Each year, selected section editors are asked to summarize the major advances from the last year. This annual ritual provides clear and gratifying evidence that the field is moving forward. The authors are always challenged to conform to the constraints of the stringent word limit.

In 2011, clinicians in cardiology and vascular neurology have had to respond to a major sea change in the approach to stroke prevention in atrial fibrillation. Goldstein and Rothwell describe the emerging science on the new thrombin and factor Xa inhibitors and how their enhanced safety profile is affecting efforts at risk stratification.

The reorganization of stroke care to optimize patient outcomes has been one of the most rapidly evolving areas of the field. The review by Thrift and Vickrey highlights the most recent studies examining clinical and cost outcomes and novel approaches to acute stroke care delivery. The impact of “meaningful use” implementation on stroke care will, undoubtedly, be of interest in coming years.

Kidwell and Heiss report on elegant acute stroke imaging studies using positron emission tomography and MRI to determine tissue viability, risk of complications, and functional outcomes. Multimodal imaging is increasingly becoming part of the evaluation of stroke risk after transient ischemic attack or in patients with carotid atherosclerosis, and future research should help establish their role in risk stratification.

Advances in stroke epidemiology reinforce the importance of socioeconomic status and lifestyle as potentially modifiable stroke risk factors. Grau and Howard also identify studies exploring novel risk factors for stroke such as hip fracture, depression, and low birth weight.

Drs Pierot, van der Bom, and Wakhloo put recent neurointerventional trials for the management of carotid disease and intracranial stenoses into perspective and describe innovations in the treatment of vascular malformations.

A few of the highest impact studies in emergency neurology and neurocritical care, contributing to improved outcomes for patients with ischemic stroke, intracerebral hemorrhage, subarachnoid hemorrhage and traumatic brain injury, are summarized by Drs Smith and Schwab.

Research in 2012, and beyond, will build on these dramatic advances. Best wishes for a happy and productive coming year!

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Disclosures
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