

Hemostasis testing guide now out in new edition

Anne Ford

June 2016—The older we get, the faster time seems to pass. That's why 2008 might not feel like all that long ago—until you consider that Obama had yet to take office, Donald Trump's television appearances were limited largely to *The Apprentice*, and there was no "like" button on Facebook.

Nor had many direct oral anticoagulants come on the market. That's a major reason behind the CAP Press' release of the second edition of *An Algorithmic Approach to Hemostasis Testing*, an illustrated reference text and guide for pathologists and laboratory professionals.



Dr. Kottke-
Marchant

"There have been a lot of advances and updates in hemostasis, both in testing and in new drugs," says Kandice Kottke-Marchant, MD, PhD, the book's editor, who is chair of the Cleveland Clinic's Pathology and Laboratory Medicine Institute. "Especially the new direct oral anticoagulants, which can interfere with a lot of different anticoagulation testing." The book includes chapters on monitoring the new anticoagulants and how they can affect different laboratory tests.

"Laboratories are just getting familiar with how to monitor those drugs," she says. "And probably even less appreciated is how those drugs affect other coagulation tests, because they act like inhibitors, so they mimic some of the natural inhibitors like lupus anticoagulants, and they can interfere with lupus anticoagulation testing. So we thought it was time for a new edition."

One example of such interference: A physician ordered a laboratory evaluation for a lupus anticoagulant on a 55-year-old male with a history of venous thrombosis, she says. The initial laboratory testing showed an elevated aPTT and a slightly prolonged PT/INR. The aPTT mixing study and dilute Russell's viper venom test showed positive mixing studies. "It wasn't until a thrombin time was performed that showed a markedly elevated thrombin time that the laboratory realized that these results suggested a direct thrombin inhibitor effect rather than a lupus anticoagulant," Dr. Kottke-Marchant says.

The second edition, which has been updated throughout, consists of sections on hemostasis physiology, the basics of laboratory testing and interpretation, algorithmic approaches to bleeding disorders and to thrombophilic disorders, and antiplatelet and anticoagulant drugs. Among its 30 chapters are new chapters on quality in hemostasis laboratory testing, the value of consultation in hemostasis testing, antifibrinolytic and thrombolytic agents, thrombotic microangiopathies, and emergency assessment of hemostasis in the bleeding patient.

That last chapter, authored by Wayne L. Chandler, MD, of Seattle Children's Hospital and a member of the CAP Coagulation Resource Committee, is one of Dr. Kottke-Marchant's favorites. "It's not an area that a lot of laboratories specifically have knowledge of: How do we get coagulation results out fast if we have a patient bleeding in the operating room or emergency room? That will hopefully be a very, very useful chapter."

At least equally useful, she expects, will be the chapter on laboratory aspects of thrombophilia testing, by Charles

Eby, MD, of Washington University School of Medicine. "It will guide you through your basic panel for thrombophilia, as well as what things can interfere with the different types of tests for thrombophilia," she explains. "For example, there's a whole algorithm for evaluating protein C. This will probably be the most practical chapter for people who do coagulation testing every day."

The new chapter on consultation in hemostasis testing contains practical information, she says. "It discusses how pathologists can do interpretations on hemostasis testing, and it talks about the value of interpretation and gives you an idea of how to structure interpretation and how laboratories can do this and bill for it."

In the new edition are case studies and algorithms related to bleeding disorders and venous thrombotic disorders, such as elevated PT and aPTT, bleeding with normal PT and aPTT, abnormal thrombin time, fibrinolytic and platelet disorders, von Willebrand disease, heparin-induced thrombocytopenia, and antiphospholipid antibody syndrome and lupus anticoagulants.

"This was a group effort by the Coagulation Resource Committee and the CAP, and it was a collaborative effort on everyone's behalf," says Dr. Kottke-Marchant, who is a member of the committee and its former chair. "All too often we look at PT results and say, 'Don't laboratories realize they should be doing this or that?' I think turning that around and having a book as an educational offering for laboratories is beneficial."

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Anne Ford is a writer in Evanston, Ill. The 480-page hardcover book (PUB 223) is for sale at www.cap.org, Shop tab (\$148 for CAP members, \$185 for nonmembers). The ebook (\$120) is at ebooks.cap.org.