



## Educational Discussion: Reporting High-Sensitivity Troponin Results

### 2016-C Cardiac Markers Survey (CAR)

High-sensitivity cardiac troponin (hs-cTnT and hs-cTnI) assays are available worldwide except for the United States, where no hs-cTn assays have received clearance from the Food and Drug Administration (FDA). Globally the Abbott hs-cTnI and Roche hs-cTnT assays are the only hs-cTn tests marketed. Over the past few years there has been a notable increase in laboratories (appropriately outside of the United States) reporting proficiency testing results within the hs-cTn peer groups in the CAP Cardiac Marker Survey.

The 2016-C Cardiac Markers Survey (CAR) was updated to reflect the international reporting recommendations for hs-cTn which universally state that hs-cTn concentrations should be expressed in nanograms per liter (ng/L) and results should be reported in whole numbers<sup>1,2</sup>. This guidance was put forth as a means to avoid confusion by having unnecessary zeros following the decimal point if the same reporting convention was used for assays not designated as high-sensitivity (ng/mL or µg/L). Adopting this convention also avoids clinical errors in data reporting for both electronic medical records and electronic data transfer, where decimal rounding to zero is a true risk. Changes to the CAP CAR Survey were conducted to eliminate potential transcription errors from laboratories attempting to convert results back to ng/mL because no option was previously given to report in ng/L.

**As laboratories in the United States are not clinically using high-sensitivity cardiac troponin assays, they therefore should not be reporting cardiac troponin results in whole numbers or ng/L.**

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1. Apple FS, Jaffe AS, Collinson P, et al. International Federation of Clinical Chemistry (IFCC) Task Force on Clinical Applications of Cardiac Bio-Markers. IFCC educational materials on selected analytical and clinical applications of high sensitivity cardiac troponin assays. *Clin Biochem*. 2015 Mar;48(4-5):201-3.
2. Thygesen K, Alpert JS, Jaffe AS, Simoons ML, Chaitman BR, White HD; Joint ESC/ACCF/AHA/WHF Task Force for the Universal Definition of Myocardial Infarction. Third universal definition of myocardial infarction. *Circulation*. 2012 Oct 16;126(16):2020-35.