

Letter to the Editor

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Editor, Clin Lab Sci:

There now exists a significant 2013 update to the protocol for the Brill-Edwards *ex vivo* heparin therapeutic range curve provided in our Winter edition Focus series, *Anticoagulant Therapy Overview*.¹ Since the *ex vivo* curve was introduced in 1993, our combined conventional wisdom has required that we assay at least 50 non-Coumadin heparin specimens to produce a valid curve.² The 50-specimen requirement also appears in CLSI document H47-A2.³ Interpreting data from an elegant experiment, Marlar and Gausman have concluded that the absolute minimum number of samples for an accurate heparin therapeutic range is only 20, and the optimum is 30, provided that fewer than 10% of the samples are collected from the same patient.⁴ Reducing the specimen demand by half eases the lab scientist's burden for identifying, dispensing, and storing heparin samples, a concern especially for

small laboratories, without compromising the validity of the heparin therapeutic range. Please consider this new conclusion as you prepare and update your Brill-Edwards curves.

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1. Fritsma GA, Anti-Xa inhibitors, from heparin to Eliquis. Clin Lab Sci 2013;26:48–53.
2. Brill-Edwards P, Ginsberg JS, Johnston M, Hirsh J. Establishing a therapeutic range for heparin therapy. Ann Intern Med 1993;119:104–9.
3. Clinical and Laboratory Standards Institute (CLSI). One-Stage Prothrombin Time (PT) and Activated Partial Thromboplastin Time (APTT) Test; Approved Guideline—Second Edition. CLSI document H47-A2. CLSI, Wayne, PA, 2008.
4. Marlar RA, Gausman J: The optimum number and types of plasma samples necessary for an accurate activated partial thromboplastin time–based heparin therapeutic range, Arch Pathol Lab Med 2013;137:77–82.