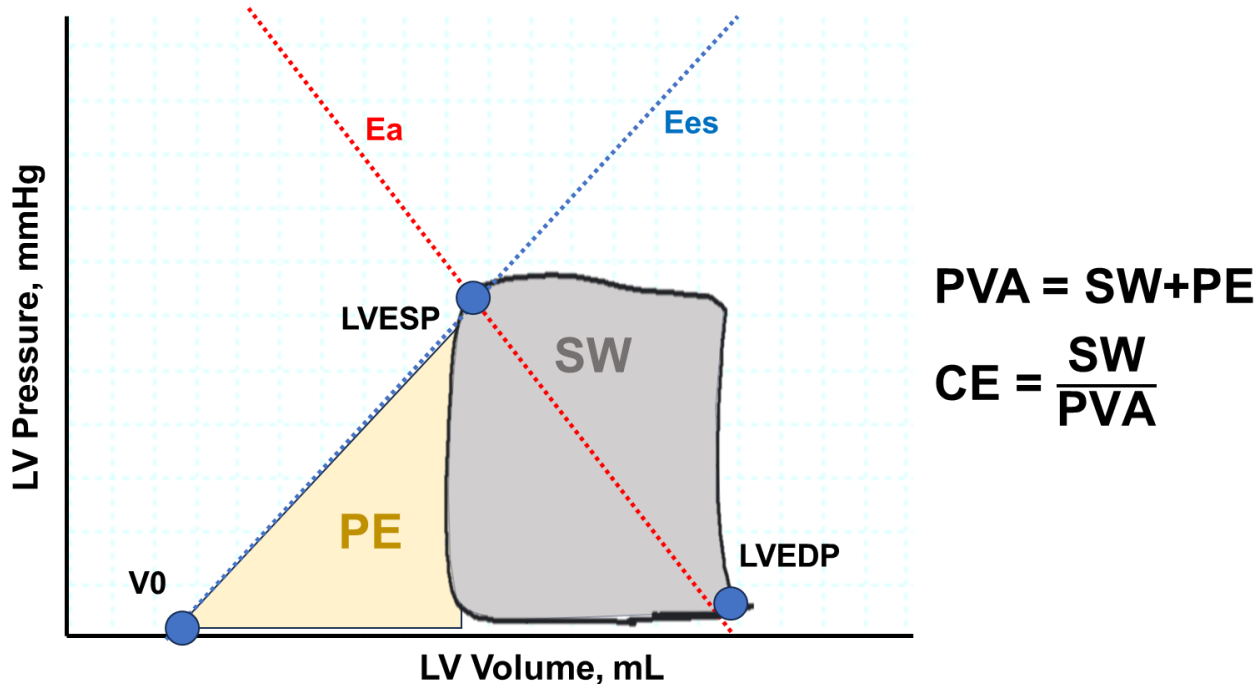


**Supplementary Figure 1: Overview of Parameters Calculated From the Pressure-Volume Loop**



Ees is the slope of end-systolic pressure-volume-relationship (ESPVR; blue dotted line) using  $V_0$  and LV end systolic pressure. Ea (red dotted line) is calculated using LV end systolic pressure and LV end diastolic pressure.

Stroke work (grey area) is the amount of work used for LV blood ejection.

Potential energy (yellow area) is amount of work dissipated as heat and is estimated as the area of the triangle bounded by the ESPVR and end-systolic portion of the PV loop.

The sum of stroke work and potential energy equals the total pressure-volume area, which is associated with myocardial oxygen consumption. Cardiac efficiency which is the ratio of work used to eject blood vs. total work is calculated as the ratio between stroke work and pressure-volume area.

Ees=end systolic elastance; Ea=arterial elastance; SW=stroke work; PE=potential energy; PVA=pressure volume area; CE=cardiac efficiency;  $V_0$ =volume when no LV pressure is generated; LVESP=LV end systolic pressure; LVEDP=LV end diastolic pressure