

## **Supplementary Results:**

### Study population

Of the participants 24% had HF with preserved EF with mean EF 45%. Most of the patients were medicated by betablockers, angiotensin converting enzyme inhibitors and diuretics. In 26 patients (42%) there was evidence of pleural effusion by US imaging. During the study period, one of the 62 patients was hospitalized due to worsening HF (in total one admission) and two patients due to hypovolemia/pre renal failure. The 62 patients underwent 119 paired consultations, with mean  $\pm$  SD  $1.9 \pm 1.0$  visits per participants and, in total, 38 patients underwent a follow-up visit.

### Reliability of medical history, clinical signs, physical findings and ultrasound

The nurse with access to ultrasound judged the patient having lower volume status in 18 visits and higher volume status in 26 visits, respectively.

The time consumption for the PSID ultrasound examination by the nurses was median (range) 5 (4-23) min. Both the clinical- and ultrasound examination were feasible in all patients (both first visit and follow-up) excluding missing data.

### Prognostic influence of ultrasound findings, diuretic doses and NYHA-class.

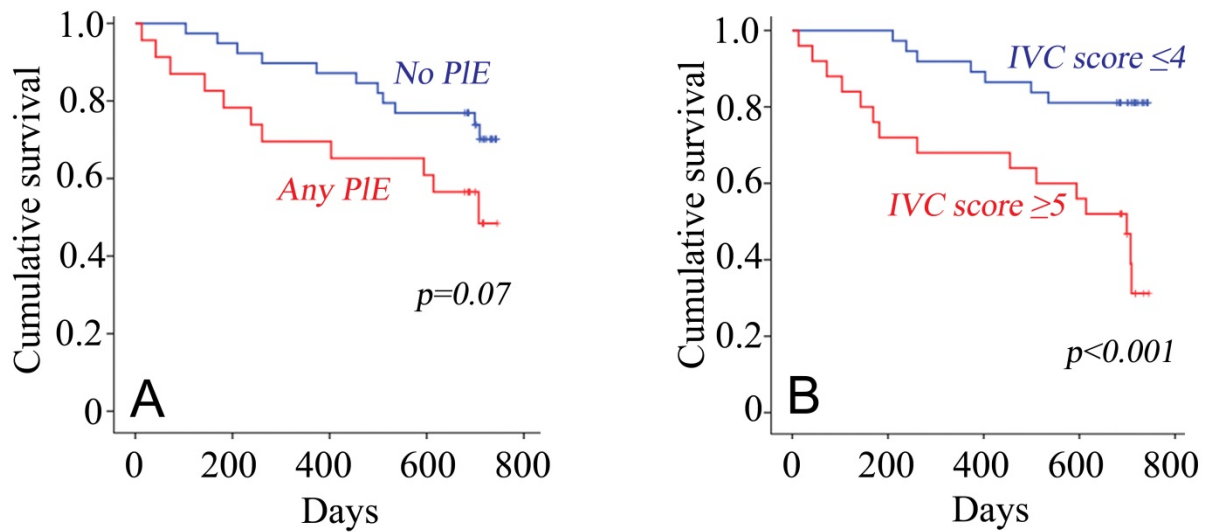
At 1 year follow-up 16 participants (25.8%) had been hospitalized due to any heart failure related cause, and all-cause mortality was 17.7% at 1 year.

In survival analyses NYHA class, diuretic dose and ultrasound measurements (1) semi quantitative inferior vena cava dimension and respiratory variation and 2) pleural effusion present or not) at first study visit were associated with outcome. With censor date April 30<sup>th</sup> 2015 and mean follow-up 605 days mortality was higher with higher NYHA-class ( $p=0.041$ ) and diuretic dose ( $p=0.02$ ). Total diuretic dose was calculated as equivalent to bumetanide regardless of type of diuretics used; 40 mg furosemide/50 mg aldosterone antagonist/12.5 mg hydrochlorothiazide/5 mg bendroflumethiazide were set equivalent to 1 mg bumetanide).

Presence of any amount of pleural effusion at first visit was near significant related to higher mortality during two year follow-up,  $p=0.07$  (Supplemental Figure – Panel A).

Ultrasound findings of a dilated inferior vena cava with reduced inspiratory collapsibility (semi quantitative score  $\geq 5$  corresponding to dimension ( $\geq 17$  mm +  $< 35\%$  collapsibility) or ( $> 21$  mm +  $< 50\%$  collapsibility) at first study visit was highly significant associated with increased mortality,  $p < 0.001$  (Supplemental Figure – Panel B).

## Supplementary Figure



Left Figure (A) indicate higher mortality (red curve) among those with any pleural effusion present at first study visit,  $p=0.007$ . Right Figure shows higher mortality among those with a dilated inferior vena cava with reduced inspiratory collapsibility present as dimension  $\geq 17$  mm and  $<35\%$  collapsibility or dimension  $>21$  mm and  $<50\%$  collapsibility corresponding to a cumulative semi quantitative score  $\geq 5$ ,  $p<0.001$ .

### Prediction of diuretic treatment

In unadjusted univariate analyses weight change, volume status assessed clinically and US assessment of the IVC and pleural cavities predicted dose adjustment of diuretics by the first visit.

In the manuscript we have described a semi quantitative score for IVC, ranging fra 2-6 where 6 correspond to dimension  $>21$  mm and inspiratory collapsibility  $<35\%$ . If weight change were scored  $\pm 1$  for change  $> 1$  to  $<4\%$  and  $\pm 2$  for change  $\geq 4\%$  (positive values if weight gain, negative values if weight loss) and otherwise score was 0.

The c-statistics (95% CI) for detection of increased diuretic dosage in the 57 visits where data for weight change were available were 0.77 (0.60-0.94) and 0.86 (0.74-0.98) IVC alone and the cumulative score of adding IVC and weight change, respectively. Thus, there was a near significant difference of adding weight change to IVC assessment. However, transforming the different variables according to how important they were for the three different outcomes of diuretic dosing (reduced, no change, increased) may introduce some

bias in the analyses. We find that the data from the regression analyses shown in Table 3 best describes the true story, as this correspond to the nurses decision about volume status after performing point of care ultrasound, and not to reclassification of data.