

**19<sup>TH</sup> ANNUAL CANADIAN ECHO WEEKEND**  
**APRIL 20-22, 2017**  
**TORONTO, ON**

**Session Title:** Chamber Quantification: A Reappraisal 2 Years Later

**Presenter/Author:** Wendy Tsang

**OBJECTIVES:** What questions or points will participants learn or discuss?

1. They will be able to name the significant changes to the 2015 Chamber Quantification Guidelines.

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2. They will understand some of the issues that have been raised because of these changes.

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3. They will be able to describe some of the efforts being made to address these issues.

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**DISCUSSION:** Please provide a summary of the discussion and/or include 3 to 6 key presentation slides.

## Changes in the 2015 Guidelines

1. Data-driven reference values for chamber volumes
  - Limited by lack of core lab analysis
  - Large, prospective ASE WASE study to obtain values
2. Expert based cutoffs for abnormality severity grading
  - Use cautiously
3. Recommendations for ultrasound contrast use
  - Still lack large normal studies
4. Recommendations for 3DE
  - Do it for LV
  - RV and LA still require more investigation.
  - RA is research only

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## Changes in the 2015 Guidelines

6. Recommendations for global longitudinal strain
  - Decreased vendor variability may make it easier to integrate into multivendor lab
7. Changes to LV segmentation
  - Improved communication
8. Continuation of leading edge to leading edge aortic root measurements (SOV, STJ, prox ascending aorta)
  - Without normal echo values, continue to use leading edge to leading edge convention.

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### CONCLUSIONS:

1. There still is a need for large population studies to generate normal and abnormal echo measurement values.

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2. 3D echocardiography is recommended when possible, but it's use will only increase with automated analysis.

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3. With standardization, global longitudinal strain will be easier to integrate into clinical echo practice.

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### REFERENCES: (journals, websites, etc.)

Lang et al. Recommendations for Cardiac Chamber Quantification by Echocardiography in Adults: An Update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. JASE 2015;28:1-39.

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Farsalinos et al. Head-to-Head Comparison of Global Longitudinal Strain Measurements among Nine Different Vendors: The EACVI/ASE Inter-Vendor Comparison Study. JASE 2015;28:1171-81.

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Yang et al. Improvement in Strain Concordance between Two Major Vendors after the Strain Standardization Initiative. JASE 2015; 28:642-8.

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