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## IMAGES IN CARDIOLOGY

### Non-invasive detection of quadricuspid aortic valve

Transthoracic echocardiography of a 66 year old Japanese woman with a history of cardiac murmur from early childhood showed large regurgitant blood flow from the aortic valve into the left ventricle that continued until the end of the diastolic phase.

Cine magnetic resonance imaging (MRI) revealed unexpected results: the aortic valve was quadricuspid (normal sized right cusp, slightly smaller left cusp, and half sized two non-coronary cusps without enlargement of annulus). The images of the end diastolic phase (left panel) and the mid-systolic phase

(right panel) showed that these four cusps could not close completely even at the end of the diastolic phase resulting in the formation of a "regurgitant window" (approximately 8 × 8 mm). MRI also showed that her pulmonary valve was tricuspid. This non-invasive examination clearly demonstrated both the presence of a quadricuspid aortic valve and the relation between structure and function of this rare aortic valve anomaly.

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