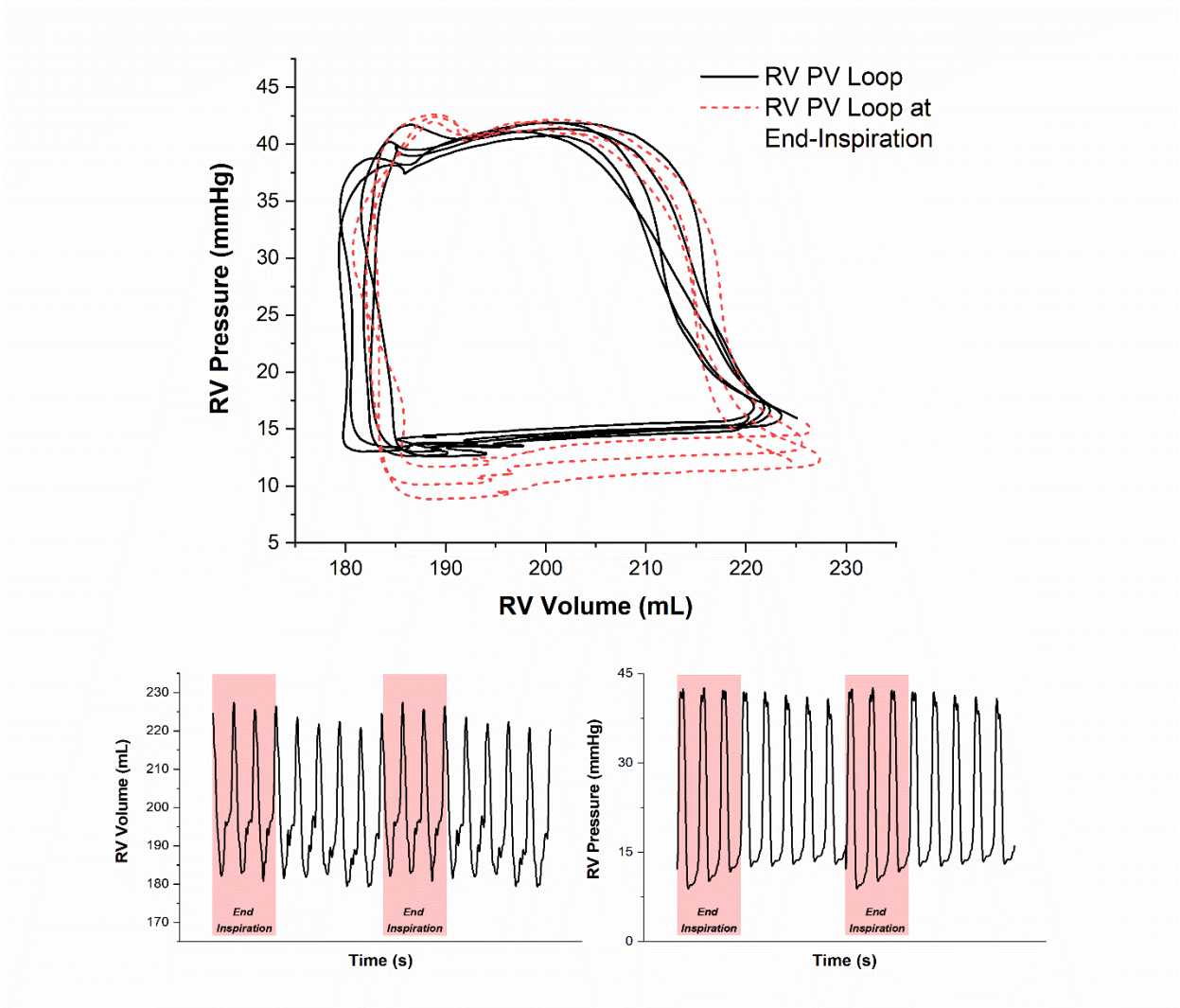
SUPPLEMENTAL MATERIAL

Table of Contents

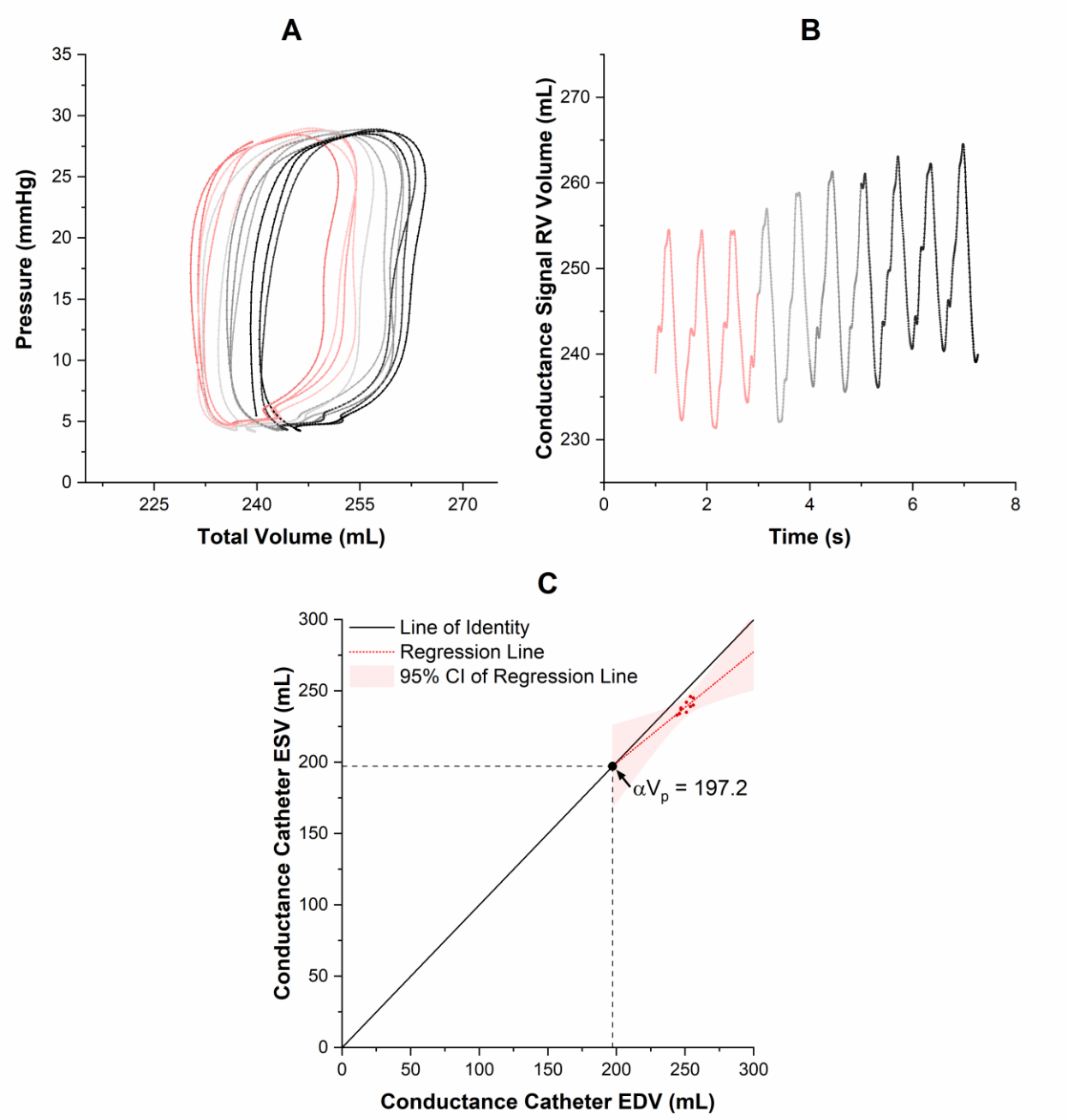
I. Figure S1 ……..…... 3
II. Figure S2 …… 4
III. Figure S3 ……... 6
IV. Figure S4 7

Figure S1. End-inspiratory beat selection.



Negative intrathoracic pressure produced during inspiration in spontaneously breathing individuals can drop right ventricular (RV) pressure and increase RV volume. Thus, loops are best analyzed outside of the end-inspiratory period.

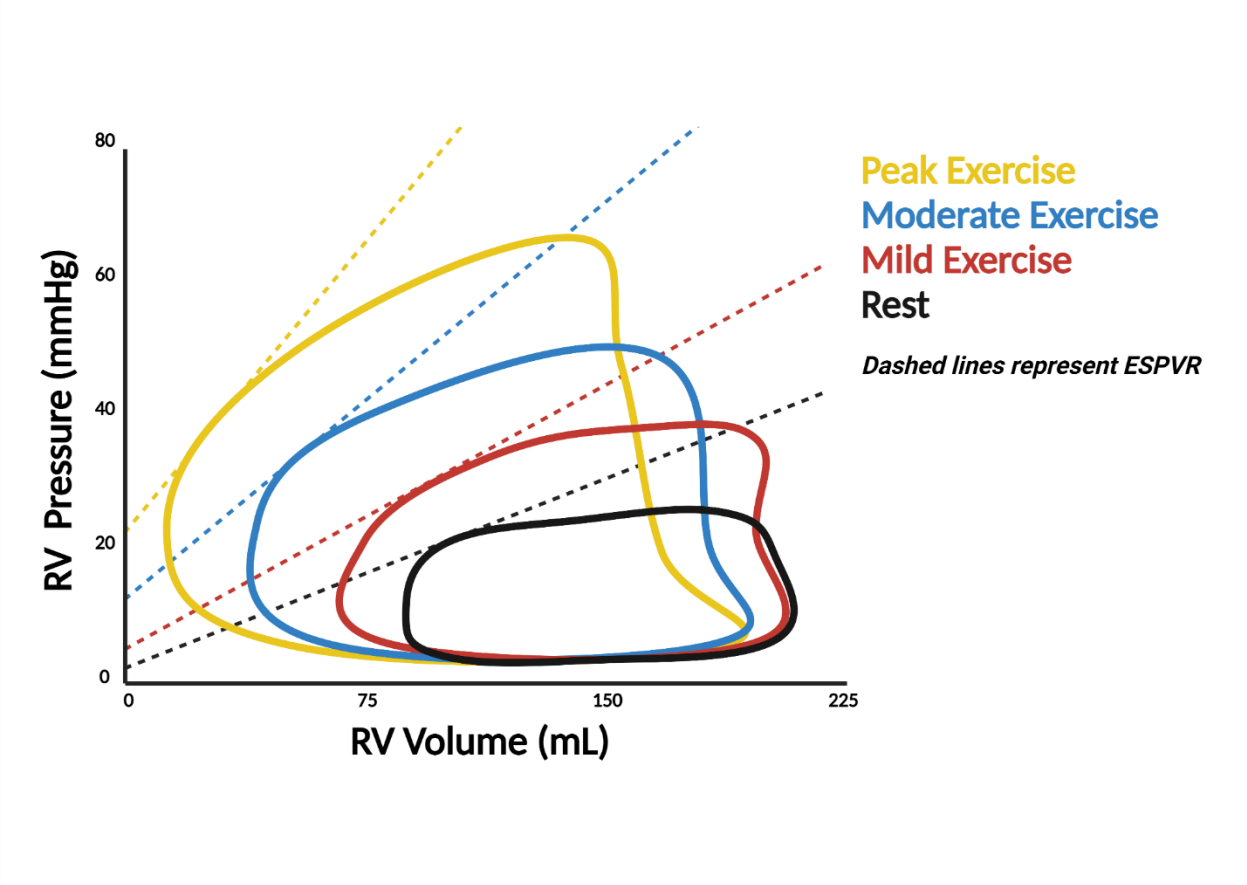
Figure S2. Volume calibration with the hypertonic saline method.



The parallel conductance offset (V_p) can be determined by injecting 5-10% hypertonic saline proximal to the conductance catheter and observing the increase in volume in the subsequent pressure-volume loops (Panel A) and volume-time, V(*t*) signal (Panel B). In Panel C, end-

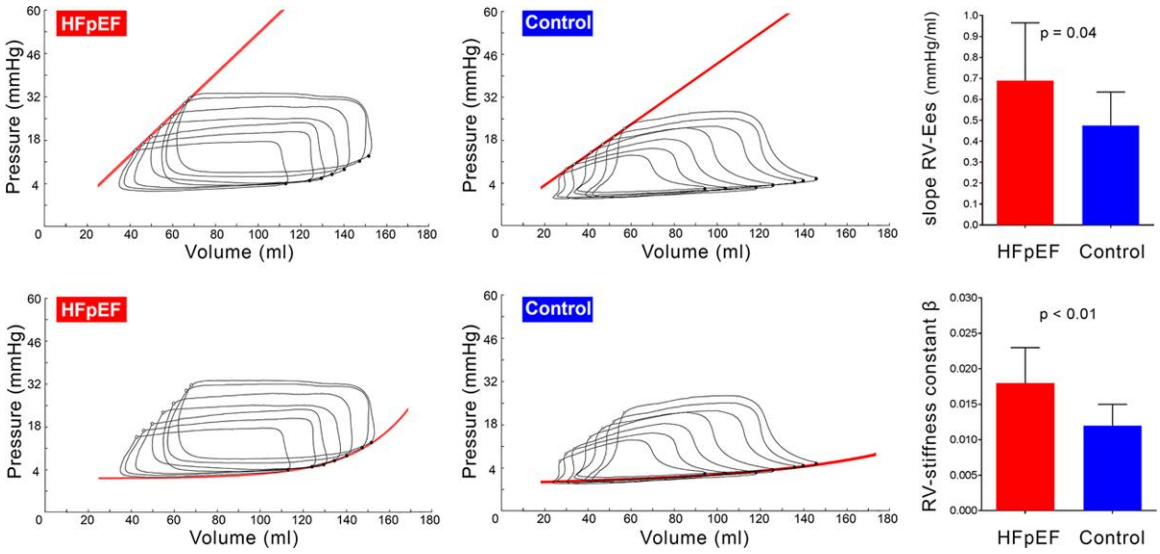
systolic volume (ESV) in the right ventricle (RV) is plotted against end-diastolic volume (EDV) measured by the conductance catheter during an infusion of hypertonic saline. The intersection of the line of regression (red dotted line) with the line of identity (black line) represents the parallel conductance offset. The calculated offset has considerable variability given the large confidence intervals accompanying the regression line.

Figure S3. Right ventricular pressure-volume loops obtained at rest and exercise in healthy adults.



Adapted from Cornwell WK, *et al*. Abstract 13179: New Insights Into Right Ventricular Performance During Exercise Using High-Fidelity Conductance Catheters to Generate Pressure Volume Loops. Circulation 2018;138(Suppl_1):A13179-A13179. [21]

Figure S4. Abnormalities in right ventricular diastolic function in patients with heart failure and preserved ejection fraction.



A steeper end-diastolic pressure-volume relationship identifies greater diastolic stiffness in patients with heart failure with preserved ejection fraction (HFpEF) relative to healthy controls. Adapted from Rommel KP, *et al*. Load-Independent Systolic and Diastolic Right Ventricular Function in Heart Failure With Preserved Ejection Fraction as Assessed by Resting and Handgrip Exercise Pressure-Volume Loops. Circ Heart Fail 2018;11(2):e004121. [34]