



# Uncovering a clot - Clear 3D imaging with Vivid™ S70 elevates diagnostic views

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When a woman in her early 60s came to the emergency room with left hemiparesis, her medical history suggested several reasons for concern.

A sufferer of rheumatic valve disease since childhood, she had been under treatment for systemic hypertension for the last 10 years. Thirty years ago, she also had undergone a mitral valve open commissurotomy. Then, just a year before her ER visit, she had returned to surgery because her valve disease had progressed to encompass both mitral and aortic valves. That operation replaced her aortic and mitral valves with bileaflet mechanical prostheses. Since then, she had been under treatment with acenocumarol, but the INR at the emergency room was below the recommended level for therapy (INR 2.15).

A surface ECG showed atrial fibrillation – a condition she had known of for years – with an average ventricular rate of 75 bpm. A transesophageal echocardiogram depicted well seated and normally functioning prosthetic valves in aortic and mitral positions. Both leaflets in the mitral and aortic prostheses demonstrated normal motion, with mean gradients of 4 mmHg in the mitral prosthesis (Figure 1) and 26 mmHg in the aortic case. Left ventricular systolic function was normal.

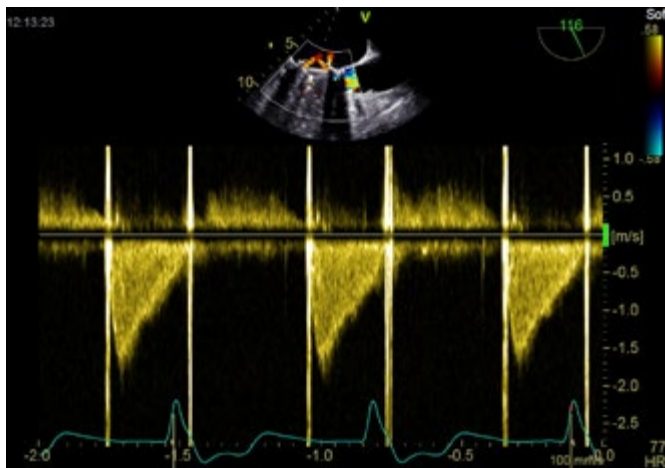


Figure 1.

## Quickly, easily determine treatment options

The Vivid S70 brings you powerful new views for evaluating problems and pursuing the path forward.

Powered by cSound™ architecture, the system acquires information up front, and presents it in new ways that are meaningful for modern cardiovascular patient management:

- Exceptional visualization in 2D, color flow, Doppler and 4D formats
- Excellent spatial resolution and detail

More detailed focus on the mitral prosthesis showed normal motion of both leaflets along with two small intraprosthetic normal cleaning flows (Figure 2, arrows). However, in some views, we could see a slight thickening of the prosthetic ring (Figure 3, arrows), which was confirmed in the triplane views of the prosthesis (Figure 4, arrows).

Finally, an en-face 3D view of the prosthesis nicely and clearly showed a small thrombus covering part of the prosthetic ring (Figure 5, arrows), which had not been completely clear in the two-dimensional echo.

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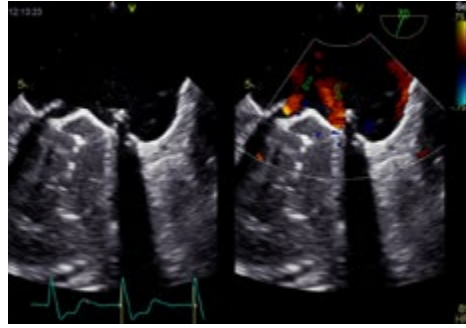


Figure 2.

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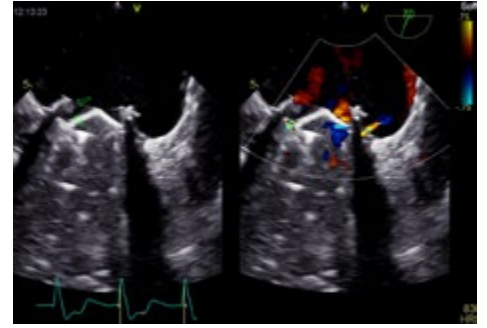


Figure 3.

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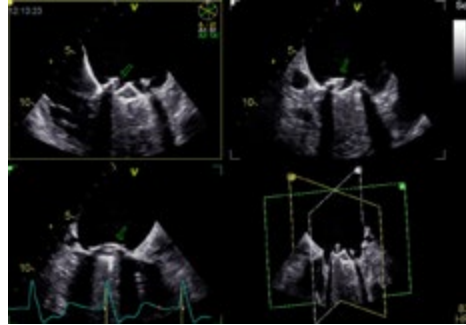


Figure 4.

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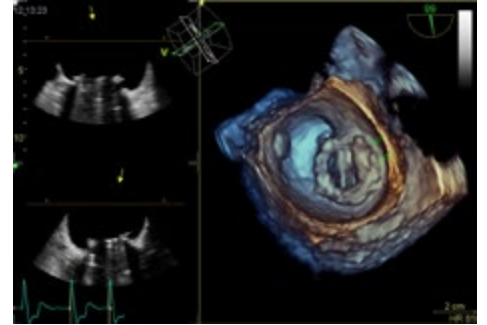


Figure 5.

## Imagination at work

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