

Inclusion criteria

The inclusion criteria are identical in the intervention and the non-intervention cohorts.

- A. All of the following echocardiographic criteria need to be satisfied between 23+0 and 31+6 weeks (z-scores according to Schneider et al (13)):
 - 1. Aortic valve stenosis with antegrade flow through the valve
 - 2. Predominantly left-to-right shunt at the atrial level
 - 3. Predominantly retrograde flow in the aortic arch between the first two brachiocephalic vessels
 - 4. Qualitatively depressed left ventricular function
 - 5. LV end-diastolic diameter Z-score $> \pm 0$
 - 6. Left ventricular inlet length in diastole :
 - a. Gest age $\leq 24+6$: Z-score $> \pm 0$
 - b. Gest age 25+0 to 27+6: Z-score > -0.75
 - c. Gest age $\geq 28+0$: Z-score > -1.50
 - 7. Mitral valve diameter in diastole Z-score > -2.0

- B. All of the following postnatal treatment options need to be available:
 - 1. Surgical or catheter based aortic valvotomy
 - 2. Ross-Konno surgery
 - 3. Norwood or hybrid stage-one surgery