# NT-proBNP, IL-1 RL1 can identify high-risk congenital heart disease in neonates

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Automated quantitative tests for NT-proBNP and interleukin 1 receptor-like 1 (IL-1 RL1) can identify high-risk congenital heart disease (CHD) in newborns, according to a study published in *JAMA Network Open*.

Henning Clausen, M.D., from Lund University in Sweden, and colleagues examined the performance of two diagnostic tests using minimal amounts of dried blood spots (DBS) to identify high-risk CHD in a Swedish cohort of neonates. Automated quantitative tests for NT-proBNP and IL-1 RL1 (formerly known as soluble ST2) were compared against established CHD screening methods among 313 newborns.

The DBS samples analyzed included 217 CHD cases and 96 controls; of the CHD cases, 89.3% (188 cases) were high-risk types, of which 38.8% (73 cases) were suspected prenatally. The researchers found that 94 (50.0%) of the high-risk cases passed pulse oximetry screening and 36 (19.1%) were discharged after birth without diagnoses. Compared with existing screening methods, combining NT-proBNP and IL-1 RL1 tests performed well, enabling additional identification of asymptomatic babies, with a receiver operating characteristic area under the curve of 0.95.

"Tests were accurate and performed well in differentiating healthy controls from high-risk CHD cases," the authors write. "This warrants prospective evaluation to improve early diagnosis of CHD in this vulnerable population of newborns."

**More information:** Henning Clausen et al, Newborn Screening for High-Risk Congenital Heart Disease by Dried Blood Spot Biomarker Analysis, *JAMA Network Open* (2024). DOI: 10.1001/jamanetworkopen.2024.18097