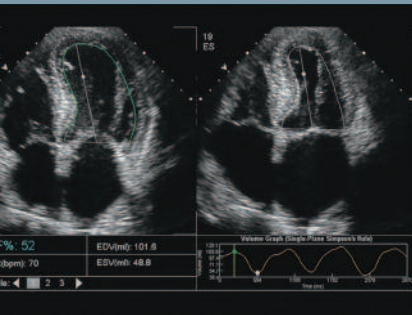


# Diagnostic Confidence Now Comes Automatically

## REAL SOLUTIONS

Understanding challenges  
Providing answers  
Improving outcomes



syngo® Auto Ejection Fraction (Auto EF) technology automatically generates EF measurements—rapidly and reliably. Its sophisticated system intelligence relies on pattern recognition technology that is based on learning from a database of expert contours on thousands of cases. This advancement provides a whole new level of accuracy and consistency in adult cardiac quantification. Furthermore, since no manual tracing is required, workflow dramatically accelerates. All in all, syngo Auto EF technology improves consistency, reduces errors and saves time among users in the adult echo lab environment.

## Highlights

### Calculated Confidence

- Uses progressive pattern recognition technology based on a comprehensive database representing typical adult transthoracic exams
- Provides robust performance and expert-like consistency in every exam
- Excels in technically difficult studies as learning is largely independent of image quality

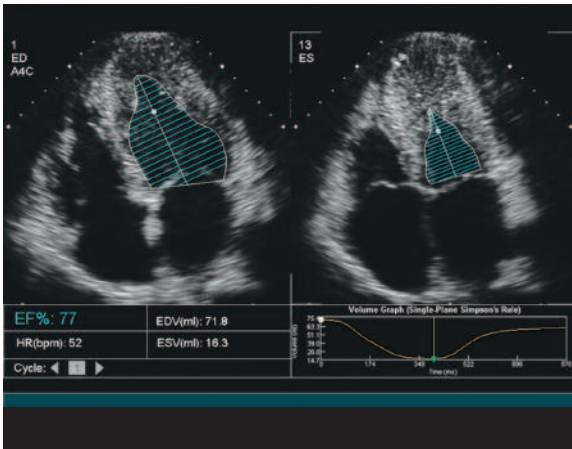
### Automated Workflow

- Bypasses the cumbersome “mark-and-trace” method to calculate EF, end diastole volume and end systole volume
- Automatically identifies ED and ES frames and tracks endocardial borders frame to frame
- Promotes smooth, efficient workflow with manual edit options
- Reduces observer variability to yield more consistent, standardized measurements

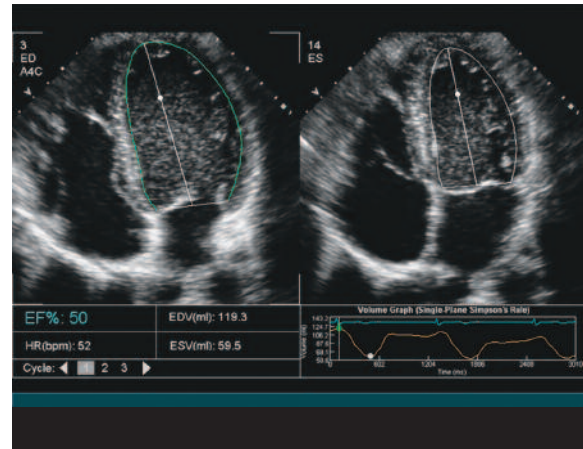
### Consistent, Reliable and Convenient

- Clinical studies published in peer reviewed journals indicate that syngo Auto EF calculates EF with greater than 90% in 77% of patients<sup>1</sup> (as compared to manually traced calculations)
- Presents EF measurement in complete perspective—with image frames for ED and ES with numerical and graphical data
- Available on select ACUSON™ ultrasound systems or with syngo® US Workplace

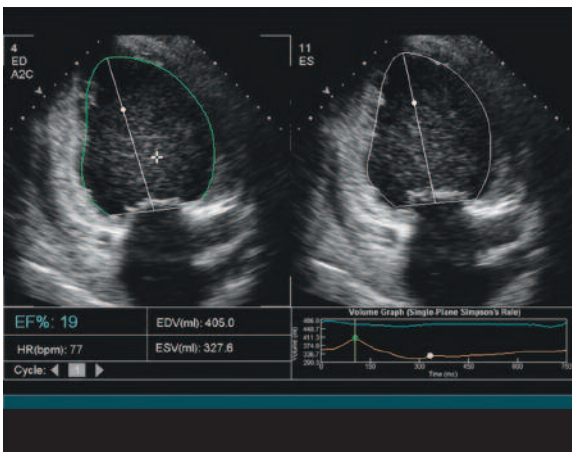
**syngo Auto Ejection Fraction**  
Automatic calculation. Streamlined workflow.



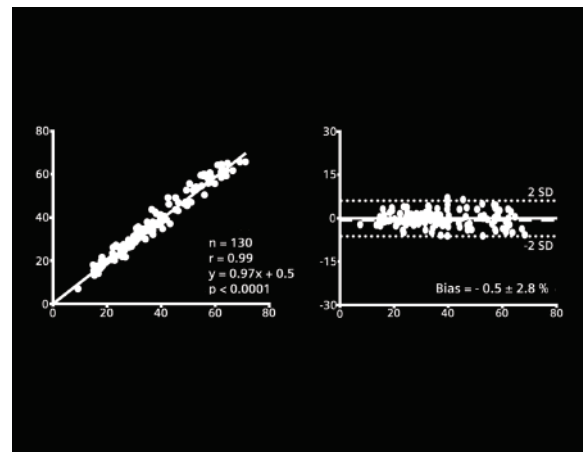
- Simpson method of disk calculation—severe LVH.



- Multiple beat clip displaying EF, volumes, and volume curve.



- Two chamber view – dilated LV with decreased EF.



- Validation: Manual contours vs. *syngo* Auto EF technology<sup>2</sup>. Automatic calculation in 83% Auto EF correlated well with manual tracing ( $r=0.99$ , bias=0.55, limits of agreement=6%)

<sup>1</sup>Cannesson, MD, Maxime, Masaki Tanabe, MD, Matthew S. Suffoletto, MD, Dennis M. McNamara, MD, FACC, Shobit Madan, MD, Joan M. Lacomis, MD, and John Gorcsan III, MD, FACC. "A Novel Two-Dimensional Echocardiographic Image Analysis System Using Artificial Intelligence-Learned Pattern Recognition for Rapid Automated Ejection Fraction." *Journal of the American College of Cardiology*. 49 (2007).

<sup>2</sup>Katz, A. S., et al. "Clinical evaluation of a novel automatic real-time myocardial tracking and wall motion scoring algorithm for echocardiography." American College of Cardiology Annual Meeting, Orlando, FL. 6 Mar 2005.

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