Results It is established that the nephroblastoma increases blood flow to the main artery of the affected kidney compared with the contralateral (p=0,00003). According to our data the volume of the affected organ with nephroblastoma correlated with blood flow in his main artery (r=0.45; p<0.05). Such dependence can reflect the pathological circulation of the affected kidney. It also reflects the need to change the absolute amount of blood flow in tumor growth. At the same time in a healthy kidney specific blood flow much higher than that of the affected (p=0,00001). Indices of relative blood flow affected and contralateral kidneys were 1.32 (1.04–2.13) ml/cm^3/min and 5.46 (3.73–6.78) ml/cm^3/min, respectively.
Conclusions Thus, the hemodynamic characteristics the affected of nephroblastoma kidney were studied. Specific blood flow of affected organ with a continuous functional activity is significantly less with respect to the contralateral (not affected). These data may prove useful in the development of differential diagnostic criteria for distinguishing nephroblastoma and adrenal neuroblastoma at the stage of diagnosis.

779 BLOOD PRESSURE AND HEART RATE DO NOT REFLECT CARDIAC OUTPUT IN CRITICALLY ILL CHILDREN

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Introduction Treatment to support the circulatory state is often based on the interpretation of clinical parameters while advanced hemodynamic monitoring is not always available or applied in children. Cardiac output(CO) measurement using the transpulmonary thermodilution(TPTD) technique is the gold standard in pediatric patients. We studied the predictive value of clinical parameters of (changes in) CO by comparing the blood pressure and heart rate values with intermittent CO_{TPTD} measurements.
Methods A retrospective observational study was performed in a heterogenic critically ill pediatric patient population. Doses of inotropics, if administered, was registered to study their influence on trend monitoring. CO was compared with heart rate(HR) and mean arterial blood pressure(MAP) one minute before every CO measurement. The results were analyzed using correlation and linear regression statistics.
Results 216 CO measurements in 20 patients were analyzed. Median age was 1.7 (range 0.3–5.2) years and median body weight 8.8 (range 3.8–18) kg. The median CO was 1.88 (range 0.61–5.64)l/min. The correlation coefficient (Spearman's rho) between the CO and HR and MAP was –0.08(p<0.24) resp. 0.31(p<0.0001). Linear regression analysis of CO and both HR and MAP and the influence of inotropics on the relation of changes in CO and changes in HR and MAP are shown in table 1.
Conclusions Heart rate and blood pressure are unreliable in predicting cardiac output in critically ill children. The use of inotropics seems to increase the correlation between changes in HR and BP and changes in CO.

Abstract 779 Table 1 Linear regression analysis

dependent variable	independent variables	sample size	r	significance level
CO (all)	HR, MAP	216	0.29	< 0.001
Δ CO (all)	Δ (HR, MAP)	216	0.37	< 0.001
Δ CO (+ inotropics)	Δ (HR, MAP)	119	0.45	< 0.001
Δ CO (- inotropics)	Δ (HR, MAP)	97	0.27	< 0.031

780 BILATERAL RENAL ARTERY STENOSIS AND EPIDERMAL NEVUS SYNDROME IN A CHILD

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Epidermal nevus syndrome is a rare congenital sporadic neuroectodermic disorder, characterized by the presence of epidermal nevi in association with various developmental abnormalities of the skin, eyes, nervous, skeletal, cardiovascular and urogenital systems. We describe a 5-year-old boy with conjunctival lipodermoid, cervical and facial sebaceous nevi who presented at 3 years of age with hypertension due to bilateral renal artery stenosis together with multiple vascular anomalies (aorta, celiac trunk, superior mesenteric artery) as shown by magnetic resonance angiography. Systemic arterial hypertension was difficult to control despite combined anti-hypertensive drugs and the surgical repair of the aortic coarctation.

781 SEEKING FOR DEFINITIONS OF POOR PERFUSION STATES (PPS) IN LOW BIRTH WEIGHT INFANTS (LBWI) (PART II)

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Background and Aims No validated scoring system to diagnose PPS in LBWI is available. Echocardiography (Echo)-derived low superior vena cava flow (SVCF) is a biomarker of PPS in this population as associates adverse outcome. We examined the ability of clinical surrogates of low systemic blood flow to indicate PPS as defined by low SVCF.
Methods One hundred LBWI [27.4 (2) wks; 1014 (316) g] who reached disease score below threshold, underwent early (< 12h) and serial Echo scans during the first 96hs after birth. Mean blood pressure (MBP), lactate, base excess (BE), core-to- peripheral temperature gap (DT) and diuresis were registered at the time of Echo assessment. N-terminal probrain natriuretic peptide (NT-proBNP) and troponine were measured within 24h and at postnatal day 4.
Results No association between SVCF and MBP, lactate, BE, DT, diuresis or troponine was found. NT-proBNP was inversely related to SVCF (p=0.006). Low SVCF (< 41 mL/k/min) was present in the first Echo (4.2h) in 27 patients. At that time, the sensitivity and specificity of the clinical parameters to predict low SVCF was, respectively: lactate > 4.5 mmol/L (22.2%; 89.4%); BE < –9 (6.9%; 92.9%); MBP<30 mmHg (25%; 64.6%); DT (15%; 78.8%). Combination of lactate and BE did not improve accuracy.
Conclusions PPS is a common condition early after birth in the sick LBWI. The role of Echo-derived systemic blood flow assessment to identify PPS cannot be replaced by clinical assessment solely.
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782 NEW DILUTION METHOD FOR QP/QS MEASUREMENT IN PATIENTS WITH SINGLE VENTRICLE (SV) ANATOMY

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Background and Aims Major challenge for treatment of Hypoplastic left heart syndrome by Norwood procedure is in achieving the adequate Qp/Qs value. The absence of routine method of assessing the Qp/Qs value can lead to hypoxia, brain injury, for Qp/Qs< < 1 or to insufficient tissue perfusion and lung edema for Qp/Qs>>1. The aim of the study was to develop routine method for Qp/Qs assessment for PICU and NICU patients.
Method development: A mathematical model of indicator movement for SV anatomy was developed. After intravenous injection and mixing in SV the first portion of the indicator enters systemic

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