pg/mL</li> </ul>
BASELINE CHARACTERISTICS	<ul style="list-style-type: none"> <li>Age ~66 years; male ~77%</li> <li>NYHA class II ~67%; class III ~31%</li> <li>LVEF ~31%; HR ~72 bpm</li> <li>Type 2 diabetes ~42%</li> </ul>	<ul style="list-style-type: none"> <li>Age ~67 years; male ~76%</li> <li>NYHA class II ~75%; class III ~24%</li> <li>LVEF ~27%; HR ~71 bpm</li> <li>Type 2 diabetes ~50%</li> </ul>	<ul style="list-style-type: none"> <li>Age ~72 years; male ~56%</li> <li>NYHA class II ~75%; class III ~24%</li> <li>LVEF ~54%</li> <li>Type 2 diabetes ~45%</li> </ul>	<ul style="list-style-type: none"> <li>Age ~72 years; male ~55%</li> <li>NYHA class II ~81%; class III ~18%</li> <li>LVEF ~54%</li> <li>Type 2 diabetes ~49%</li> </ul>
DURATION	Median follow-up of ~18.2 months	Median follow-up of 16 months	Median follow-up of 2.3 years	Median follow-up of 26.2 months
PRIMARY OUTCOME	Composite of worsening HF and cardiovascular death	Composite of HF hospitalization and cardiovascular death	Composite of worsening HF and cardiovascular death	Composite of HF hospitalization and cardiovascular death
RESULTS	<p><b>Primary Composite Outcome:</b> 386 (16.3%) vs 502 (21.2%) HR 0.74 (95% CI 0.65-0.85) p&lt;0.001; ARR 4.91%; NNT ~21</p>	<p><b>Primary Composite Outcome:</b> 361 (19.4%) vs 462 (24.7%) HR 0.75 (95% CI 0.65-0.86) p&lt;0.001; ARR 5.37%; NNT ~19</p>	<p><b>Primary Composite Outcome:</b> 512 (16.4%) vs 610 (19.5%) HR 0.82 (95% CI 0.73-0.92) p&lt;0.001; ARR 3.12%; NNT ~32</p>	<p><b>Primary Composite Outcome:</b> 415 (13.8%) vs 511 (17.1%) HR 0.79 (95% CI 0.69-0.90) p&lt;0.001; ARR 3.24%; NNT ~31</p>
MORBIDITY OUTCOMES	<p><u>Heart Failure Hospitalization:</u> 231 (9.73%) vs 318 (13.4%) HR 0.70 (95% CI 0.59-0.83) ARR 3.68%; NNT ~28</p> <p><u>Urgent Care Visit for Heart Failure:</u> 10 (0.42%) vs 23 (0.97%) HR 0.43 (95% CI 0.20-0.90) ARR 0.55%; NNT ~183</p>	<p><u>Heart Failure Hospitalization:</u> 246 (13.2%) vs 342 (18.3%) HR 0.69 (95% CI 0.59-0.81) ARR 5.11%; NNT ~20</p>	<p><u>Heart Failure Hospitalization:</u> 329 (10.5%) vs 418 (13.3%) HR 0.77 (95% CI 0.67-0.89) ARR 2.84%; NNT ~36</p> <p><u>Urgent Care Visit for Heart Failure:</u> No significant difference</p>	<p><u>Heart Failure Hospitalization:</u> 259 (8.64%) vs 352 (11.8%) HR 0.71 (95% CI 0.60-0.83) ARR 3.13%; NNT ~32</p>
MORTALITY OUTCOMES	<p><u>Cardiovascular Death:</u> 227 (9.57%) vs 273 (11.5%) HR 0.82 (95% CI 0.69-0.98) ARR 1.95%; NNT ~52</p>	<p><u>Cardiovascular Death:</u> No significant difference</p>	<p><u>Cardiovascular Death:</u> No significant difference</p>	<p><u>Cardiovascular Death:</u> No significant difference</p>

These trials demonstrated clear **morbidity** benefit (e.g., reduced heart failure hospitalization) with SGLT2is in patients with **heart failure** (reduced and preserved ejection fraction). Mortality benefit (reduced cardiovascular death) was only demonstrated in the DAPA-HF trial. Results were consistent in patients **with** and **without** diabetes in these trials.

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