

Normal

Mild

Moderate

Severe

↓ Relaxation

↓ Relaxation
↓ Compliance
↑ LVEDP↓ Relaxation
↓ Compliance
↑↑ LVEDP

Abnormal relaxation

Pseudo-Normal

Restrictive filling

LV inflow Doppler



1-2

50-100

150-200



<1

>100

>200



1-2

50-100

150-200



>2

<50

<150

E/A ratio

IVRT (ms)

DT (ms)

Pulmonary venous Doppler

 PV_s/PV_d

PVa (m/s)

 $a_{dur} - A_{dur}$ (ms) $PV_s > PV_d$

<0.35

<20

 $PV_s > PV_d$

<0.35

<20

 $PV_s < PV_d$

≥ 0.35

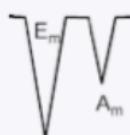
≥ 20

 $PV_s << PVD$

≥ 0.35

≥ 20

Mitral annular tissue Doppler

 E_m/A_m

1-2

<1

<1

<<1

 E/E_m (septum)

<8

>15

 E/E_m (lateral)

<10

>10