mean LVEF improved from 37,3 to 44,1% and QRS duration from 172,9 to 136,8ms. Pts with less than 50% LVEF had a response rate of 75,5% (increase in LVEF from 4-30%), and 30% of patients increase their LEVF between 10-30% (deemed super responders), only one pt decrease 10% her LVEF (a His failure implant).

CONCLUSION: Cardiac resynchronisation is feasible with less leads needed, potentially with longer duration of batteries and lesser cost for the health system. Response rate is similar to CRT historical controls but super responders are twice to three times higher tan historical controls.

P100
DEVELOPMENT OF A DIAGNOSTIC SCREENING ALGORITHM FOR THE IDENTIFICATION OF TRANSTHYRETIN AMYLOID CARDIOMYOPATHY IN HIGH-RISK PATIENT POPULATIONS

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BACKGROUND: Transthyretin amyloid cardiomyopathy (ATTR-CM) is an underdiagnosed disease, resulting in heart failure, arrhythmias, and valvular disease in a sizable (but still undetermined) proportion of older patients. Disease modifying therapy exists but is more effective in earlier-stage disease. Effective screening methods are needed to identify ATTR-CM at a treatable stage and improve outcomes for this complex population.

METHODS AND RESULTS: We designed a pragmatic screening study to identify patients in high-risk settings, including heart failure (HFC), atrial fibrillation (AFC), and transcatheter valve (TAVR) clinics. Patients were included if they were >60 years old, met one of several broad screening criteria, and their treating physician felt that an ATTR evaluation was appropriate. Patients with a clear alternate diagnosis or known diagnosis of amyloidosis were excluded. Patients were screened with nuclear scintigraphy (PYP). Patients also underwent blood and urine screens for monoclonal protein. Baseline demographic, clinical, laboratory, and imaging data were collected into a prospective observational registry. Patients are followed for 3 years. To date, 97 patients have been fully screened, 57% of these in HFC. The mean age of participants is 78 years; 54% are male. 20 patients (21%) have been diagnosed with ATTR-CM, including 5 (5%) who had a monoclonal protein identified. Of screening criteria used, the positive predictive value (PPV) for ATTR-CM ranged from 6-36%. 12/33 participants (PPV 36%) with moderate-severe diastolic dysfunction (DD) had ATTR-CM, 20/66 with age >70 years (PPV 30%), 19/72 with heart failure with preserved ejection fraction (HFpEF, PPV 26%), 15/59 with left ventricular septal thickness >/=12 mm (IVSD12, PPV 25%), 19/79 with natriuretic peptide values disproportionately elevated for NYHA class (BNP, PPV 24%), 2/13 with LVEF < 40% and normal ventricular dimensions (HFrEF, PPV 15%), and 1/16 with severe low-flow low-gradient aortic stenosis (AS, PPV 6%). Conversely, the negative predictive value was highest for age >70 (NPV 100%), followed by HFpEF (NPV 96%), BNP (NPV 94%), DD (NPV 87%), IVSD12 (NPV 86%), HFrEF (NPV 79%), and AS (NPV 76%). Combining screening criteria yielded improved test characteristics. A combination of [age >70 and DD] had PPV 52% and NPV 89%, while a combination of [age >70 and HFpEF] had PPV 34% and NPV 98%.

CONCLUSION: Broad screening criteria applied to high-risk patient populations yield a large number of new ATTR-CM diagnoses. Further refinement of these criteria should lead to even greater diagnostic yield while minimizing unneeded testing. Efficient diagnosis of ATTR-CM may allow earlier diagnosis and more effective therapeutic interventions.

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P101
EARLY DETECTION OF POLYNEUROPATHY IN PATIENTS WITH HEREDITARY TRANSTHYRETIN AMYLOIDOSIS CARDIOMYOPATHY

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BACKGROUND: Hereditary Transthyretin Amyloidosis (hATTR) is a disorder that can present with cardiac, neurological, or mixed signs and symptoms. Patients with hATTR cardiomyopathy (CM), can show early neurological signs which lead to the eventual onset of neurological symptoms. Early detection of polyneuropathy among patients with hATTR-CM can identify candidates for new disease modifying therapies that could significantly reduce mortality and morbidity in these complex patients. The purpose of this study is to examine the role of systematic neurological examinations in patients with hATTR-CM.

METHODS AND RESULTS: Twenty-eight patients with hATTR-CM who did not have any neurological symptoms were enrolled in this prospective study from the Amyloidosis Clinic at the University Health Network. All patients (average age 65.71± 14.23 years; 39.3% males; 60.7% females) were referred to a neurology program specialized in hATTR polyneuropathy (PN). Comprehensive neurological assessments were conducted including a physical examination and nerve conduction studies (NCS). NCS was performed on the upper and lower extremities. Twelve (42.9%) patients did not display any neurological abnormalities on the physical examination, but they had abnormalities on the NCS suggesting the presence of TTR-PN. The abnormalities on the NCS were diffuse sensory greater than motor polyneuropathy. Ten (35.7%) patients displayed clinical and NCS abnormalities. Six (21.4%) patients did not display any clinical or NCS abnormalities. Based on the systematic neurological assessment, twenty-two patients in our study were identified as

mixed hATTR phenotype and are to receive specific disease modifying therapies, either Patisiran or Inotersen.

CONCLUSION: Patients with hATTR-CM can display a wide range of neurological symptoms. In this study, we were able to identify a significant number of patients with abnormal neurological tests in the absence of obvious neurologic signs and symptoms suggesting TTR-PN. Therefore, patients with hATTR-CM should be systematically referred to a specialised neurologist for routine assessment.

P102
ECHOCARDIOGRAPHIC EVALUATION OF LEFT VENTRICULAR REMODELING AFTER VALSARTAN/SACUBITRIL INITIATION IN PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION

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BACKGROUND: In PARADIGM-HF, Valsartan/Sacubitril (ARNI) therapy was shown to reduce morbidity and mortality compared to ace-inhibitor (ACE-I) therapy in Heart Failure with Reduced Ejection Fraction (HFrEF). However, PARADIGM-HF did not report echocardiographic findings which may provide a mechanism for the observed improvement in clinical outcomes. ACE-I, mineralocorticoid receptor antagonist (MRA) and beta-blockers have previously demonstrated favorable left ventricular (LV) remodeling. We sought to analyze echocardiographic markers of cardiac remodeling before and after ARNI therapy.

METHODS AND RESULTS: We conducted a blinded retrospective cohort study at a regional cardiovascular center. All HFrEF patients who had 3 months of stable disease on optimal background therapy with ACE-I, Beta-blocker and MRA (where tolerated) who were newly switched to maximal dose ARNI therapy were screened for inclusion. Only patients who previously had an echocardiogram within 6 months prior to ARNI initiation and a second echocardiogram within 3 to 12 months after initiation were included. Patients who had adjustments to other HFrEF therapies (such as beta-blockers or MRA) between follow-up echocardiograms were excluded from the study. Following inclusion, all echocardiograms (pre and post ARNI initiation) were re-evaluated by a single cardiologist reviewer in a blinded fashion under the same protocol in order to decrease the variability and reviewer bias. LV end systolic volume index (LVESVi) was the pre-specified primary outcome. We screened 252 HFrEF patient charts. 21 patients met inclusion criteria and their echocardiograms were re-evaluated in a blinded manner. The primary reason for exclusion was lack of available pre and post echocardiograms. Mean age was 67 and 81% were male. Prior to ARNI initiation, the mean LVEF was 34%, 67% of patients had ischemic cardiomyopathy and 81% of patients had New York Heart Association class II symptoms. Mean LVESVi was significantly reduced from 49.4 ml/m2 at baseline to 37.4 ml/m2 post-ARNI initiation (mean reduction 11.9 ml/m2, 95% CI -22.2, -1.7). Among secondary outcomes, LVEF was significantly increased by a mean 10.9% (95% CI 5.0, 16.8) and right ventricular systolic pressure was significantly reduced by a mean 6.7 mmHg (95% CI -11.5, -1.9). There was no significant reduction in LV end diastolic volume index (mean reduction -7.1 ml/m2, 95% CI -17.0, 2.8) or significant increase in stroke volume (mean increase 4.6 mL, 95% CI -4.5, 13.7).

CONCLUSION: This study demonstrates significant improvements in multiple echocardiographic parameters following ARNI optimization in HFrEF patients, suggesting favorable LV remodeling. This may provide a mechanistic explanation for the benefits of ARNI therapy in HFrEF.

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EFFECTIVENESS, SAFETY, AND TOLERABILITY OF SACUBITRIL/VALSARTAN OVER 3 YEARS OF FOLLOW-UP IN CANADIAN PRACTICE: INSIGHTS FROM THE PARTHENON REGISTRY

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BACKGROUND: The PARADIGM-HF trial demonstrated the superiority of sacubitril/valsartan over enalapril in reducing the risk of CV death or HF hospitalization in patients with HFrEF. The generalisability of these data as well as safety and medication persistence to unselected, real world patients remained to be evaluated. The PARTHENON (PAtient RegisTry assessing effectiveness and safety of HEart failure treatment with LCZ696 acrOss CaNada) registry study was conducted to evaluate the effects of sacubitril/valsartan use in Canadian patients with HFrEF.

METHODS AND RESULTS: PARTHENON was an observational, naturalistic, multi-centre study of Canadian patients with HFrEF who were initiated on sacubitril/valsartan as per the Canadian label within 3 months prior to study start. Over a 3-year period, 996 patients from 32 community and academic centres across 7 provinces were followed. Total daily dosage of sacubitril/valsartan at initiation and at each annual timepoint are shown in Figure 1. At baseline, most (699/996; 70.2%) were initiated on 100 mg daily. By 12 months, 47.5% of patients (n=401/844) were at the maximum daily dosage of 400 mg, with 26.3% of patients receiving 200 mg daily, and 20.4% receiving 100 mg daily. The observed 3-year all-cause mortality rate was 10.8%, which was lower than the 3-year all-cause mortality rate of 29.0 $\pm$ 13.7% predicted by the MAGGIC risk score; the projected 3-year survival rate of 53.4 $\pm$ 26.4% from the Seattle Heart Failure Model was also lower than the observed 89.2% survival rate. Several a priori defined secondary safety-related endpoints are summarized in Table 1. For patients who experienced an AE, 354 (35.5%) were suspected by the investigator to be related to sacubitril/