

**On behalf of:** DECLARE-TIMI 58 Investigators

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**Background:** Type 2 diabetes mellitus (T2DM) and heart failure (HF) represent a considerable burden to patients, healthcare systems and society globally. The Dapagliflozin Effect on Cardiovascular Events (DECLARE)-TIMI 58 trial evaluated the effects of dapagliflozin on cardiovascular (CV) and renal outcomes in patients with T2DM and either established CV disease or multiple risk factors (MRF) for CV disease. The trial demonstrated that treatment with dapagliflozin was associated with a lower rate in the composite of CV death or hospitalisation for heart failure (HHF) compared to placebo (hazard ratio: 0.83; 95% confidence interval: 0.73 to 0.95); a finding driven by a lower rate of HHF in dapagliflozin-treated patients (hazard ratio: 0.73; 95% confidence interval: 0.61 to 0.88).

**Purpose:** To estimate the direct healthcare costs associated with HHF event rates reported from DECLARE-TIMI 58, from a US payer perspective.

**Methods:** DECLARE-TIMI 58 event rates were used to predict HHF incidence in a hypothetical cohort of 1,000 people with T2DM, over a 4-year time horizon. A range of published HHF event costs (\$26,893–\$37,076, 2017 \$) were applied to predicted HHF events. Long-term costs associated with managing HF were not considered. Future costs were discounted at 3% per annum. Sensitivity analyses were conducted for pre-defined DECLARE-TIMI 58 subgroups.

**Results:** Over a 4-year modelled time horizon, 24 HHF events were predicted per 1,000 patients treated with dapagliflozin versus 33 HHF events for placebo (difference: –9 events). When modelled by prior HF status, more events were avoided in those with prior HF due to higher underlying event risk in this subgroup (difference: –33 events per 1,000 patients). Total estimated costs associated with HHF were \$630,237–\$868,875 per 1,000 patients treated with dapagliflozin versus \$860,164–\$1,185,864 per 1,000 patients treated with placebo (difference: \$229,927–\$316,989). For the overall population, a 27% reduction in HHF costs was estimated over 4 years, compared to 21% and 35% reductions estimated in the established CV disease and MRF subgroups, respectively.

**Conclusions:** The reduction in HHF events demonstrated for dapagliflozin versus placebo in the DECLARE-TIMI 58 trial will translate to savings within healthcare systems in clinical practice. Further to hospitalisation costs estimated in this study, additional savings associated with HF management may be attained in those without prior disease. These short-term cost savings complement other previously shown benefits of dapagliflozin related to improved glycaemic control and weight loss.

## P952

### Sex difference of mortality and mode of deaths in elderly patients with chronic heart failure - A report from the CHART-2 Study-

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**Background:** Limited data exist on the sex difference of mortality and mode of deaths in elderly patients with chronic heart failure (CHF).

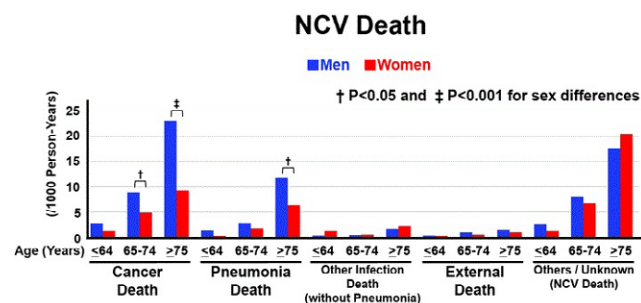
**Purpose:** To examine the sex difference in mortality and mode of death comparing older versus younger CHF patients.

**Methods:** We compared the mortality and mode of deaths of older and younger Stage C/D CHF patients in the Chronic Heart Failure Analysis and Registry in the Tohoku District (CHART)-2 (N=4876, mean 69 years, women, 32%) by age; G1, <64 years, N=1521 (54.3±8.8 years, women, 22.8%); G2, 65-74 years, N=1510 (69.9±2.9 years, 30.7%); and G3, >75 years, N=1845 (80.3±4.4 years, 40.2%).

**Results:** From G1 to G3, the prevalence of women, left ventricular ejection fraction (LVEF) and plasma levels of B-type natriuretic peptide (BNP) increased (all P<0.001). Although NYHA functional class -, chronic kidney disease, cancer, LVEF, and BNP had significant impacts on all-cause mortality in all groups, their impacts were less evident in G3 as compared with G1. In both sexes, 5-year mortality increased (9.9, 17.3 to 39.9%, P<0.001) along with a decrease in the proportion of cardiovascular mortality and an increase in non-cardiovascular mortality. Between the sexes, all-cause and cardiovascular mortality were comparable whereas women had a significantly lower incidence of non-cardiovascular mortality than men in G2 (9.1% vs. 13.3%, P=0.024) and G3 (18.9% vs. 26.1%, P<0.001), which was attributable to the higher incidence of cancer death and pneumonia death in men than in women (Figure).

**Conclusions:** Compared with younger CHF patients, the elderly were characterized by more severe clinical background, the increased proportion of non-cardiovascular death and worse prognosis with different impacts of prognostic factors. Sex differences exist in non-cardiovascular mortality in the elderly. These results indicate

that HF management in the elderly should include a multidisciplinary approach to improve mortality.



Mode of deaths by sex and age categories

## P953

### The long term survival rate of patients without CV disease and with HF in Russia. The epidemiologic study EPOCH

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**On behalf of:** EPOCH study group

**Background:** usually survival rate in heart failure (HF) are evaluated in patients who admitted to hospital or come to clinical visit. However, there are lack of data of survival rate in population regarding the fact that some patients would not sick for medical health

**Purpose:** to find out how the survival rate of heart failure patients over 17 years of follow-up in a representative sample of the population.

**Methods:** medical data of the representative sample in the six regions of Russia were analysed to find out the prevalence of heart failure.

**Results:** 16000 patients were enrolled in the study in 2002 years. The long term prognosis was known for 9349 of them. The mortality one-year mortality was 0.69%, 2.56%, 4.42%, 6.25% in patients without CV diseases, with CV diseases but without HF, with mild and severe HF respectively. During 5 and 10 years of follow-up, 50% and 100% with severe HF died respectively. At the end of follow-up, 70% with mild HF died.

**Conclusion:** This analysis showed a quite poor prognosis of patients with both CV diseases and HF in Russia. The implementation of new treatments and prevention measures are required to improve the prognosis of these patients.

**Limitations:** As this was epidemiologic study BNP levels were not measured and echocardiography were not evaluated. There is a possibility that some patients in the mild HF group didn't have HF.

