Resource Summary Report

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Creatinine Standardization Program

RRID:SCR_006441
Type: Tool

Proper Citation

Creatinine Standardization Program (RRID:SCR_006441)

Resource Information

URL: http://www.nkdep.nih.gov/lab-evaluation/gfr/creatinine-standardization.shtml

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Description: Standard specification to reduce inter-laboratory variation in creatinine assay calibration and therefore enable more accurate estimates of glomerular filtration rate (eGFR). Created by NKDEP""s Laboratory Working Group in collaboration with the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the European Communities Confederation of Clinical Chemistry (now called the European Federation of Clinical Chemistry and Laboratory Medicine), the effort is part of a larger NKDEP initiative to help health care providers better identify and treat chronic kidney disease in order to prevent or delay kidney failure and improve patient outcomes. Recommendations are intended for the USA and other countries or regions that have largely completed standardization of creatinine calibration to be traceable to an isotope dilution mass spectrometry (IDMS) reference measurement procedure. The program""s focus is to facilitate the sharing of information to assist in vitro diagnostic manufacturers, clinical laboratories, and others in the laboratory community with calibrating their serum creatinine measurement procedures to be traceable to isotope dilution mass spectrometry (IDMS). The program also supports manufacturers"" efforts to encourage their customers in the laboratory to coordinate use of standardized creatinine methods with implementation of a revised GFR estimating equation appropriate for use with standardized creatinine methods. Communication resources and other information for various segments of the laboratory community are available in the Creatinine Standardization Recommendations section of the website. Also available is a protocol for calibrating creatinine measurements using whole blood devices. The National Institute for Standards and Technology (NIST) released a standard reference material (SRM 967 Creatinine in Frozen Human Serum) for use in establishing calibrations for routine creatinine measurement procedures. SRM 967 was validated to be commutable with native serum samples for many routine creatinine procedures and is useful to establish or verify traceability to an IDMS reference measurement procedure. Establishing calibrations for serum creatinine methods using SRM 967 not only provides a mechanism for ensuring more accurate measurement of serum creatinine, but also enables more accurate

estimates of GFR. For clinical laboratories interested in independently checking the calibration supplied by their creatinine reagent suppliers/manufacturers, periodic measurement of NIST SRM 967 should be considered for inclusion in the lab""s internal quality assurance program. To learn more about SRM 967, including how to purchase it, visit the NIST website, https://www-s.nist.gov/srmors/quickSearch.cfm

Abbreviations: Creatinine Standardization Program

Resource Type: narrative resource, data or information resource, standard specification, experimental protocol, international standard specification, resource

Keywords: creatinine, estimate, glomerular filtration rate, kidney, isotope dilution mass spectrometry, whole blood, calibration, serum, serum creatinine, clinical

Related Condition: Chronic kidney disease

Funding: NIDDK

Resource Name: Creatinine Standardization Program

Resource ID: SCR_006441

Alternate IDs: nlx_152736

Record Creation Time: 20220129T080236+0000

Record Last Update: 20260729T044135+0000

Ratings and Alerts

No rating or validation information has been found for Creatinine Standardization Program .

No alerts have been found for Creatinine Standardization Program .

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 2 mentions in open access literature.

Listed below are recent publications. The full list is available at kravitz2 .

Pottel H, et al. (2022) Standardization of serum creatinine is essential for accurate use of unbiased estimated GFR equations: evidence from three cohorts matched on renal function. Clinical kidney journal, 15(12), 2258.

Pi??roni L, et al. (2017) Did Creatinine Standardization Give Benefits to the Evaluation of Glomerular Filtration Rate? EJIFCC, 28(4), 251.