



Letter to the editor

Letter regarding Groves et al. “Feasibility of low radiation dose retrospectively-gated cardiac CT for functional analysis in adult congenital heart disease”



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The excellent paper by Dr. Groves et al. highlights the issues surrounding determining whether a low radiation dose cardiac CT would be feasible to evaluate ventricular systolic function in adult congenital heart disease (CHD) patients [1]. The main findings: First, the median radiation dose for contrast-enhanced CT scans in evaluating ventricular systolic function was less than 1 mSv. Second, no patients were excluded due to body size, heart rate or heart rhythm, which could make wider implementation possible.

The prevalence of CHD in adults has increased. Ventricular function is often used to determine optimal medical management and timing of repeat intervention. Cardiac CT function imaging is a viable alternative when cardiac magnetic resonance is contraindicated. Decreasing cumulative radiation dose is particularly important for patients with CHD, because they may often require serial evaluation of function for clinical management. However, historical radiation doses for functional cardiac CT imaging have been relatively high and have been a major limitation of cardiac CT technology. In recent years, efforts have increased to reduce radiation dose while maintaining image quality [1–3].

As far as we know, Dr. Groves et al. presented a minimum radiation dose to evaluate ventricular systolic function in adult CHD patients. This study marks another step forward in the use of cardiac CT in adult CHD

population. We should advocate a similar approach to reduce the radiation dose if using a different CT scanner, because the newer CT such as 320-detector row CT scanner is available in a limited number of centers.

Conflict of interest

The authors report no relationships that could be construed as a conflict of interest.

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