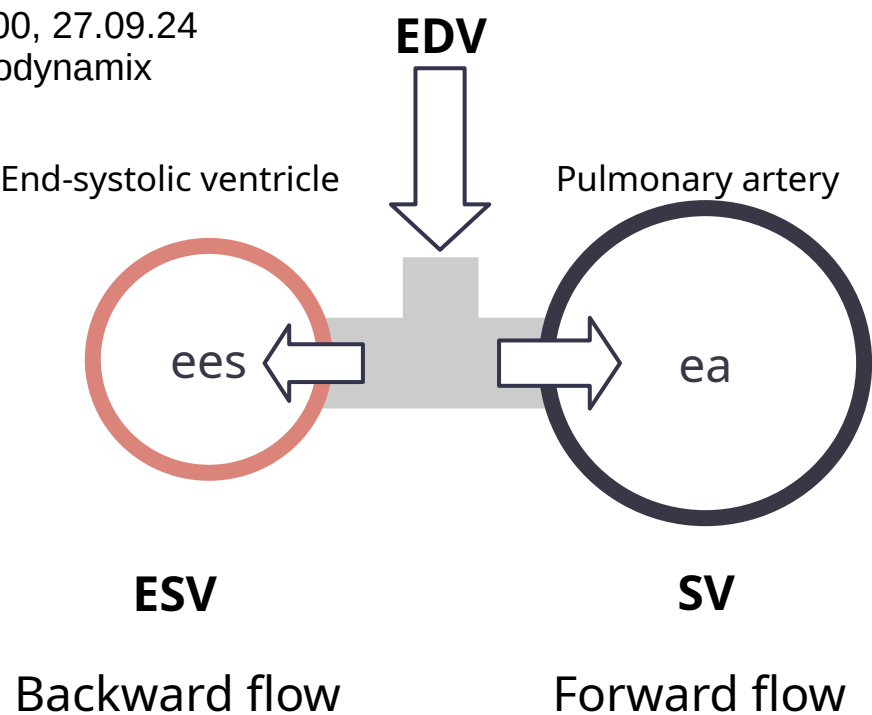




**Ejection fraction (EF)** = How much of EDV goes to the PA?

**Coupling** = How stiff is the right ventricle in comparison to the pulmonary system during the end-systole?

**Retention fraction (RF)** = How much of EDV goes to the RV?

Symmetries:

|     |      |        |
|-----|------|--------|
| EDV | Pmax | ees+ea |
| ESV | ESP  | ea     |
| SV  | SP   | ees    |

| Domain    | EF Forward    | RV-PA Coupling Forward Coupling Ratio | PA-RV Coupling Backward Coupling Ratio | RF Backward    | V0 != 0 Calculation                    |
|-----------|---------------|---------------------------------------|----------------------------------------|----------------|----------------------------------------|
| Volume    | <b>SV/EDV</b> | SV/ESV                                | ESV/SV                                 | <b>ESV/EDV</b> | <b>EF correct</b><br><b>RF correct</b> |
| Elastance | ees/(ees+ea)  | <b>ees/ea</b>                         | <b>ea/ees</b>                          | ea/(ees+ea)    | <b>Coupling correct</b>                |
| Pressure  | SP/PMAX       | <b>SP/ESP</b>                         | <b>ESP/SP</b>                          | ESP/PMAX       | <b>Coupling correct</b>                |
| Fractions | EF            | EF/RF                                 | RF/EF                                  | RF             | -                                      |

$SV = ESV - EDV$

$SP = PMAX - ESP$

$ees = SP / SV$

$ea = ESP / SV$

$EF + RF = 1$