



## Letter to the Editor

**Recommendation to harmonize the units for reporting cardiac troponin results**

Standardization in Laboratory Medicine is an essential component in the transferability of information in practice guidelines and recommendations. Cardiac troponins (cTns) I and T are now widely used as biomarkers to diagnose myocardial infarction and for risk prognostication. Whereas some recommendations are written for local use, the worldwide community of cardiologists has succeeded in producing globally accepted documents signed up by US, European and World Associations and which are largely based on expert consensus [1–3]. The early joint documents sought to standardize on the use of cTns as the biomarker of choice for the diagnosis of myocardial infarction. However, the performance of the new cTn assays has improved dramatically over the past decade. Highly sensitive cTn assays generally use units of ng/L, whereas results from previous generations of the same analytical system have usually been reported in µg/L or in ng/mL to two or more decimal points. As a consequence, the reporting of these more sensitive assays produces results that may be a thousand-fold different compared to results by other less sensitive assays, and thus has the potential for confusion and medical error, e.g. 1290 ng/L is 1.290 µg/L and 40 ng/L is 0.040 µg/L. It is, therefore, essential that the clinical and laboratory communities standardize on units of measurement of cTns.

In the current era of electronic patient records the existence of a multiplicity of units has the potential to harm patients, e.g. reporting of therapeutic drugs and hormone concentrations is particularly dangerous where values may be reported in either SI or mass units by individual laboratories [4]. In the same way the non-SI units for reporting of cTns, ng/mL is not recommended. In order to improve patient safety, we recommend that the reporting of cTns (I and T) is standardized in any specimen or instruments they are measured. We wish to express a strong recommendation for the reporting in whole numbers and for the use of nanogram per liter (ng/L) as the standard unit for reporting cTns, which is acceptable to the 'Système Internationale' (SI) of Measurement.

**References**

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