Objectives
To characterize patterns of preoperative and postoperative ventricular function in infants with congenital diaphragmatic hernia (CDH).

Material and methods
Infants treated for CDH during 2017-2018 were included in this prospective, observational study. Echocardiography was performed in the first 12 hours of life, 7 days following surgery, and 30 days of life. Parameters analyzed included measurements of right ventricle (RV) and left ventricle (LV) systolic and diastolic function, including LV myocardial strain (LVMS). Data obtained at 12h of life were compared with a control group of healthy newborns.

Results
• Eight patients were included; 7/8 survived to hospital discharge.
• Half required ECMO with a duration of 8.5 days (7.5, 9.5) and an ICU stay of 61 days (38, 82).
• At birth, CHD newborns had worse CO compared to controls, with both RV and LV systolic and diastolic dysfunction.

• After surgery, CDH newborns had significant improvements in aortic VTI, CO & LV systolic function increased. (Fig. 2a-2b)
• Though trans-mitral flow improved, overall LV diastolic function worsened. (Table 1 - Fig. 2c)
• LV strain analysis showed improvement after surgery, specifically in the apical segments, but did not show any significant changes in mid-ventricular GCS. (Table 1)
• RV showed significant systolic and diastolic function improvement. (Fig. 2d)

Conclusions
• CDH patients showed reduced cardiac output and global RV dysfunction at birth compared with healthy controls, with clear improvement in overall RV function after surgery.
• Patients with CHD have abnormal LV diastolic function 1 month after surgery.
• The abnormally low LV volumes at birth might conceal underlying diastolic dysfunction, which is then unmasked post-surgery.