The review by Sánchez-Quiones et al discusses the complex relationship between atrial fibrillation (AF) and the use of statins, a subject area that has attracted media attention this year. The suppression by statins of cholesterol biosynthesis is well documented. However it is now speculated that statins also have anti-inflammatory properties. The pathogenesis of AF is multifactorial but there is now some evidence to support the hypothesis that oxidative stress and inflammation may play a role in its development. Unsurprisingly therefore, a number of studies have demonstrated a reduction in the development of AF following the use of statins. Furthermore, statins have been related to a decrease in the risk of developing AF after cardioversion and after non-cardiac thoracic surgery. The authors conclude by stating that large randomised clinical trials are required to fully evaluate the impact of the use of statins on preventing AF. Evidence so far looks encouraging. In the words of one commentator: “good drugs, these statins!”

Congestive heart failure (CHF) continues to represent a common clinical disorder with significant mortality and morbidity. Prompt diagnosis is required to ensure the best outcome. Sadly, precise diagnosis of CHF may be less than straightforward, especially in the elderly, who may have other co-morbidities. While dyspnoea may represent a classical CHF symptom it may also be present in other and co-existing conditions. The review by Ray and colleagues highlights the potential use of B-type natriuretic peptide (BNP) and N-terminal proBNP (NT-proBNP) as promising markers for the diagnosis and management of CHF. Natriuretic peptides which include BNP (as well as inactive NT-proBNP) are hormones that are released by heart muscle cells in response to myocardial stretch and overload. The authors advocate the measurement of both of these parameters in the emergency care setting not only to support the diagnosis of CHF but to also improve clinical outcomes.

The threat of obesity as a significant risk factor for macrovascular complications in type 2 diabetes mellitus (T2DM) is well known and understandably much attention is given to the management of obesity in this patient group. However T2DM can also occur in non-obese individuals and the question arises: does this latter group of diabetic patients have the same risk of developing large vessel disease? Song and Hardisty explore the relationship between development for cardiovascular disease, and varying degrees of obesity. In a study of 390 patients with T2DM, risk factors for cardiovascular disease were evaluated along with prevalence of macrovascular complications for varying categories of body weight. Complication rates were similar for both obese and non-obese subjects. They conclude that all T2DM possess adverse CVD risk factors with significant burden of macrovascular disease irrespective of their baseline body weight. Although a small study, its findings if validated by further research in this area, should be noted by clinicians who have a responsibility for general diabetic clinics. A “normal” body weight in a T2DM patient does not exclude the later development of macrovascular disease.

Recombinant tissue plasminogen (rt-PA) has been confirmed as a safe and effective treatment for acute non-ischaemic stroke especially if given within three hours of diagnosis. The Safe Implementation of Thrombolysis in Stroke-Monitoring Study (SITS-MOST) represents a multi-national observational study group that has been set up to assess the safety and efficacy of thrombolytic therapy. It represents a rich source of data that facilitates the audit of stoke thrombolytic services. With this in mind, Lees and collaborators analysed data from UK centres from the SITS-MOST database. It is disappointing to conclude from the results that there is considerable scope for improvement. While thrombolytic therapy services have been implemented successfully at a relatively small number of UK stroke centres, overall provision was considered
to be patchy. Provision of service out of normal working hours was less than satisfactory and UK patients tended to be treated later than those in other participating countries.

The commentary by Lord and others is highly topical in light of the publication of Darzi’s Next Stage Review. It considers a number of topics that are related to the central theme of translational research. The rationale for the establishment of the National Institute for Health Research (NIHR) which fulfils the role of a “virtual national research facility” for NHS England is discussed. This has been followed by the exciting development of a robust educational infrastructure that includes Biomedical Research Centres and Biomedical Research Units. Perhaps the most exciting initiative described is the concept of the Academic Health Science Centre (AHSC) which seeks to integrate research, teaching and clinical services under a single management structure with the sole aim of improving care outcomes. The AHSC model is well known in North America and its development in England will be noted with interest. The overall theme of the review is one of optimism for the future of biomedical research in the UK.

Michael Bannon
Editor, QJM