valsartan, and 103 (10.3%) patients were withdrawn from sacubitril/valsartan due to an AE.

CONCLUSION: The PARTHENON registry confirms the safety and tolerability of long-term administration of sacubitril/valsartan in a real-world setting, additionally demonstrating favourable survival in eligible patients with HFrEF compared to predicted survival.

Novartis

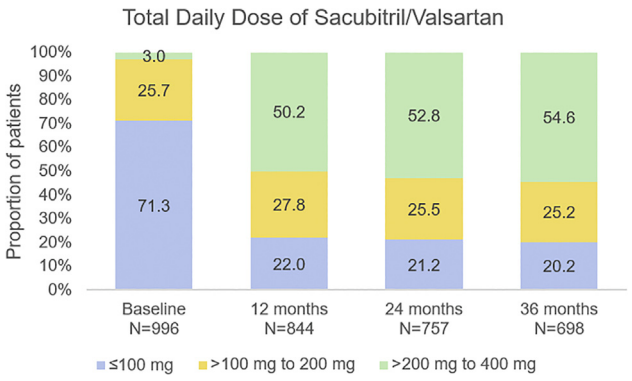

Table 1. Secondary Safety Endpoints

	N	%
Any AE	803	80.6
Serious AE	381	38.3
Clinically relevant symptomatic hypotension (Systolic BP <100 mmHg)	235	23.6
Clinically significant hyperkalemia (Serum Potassium > 5.5 mmol/L)	44	4.4
Decrease in eGFR ≥40% compared to baseline	93	9.3
Clinically significant elevation in serum creatinine	109	10.9
AEs of special interest:	22	2.2
Angioedema-related events	2	0.2
Hepatotoxicity-related events	6	0.6
Statin-related events	3	0.3
Dementia-related events	11	1.1

P104
HIGH-INTENSITY INTERVAL TRAINING FOR HEART FAILURE AND POST-HEART TRANSPLANT: A SYSTEMATIC REVIEW AND META-ANALYSIS

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BACKGROUND: Heart failure (HF) continues to have a growing burden on health care systems with profound effects on patients' health-related quality-of-life (HRQoL), exercise capacity, hospitalizations, and mortality. Heart transplant (HTx) is the gold standard treatment for medically refractory end-stage HF. However, HTx recipients continue to have reduced exercise capacity that in turn is linked with adverse long-term outcomes. High-intensity interval training (HIIT) has effectively improved fitness in numerous populations, including those with cardiovascular disease. We thus sought to evaluate the safety and impact of HIIT exercise interventions on exercise capacity, HRQoL, and vascular stiffness and function in patients with HF and post-HTx. We hypothesized that HIIT is a safe and effective strategy across the HF/HTx clinical continuum.

METHODS AND RESULTS: Embase, CINAHL, Cochrane, and MEDLINE databases were searched for randomized control trials using 'cardiovascular disease' and 'HIIT" search terms in May 2021 with an updated search performed in April 2022. We identified 1812 studies, of which 328 underwent full text review. Participants were HF patients or HTx recipients participating in ≥6-weeks of HIIT. Risk of bias was evaluated with Cochrane Collaboration's Tool. Meta-analysis was done pooling outcomes using mean differences (MD, 95% confidence interval), and grouped by comparison group (HIIT vs. moderate-intensity continuous exercise (MICE) or control groups). A total of 1144 participants (185 HTx and 959 HF, 70% male, average 59.17 years of age) across 26 RCT (22 HF and 4 HTx) across 36 studies were included. HIIT improved exercise capacity (for peak oxygen consumption [VO2peak]) mean difference (MD) 2.17 (95% CI,1.17 to 4.75) ml/kg/min for HF, and 2.46 (95% CI, 1.64 to 3.29) for HTx participants), HRQoL (MD HF=0.53 [95%CI 0.09 to 0.97], MD HTx for mental=3.13 [95% CI -1.91 to 11.46]), and endothelial function (for FMD, MF HF=1.56 [95%CI, -1.69 to 4.81], MD HTx=3.40 [95% CI, 2.36 to 4.44]). Interventions were equally safe between HIIT and other interventions across HF and HTx groups with no differences (MD=0 across all) in adverse events directly related HIIT interventions vs other interventions or control arms.

CONCLUSION: HIIT is a promising, safe, and accessible tool with the potential to improve exercise capacity and long-term outcomes in HF and HTx populations. Key populations remain understudied, including women, children and adolescents, and those with congenital heart disease, highlighting key knowledge gaps for this potentially effective exercise strategy.

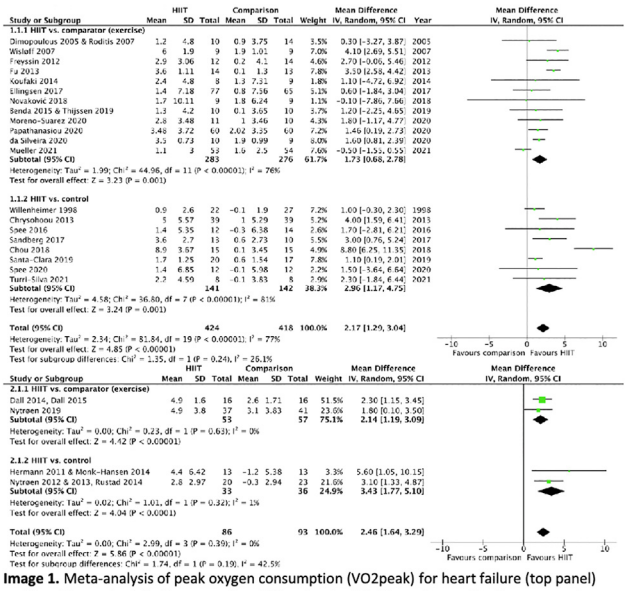

Image 1. Meta-analysis of peak oxygen consumption (VO2peak) for heart failure (top panel) and heart transplant (bottom panel) participants, stratified in each panel by the comparator group (exercise or control).

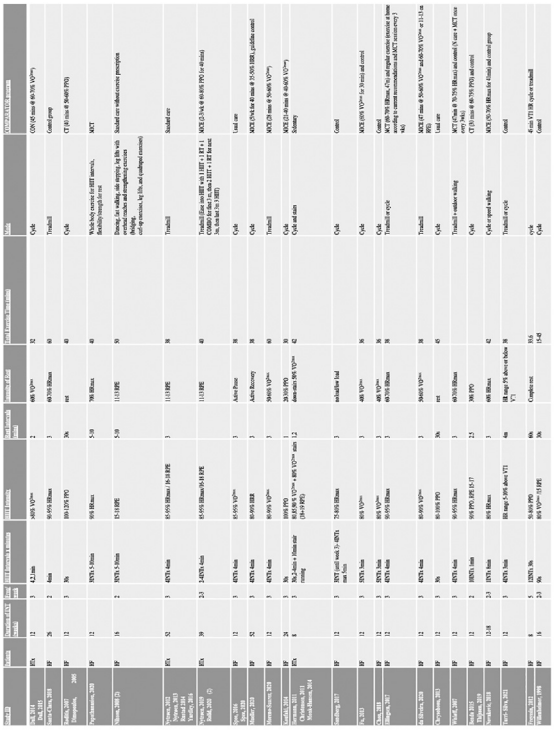

Figure 1. Summary of final findings. PPO= peak power output, HRQoL: health related quality of life, HIIT= high interval intensity training, MICE= moderate intensity continuous exercise, 6MWT= six minute walk test, HADS-A= hospital anxiety and depression scale- anxiety, VO2max= peak oxygen uptake

Alberta Innovates Health Solutions (AIHS), Heart and Stroke Foundation, Alberta

P106
IS FLAXSEED EQUIVALENT AND/OR SYNERGISTIC WITH ACE INHIBITION IN THE TREATMENT OF CHEMOTHERAPY MEDIATED CARDIOTOXICITY?

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BACKGROUND: Breast cancer is a major public health concern in Canada. Although the current combination of surgery, radiation, and chemotherapy may lead to a cure in the breast cancer setting, the administration of the anti-cancer drugs Doxorubicin and Trastuzumab (DOX+TRZ) is associated with an increased risk of developing heart failure. Little is known, however, on whether flaxseed (FLX) is equivalent to angiotensin converting enzyme inhibition (ACEi) in the treatment of DOX+TRZ mediated cardiotoxicity.

METHODS AND RESULTS: In a chronic in vivo murine model of chemotherapy mediated cardiotoxicity, DOX+TRZ (8mg/kg and 3mg/kg, respectively) were administered weekly for a total of 3 weeks. Following this, mice were randomized to daily treatment with a 10% FLX supplemented diet, Perindopril (PER) (3mg/kg) via oral gavage, or a combination treatment of FLX+PER for an additional 3 weeks. Serial echocardiography was performed weekly. At the end of week 6, the mice were euthanized, and histological and biochemical analyses were performed on cardiac tissue. In mice treated with DOX+TRZ, the left ventricular ejection fraction (LVEF) decreased from 72±4% at baseline to 30±2% at week 6. Treatment with either FLX, PER, or FLX+PER improved LVEF to 52±4%, 54±4%, and 55±3%, respectively ($P < 0.05$) (Figure 1). Histological analyses confirmed significant disruption of myofibrils, vacuolization, and loss of sarcomere integrity in the DOX+TRZ treated mice. Treatment with FLX, PER, or FLX+PER, however, improved myofibril integrity at week 6 in mice receiving DOX+TRZ.

CONCLUSION: In a chronic in vivo murine model of DOX+TRZ induced cardiotoxicity, although FLX was equivalent to PER in the treatment of adverse LV remodeling, the combination of FLX and PER was not synergistic.

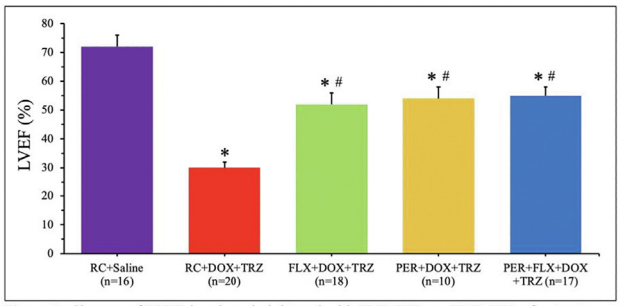

Figure 1: Changes of LVEF in mice administered with FLX, PER, or FLX+PER after treatment with DOX+TRZ. *p<0.05 RC+DOX+TRZ vs. RC+Saline. *#p<0.05 FLX+DOX+TRZ or PER+DOX+TRZ or PER+FLX+DOX+TRZ vs. RC+DOX+TRZ and RC+Saline.

Heart and Stroke Foundation of Canada

P107
MEDICAL MANAGEMENT OF HEART FAILURE WITH CONCURRENT DIABETES MELLITUS IN CANADIAN PRIMARY CARE

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BACKGROUND: Heart failure (HF) and diabetes (DM) often co-exist and are associated with increased mortality and hospitalization. Although most patients are managed in primary care, the disease intersection has mainly been studied in secondary care, ambulatory registries, and selected cohorts. We therefore assessed HF and DM management in primary care using the Canadian Primary Care Surveillance Network (CPCSSN).

METHODS AND RESULTS: CPCSSN is a primary care data repository consisting of 17 electronic medical record (EMR) systems, spanning all provinces in Canada except Saskatchewan. Data on over 2 million patients are contributed quarterly to the network. Patients with HF and DM were identified using validated case definitions. The sensitivity and specificity are 90% and 93% for identifying HF, and 96% and 97% for identifying DM. Prescription of all medical therapies increased from 2010 to 2020. In patients with HF alone (n=5,319 in 2010 and n=10,699 in 2020), renin-angiotensin blockade (RAASi) increased from 79.6% to 80.3%, beta-blockers from 29.3% to 47.2%, and mineralocorticoid receptor antagonists (MRA) from 6.4% to 17.3%. In those with concurrent DM (n=2,747 in 2010 and n=9,024 in 2020), the corresponding