New ESC/ESA Guidelines on non-cardiac surgery: cardiovascular assessment and management

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During the last 16 months, a Task Force established by the Guideline Committees of the European Society of Cardiology (ESC) and European Society of Anaesthesiology (ESA) has been working on a new Guideline document on cardiovascular assessment and management of patients undergoing non-cardiac surgery.

The clinical scenario is common and the optimal management strategy for these patients is discussed by cardiologists, anaesthesiologists, surgeons, and other doctors and health personnel in our daily practice. The field is wide and complex, and is evolving with many new developments. The ESC decided in December 2012 to write a new Guideline on perioperative care, and established, together with the ESA, a new task force of experts co-chaired by Professor Steen D. Kristensen, Aarhus, Denmark (Figure 1) and Professor Juhani Knuuti, Turku, Finland (Figure 2).

The Guideline will cover the entire field including surgical risk assessment, pre-operative evaluation, and optimal perioperative management, and will also address relevant cardiological and anaesthesiological issues in patients with specific cardiac diseases and common co-morbidities scheduled to undergo non-cardiac surgery. The goal is to provide optimal guidance in the clinical decision-making process for patients undergoing non-cardiac surgery. Key areas with new recommendations based on scientific developments are:

- How do we optimally evaluate pre- and perioperative risk and what kind of impact may it have on patients undergoing non-cardiac surgery?
- New generation drug-eluting stents: should non-cardiac surgery be postponed and, if so, for how long?
- New and former antithrombotic drugs: what should we do if non-cardiac surgery is needed?
- When should we perform pre-operative revascularization?
- How do we handle patients with valve disease, arrhythmia, heart failure, and other cardiac diseases?
- What are the implications of co-morbidity such as diabetes, renal failure, and lung disease?
- What is the optimal perioperative medical treatment with, for example, beta-blockers, statins, angiotensin-converting enzyme (ACE) inhibitors/angiotensin receptor blockers (ARBs)?

The use of perioperative beta-blocker treatment is complex, and has received a great deal of attention. As described in detail in a recent editorial by the Editor-in-chief of the European Heart Journal,1 the validity of some of the key publications in this field has been questioned, and burning issues on dosing, type of compound, and in particular which subgroups of patients that will benefit are difficult to resolve. Recent registry data show overall benefit of beta-blockers in some patients,2,3 but to address the use of beta-blockers properly, new randomized studies need to be conducted. Some colleagues and journalists have criticized the ESC and other leading scientific bodies for being too slow to react and change the Guidelines. However, as explained below, writing Guidelines is a lengthy process and includes the comprehensive study of the literature and evidence as well as a multistep review process—all of which are critical for the quality of the guidelines. Meanwhile, the ESC together with the American Heart Association (AHA) and the American College of Cardiology (ACC) decided in August 2013 to issue a common statement regarding temporary recommendations on the use beta-blockers: ’In the interim, our current joint position is that the initiation of beta-blockers in patients who will undergo non cardiac surgery should not be considered routine, but should be considered carefully by each patient’s treating physician on a case-by-case basis.’ In that statement, as well as earlier (March 2013), the ESC indicated that a new Guideline on non-cardiac surgery was in preparation. Our American colleagues from the AHA/ACC are also in the process of writing a new Guideline on this topic.

Guideline documents demand meticulous preparation, and their publication cannot be achieved in a rush for many reasons—the foremost being the safety of our patients. Once the development of an ESC Guideline is approved, the Committee for Practice Guidelines (CPG) chaired by Professor Zamorano from Madrid (Figure 3) prepares a list of potential authors to constitute the Task Force in charge of writing the Guideline. Among the Task Force members, one or two Task Force chairpersons are chosen. The list of potential members of the Task Force is prepared in collaboration with ESC constituent bodies concerned by the topic to be written. Eventually, 15–25 experts are nominated for each Guideline Task Force, which is under the co-ordination of the chairpersons. The Task Force,

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primarily, is responsible for the scientific content of the Guideline. Once they have produced a final draft document, it will be reviewed by CPG members and external reviewers appointed by the CPG in view of their knowledge in the field under discussion. Two members of the CPG co-ordinate the review process. Comments from all reviewers are sent back to the Task Force chairpersons who must address each and every one of them; it is not unusual for the number of comments to exceed 1000. The revised version as well as the responses to all comments are sent back to the CPG, and the review process starts again until a final version is produced, usually after 2–3 reviews—sometimes even after more rounds.

For the new ESC Guidelines on non-cardiac surgery, more than 115 experts have been involved, including 24 Task Force members, 26 members of the CPGs, 36 National Cardiac Society reviewers, 24 expert peer reviewers, and a number of ESC and ESA Board members. The document is now finalized and will be presented this year in Barcelona at the annual ESC Congress in September, and will also be made available online in the European Heart Journal. The numerous comments from the reviewers have improved the quality of the document considerably. We would like to stress that although the beta-blocker section is important, numerically it only accounts for quite a small section in the entire document. We look forward to presenting and discussing our work at the ESC Congress in Barcelona 2014.

**Conflict of interest:** none declared.

**References**