is not indicated (Table). Similar steps can be followed for the other NOAs, and we need to adhere to their respective guidelines.[2,3]

If NOAs are to be used in patients with nonvalvular AF, the CHA_2DS_2-VASc score (congestive heart failure, hypertension, age ≥75 years [doubled], diabetes, stroke/transient ischemic attack/thromboembolism [doubled], vascular disease [prior myocardial infarction, peripheral artery disease, or aortic plaque], age 65-75 years, sex category [female]) should be determined. This score gives special attention to congestive heart failure, hypertension, age 75 years and older, diabetes, women, and history of stroke, transient ischemic attack, or systemic embolism.[2,3] A score of 2 is assigned to patients who have a stroke or are 75 years or older. A score of 1 is assigned to each of the remaining risk factors, if present. A total score of 0 requires no treatment, and a score of 2 or more requires treatment. For patients with a score of 1, treatment is decided on an individual basis. Moreover, a renal risk stratification should be done for all NOAs using a comprehensive metabolic panel before treatment begins and 1 week after initiation of the NOA or if there is a change in the patient's clinical condition.[2,3] It should be noted that the suggested dosing of the NOAs based on CKD stages has not been validated for clinical use. However, the actual dosing is the same for equivalent stages of renal dysfunction based on CGe and the current NOA prescribing information.[5-8] The guideline highlights the need for CKD staging to prevent adverse effects.[2,3]

As we accumulate more experience with the NOAs, we will have a better understanding of the proper selection of each of these agents. The net clinical benefit[17] obtained should be evaluated with each agent in this upcoming era of individualized patient care and precision medicine. The NOAs can be a welcome addition to our armamentarium to treat patients who need anticoagulation. Because of the narrow therapeutic indices of the NOAs,[18] use of the proposed renal risk stratification is suggested to avoid some of the risks, morbidity, mortality, and expense in managing serious NOA adverse effects.[2,3,11-13]

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In reply—New Oral Anticoagulants in Elderly Adults With Chronic Kidney Disease

We thank Dr Pazmiño for his comments on our article. Many of the new oral anticoagulants (NOAs) are excreted to a substantial extent by the kidney, and it is certainly necessary to consider dosage adjustments on the basis of the patient's estimated glomerular filtration rate. It is true that the occurrence of nonvalvular atrial fibrillation is increased in patients with advanced kidney failure, and use of NOAs has some appeal for this condition compared with other oral anticoagulants such as vitamin K antagonists (warfarin). However, we recommend great caution with the use of NOAs in patients with advanced renal failure because it can be extremely difficult to assess the appropriate safe and effective dosing regimen in these patients, and if serious bleeding occurs

during NOA use, immediate reversal of the anticoagulant effects of NOAs can be problematic. To confirm our concern, a recent study by Chan et al[1] revealed that the use of dabigatran or rivaroxaban in patients undergoing hemodialysis was associated with a higher risk of hospitalization or death from bleeding when compared with warfarin. Such a risk may be further increased if patients with severe renal failure are elderly, because aging can impair the pharmacokinetics of many drugs and further expose the patient to an unintentional risk of bleeding.[2]

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CORRECTION

A cover line on the September 2015 print cover was incorrect. It should read: "Overview of Essential Thrombocythemia and Polycythemia Vera." We regret the error.

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