studies, if ethically feasible, prove otherwise.

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doi:10.1016/j.jtcvs.2009.07.065

Reply to the Editor:

We would like to thank Soueidi and colleagues for their thoughtful comments on our work. We agree that the decision to proceed with a Fontan operation is a delicate one with major implications for the child's future course. It is standard clinical practice to perform cardiac catheterization for preoperative evaluation. However,

this practice is based on data from the 1970s and does not take into consideration advances in noninvasive imaging and changes in the characteristics of subjects presenting for a Fontan operation. Although cardiac catheterization is the reference standard for hemodynamic assessment, it is invasive and costly and carries several risks, including exposure to ionizing radiation.

Our work demonstrates that a comprehensive, noninvasive diagnostic algorithm that incorporates data from clinical history, echocardiography, and noninvasive angiography is effective in screening for children who might not be eligible for a Fontan operation. The proposed algorithm correctly classified all 9 subjects who were deemed ineligible for a Fontan procedure into the high-risk group, which would undergo cardiac catheterization before the Fontan operation. It is important to note that the proposed algorithm is not merely an assessment of ventricular function and pulmonary artery size but requires a more comprehensive evaluation.

With regard to pulmonary artery pressure (PAP), we made some interesting observations. First, no patient deemed ineligible for a Fontan operation had an increased PAP without an associated risk factor on history, echocardiography, or angiography. Second, in patients who underwent

a Fontan operation, preoperative PAP was not associated with adverse postoperative outcomes. We believe that these results are partly due to the rarity of significant increases in PAP in the current era of staged surgical palliation. In the current era, other risk factors, such as heterotaxy syndrome, might have become more important. In light of these findings, it might seem unreasonable to expose low-risk patients to the risks of catheterization to measure PAP.

On the other hand, it is important to note that these results are based on a retrospective analysis of patients followed at a single tertiary care center. They might not apply to patients who have not undergone a similar protocol of stage palliation. Furthermore, the proposed diagnostic algorithm requires high-quality noninvasive angiography with magnetic resonance angiography or computed tomography, which might not be universally available. We hope that our work will help stimulate further prospective investigation that will help clarify the role of noninvasive diagnostic algorithms before a Fontan operation.

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doi:10.1016/j.jtcvs.2009.07.066