**Scope of Work**

Title: A comprehensive population-based characterization of heart failure with preserved ejection fraction

Projected Start Date: TBD

Projected End Date: TBD

**Background**

Chronic heart failure (HF) is a life-threatening and debilitating clinical syndrome that results from structural or functional impairment of ventricular filling or ejection of bloodHalf of patients with heart failure (HF) have a preserved left ventricular ejection fraction (HFpEF), yet no effective treatment has been identified. However, no single dataset has provided comprehensive population-based data on HFpEF, encompassing inpatients and outpatients and detailed clinical characteristics. The purpose of this present proposal is to describe the clinical characteristics of HFpEF patients with particular focus on hospitalization history, NYHA class, comorbid conditions, medication use and biochemistry.

**Project Overview**

In the Genesis Care database, characteristics of HFpEF patients will be assessed and described.

Specific objectives include:

1. Describe clinical characteristics of identified HFpEF (Defined as EF>50%) patients, overall and stratified by

Presence of volume overload (peripheral and/or pulmonary edema)

Letter would include words such as:

diuretics (especially if IV),

peripheral and/or pulmonary edema,

orthopnea,

paroxysmal nocturnal dyspnea,

jugular venous pressure,

jugular venous distension,

pitting edema,

ascites,

chest lung exam results with crackles,

rhoncii X-ray:

cardiomegaly,

pleural effusion,

redistribution of pulmonary blood flow,

artery to bronchus ratio,

interstitial edema,

Kerley B lines,

azygos vein dilatation

On echo:

increased left atrial pressures,

E/e’>15 in presence of LVEF >50%.

1. Hospitalization history

Please include only patients who have had 12 months follow-up. Since we will look at hospitalization during this 12 month period.

1. Determine proportions of the following subsets of HFpEF patients
2. Among those with NYHA class II-IV, proportions with evidence of fluid overload
3. Among those with NYHA class II-IV and evidence of volume overload, proportions hospitalized for heart failure within the past 12 months.
4. **Among those with NYHA class III-IV with evidence of volume overload and not hospitalized for heart failure within the past 12 months, proportions with NT-proBNP threshold above 250 pg/mL**
5. **Among those with NYHA class III-IV with evidence of volume overload, not hospitalized for heart failure within the past 12 months, and with NT-proBNP threshold above 250 pg/mL, proportions with sleep apnea, orthopnea, diabetes, coronary artery disease or atrial fibrillation.**

We will just have to split this information into those with and without BNP/NT-proBNP? They are happy to get a mix of both to make up numbers.

Table 1. Baseline clinical characteristics of HFpEF patients n=

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Characteristics | All HFpEF | **Volume overload**  (Peripheral and/or pulmonary or edema) | | Hospitalized within the past **12 months** | |
| Yes | No | Yes | No |
| Age, years, mean (±SD) |  |  |  |  |  |
| Female n (%) |  |  |  |  |  |
| Index year | Unavailable |  |  |  |  |
| 2000-2006 | Unavailable |  |  |  |  |
| 2007 – 2012 | Unavailable |  |  |  |  |
| **Duration since HF diagnosis** | How long have they been with us? |  |  |  |  |
| **<= 6 months** n (%) |  |  |  |  |  |
| **>6 months** n (%) |  |  |  |  |  |
| Smoking |  |  |  |  |  |
| Current n (%)  Previous |  |  |  |  |  |
| Previous n (%) |  |  |  |  |  |
| Alcohol | Have defined with Veeresh |  |  |  |  |
| Never n (%) |  |  |  |  |  |
| Normal (2SD-4SD) n (%) |  |  |  |  |  |
| Previous problematic (>2SD) n (%) |  |  |  |  |  |
| Type of care | All are patients are outpateints |  |  |  |  |
| **Inpatient** |  |  |  |  |  |
| **Outpatient physician** |  |  |  |  |  |
| **Outpatient HF nurse clinic** |  |  |  |  |  |
| Clinical characteristics | Have defined with Veeresh |  |  |  |  |
| Body mass index , kg/m2 ;mean (±SD) |  |  |  |  |  |
| Systolic blood pressure, mmHg; mean (±SD) |  |  |  |  |  |
| Diastolic blood pressure , mmHg; mean (±SD) |  |  |  |  |  |
| Pulse pressure , mmHg; mean (±SD) |  |  |  |  |  |
| Mean arterial pressure , mmHg; mean (±SD) |  |  |  |  |  |
| Heart rate, b.p.m. mean (±SD) |  |  |  |  |  |
| NYHA class | Have defined with Veeresh |  |  |  |  |
| I ;n (%) |  |  |  |  |  |
| II ;n (%) |  |  |  |  |  |
| III;n (%) |  |  |  |  |  |
| IV;n (%) |  |  |  |  |  |
| Chest Xray; n (%)  Chest X-ray | Have defined with Veeresh |  |  |  |  |
| Cardiomegaly; n (%) | Might not have many but if we do n(%) |  |  |  |  |
| Pulmonary congestion; n (%) |  |  |  |  |  |
| Comorbidities |  |  |  |  |  |
| Sleep apnea; n (%) |  |  |  |  |  |
| Orthopnea; n (%) |  |  |  |  |  |
| Hypertension; n (%) |  |  |  |  |  |
| Diabetes; n (%) |  |  |  |  |  |
| Atrial fibrillation; n (%) |  |  |  |  |  |
| Lung disease/ Airways Disease; n (%) |  |  |  |  |  |
| Valve disease/Moderate Valve Disease; n (%) |  |  |  |  |  |
| Peripheral artery disease; n (%) |  |  |  |  |  |
| Anaemia; n (%) |  |  |  |  |  |
| Aortic stenosis; n (%) | Might not be available but emails from Leighton and Wendy would have clarified by now |  |  |  |  |
| Biochemistry |  |  |  |  |  |
| Creatinine , mmol/L ; mean (±SD) |  |  |  |  |  |
| eGFR, mL/min/1.73 m2 ; mean (±SD) |  |  |  |  |  |
| Haemoglobin , g/dL ; mean (±SD) |  |  |  |  |  |
| Potassium , mEq/L ; mean (±SD) |  |  |  |  |  |
| NT-proBNP , pg/mL, median [IQR] |  |  |  |  |  |
| BNP , pg/mL, median [IQR] |  |  |  |  |  |
| Total cholesterol ; mean (±SD) |  |  |  |  |  |
| LDL cholesterol; mean (±SD) |  |  |  |  |  |
| Medications |  |  |  |  |  |
| ACEI, ARBs or Renin inhibitors ;n (%) |  |  |  |  |  |
| Sacubitril/valsartan ;n (%) |  |  |  |  |  |
| Beta-blockers ;n (%) |  |  |  |  |  |
| Diuretics ;n (%) |  |  |  |  |  |
| Aldosterone antagonists ;n (%) |  |  |  |  |  |
| Digoxin/ Wendy knows ;n (%) |  |  |  |  |  |
| Calcium channel blockers | Refer to email |  |  |  |  |
| Statins ;n (%) |  |  |  |  |  |
| Nitrates;n (%) |  |  |  |  |  |

**Notes Taken:**

Consider all patients with Lvef >= 50, If lvef is null then consider Lowestlvef > 50.

**For Volume Overload:**

Acute pulmonary odeama (Patient Data) or Leg odema(Assessmentt)

or JVP >3

or Oedma is not NILL

or Chest != CLEAR

or DIrutics = Yes (Pharma)

or Loop = Yes (Pharma)

or Volume status = hypervolemic(Patient summary)