

the next level in  
cardiovascular ultrasound imaging

## Hemodynamic analytics

Heart failure is a prevalent medical condition and often comes along with hospitalization – impacting quality of life as well as healthcare costs. Now you can detect very early signs of heart disease with information gained from our hemodynamic analytics. This specialised package visualises and assesses cardiac blood flow from various angles, so you can base your decisions on grounded, clinical data – for accurate prognosis and patient treatment.

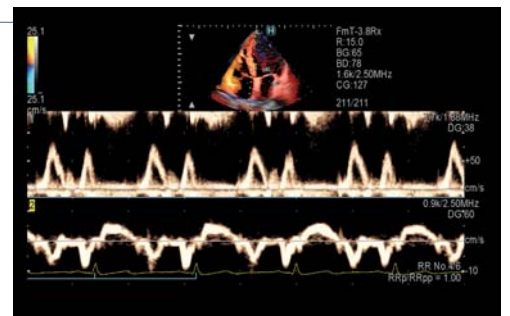
### Measure the systolic function even in difficult patients with virtual contrast

Delineate the endocardial border of the left ventricle by simply applying our high-definition blood flow mode LVeFLOW. By overcoming wall motion noise, this highly sensitive technology delivers clear images of the fully filled LV cavity - even in older patients or those with a high BMI. You can use LVeFLOW instead of contrast agent imaging for a non-invasive and quick examination – with results that are comparable to MRI.



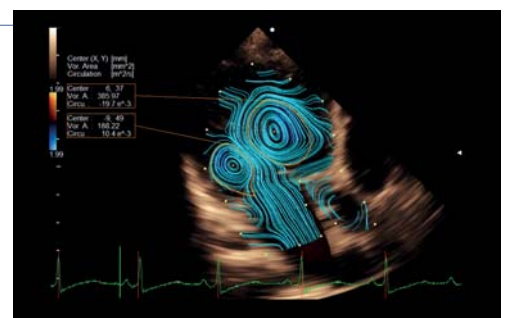
### Get stable Doppler measurements even in patients with arrhythmia

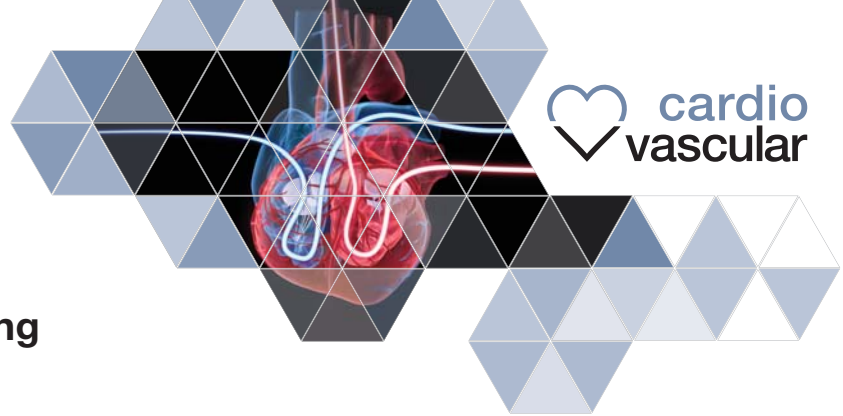
Our unique Dual Gate Doppler measures two separate sample waves from the same heart cycle at the same time. You can combine PW/TDI, PW/PW or TDI/TDI simultaneously, and improve your understanding of the diastolic function especially in patients with arrhythmia like atrial fibrillation. Using data from the same cycle makes the measurements very reliable, and calculates the E/e', IVRT or IVCT indices extremely accurately.



### Visualise the hemodynamics within left ventricle with velocity vectors

Move beyond Colour Doppler imaging, where blood flow directions simply go up and down. Our innovative Vector Flow Mapping visualises flow dynamics in the heart and vessels in all directions as velocity vectors. So now you can view blood vortices in the cavity and check their formations, size and intensity. The result? Reliable data calculations help you detect suspicious signs of heart disease early – improving your prognosis, treatment decisions or follow-up.

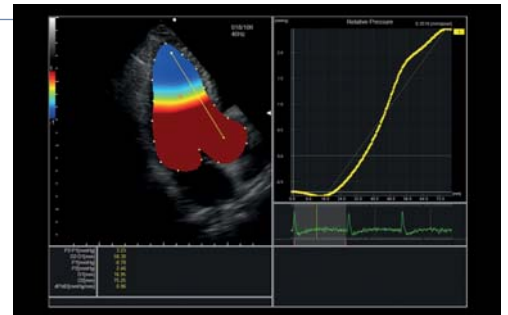




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**Non-invasive measurement of the relative pressure in the LV cavity**

Most clinics use a catheter to measure the pressure in the left-ventricular cavity. But wouldn't you prefer a non-invasive procedure? With our VFM, you can calculate the relative pressure gradient simply by conducting an echoscan. Just draw a line and click a button to get various pressure indices, like mmHg. The suction function in the isometric relaxation period is displayed in a pressure colour map – all of which enables you to assess diastolic function and quickly evaluate the heart failure risk.



**Assess energy loss at turbulences to check treatment response**

Turbulent blood flows in the left ventricle can be caused by stenosis or complications after surgery. Our VFM detects and characterises these flows by assessing the energy loss they cause: the more energy lost, the higher the turbulence. Studying energy loss - for example in patients with aortic insufficiency, or as follow-up before and after mitral valve treatment – has also proved useful in understanding hemodynamics.



**Add vessel analysis to your cardiac examination to get the bigger picture**

The signs of heart failure aren't limited to the heart. They can also appear in the vessels. The cardiac and the arterial system constantly interact with each other through waves that travel forwards and reflect backwards. Our unique Wave Intensity tool uses these travelling parameters – generated from vessel wall movements and velocity – to quantify circulation dynamics. Simply set your probe to the carotid artery to get insights into cardiac function – and even brain stroke risk.

