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Statement of ESO, Stakeholder round table on AF related stroke prevention **Brussels, April 3, 2014**

Dear colleagues, dear ladies and gentlemen,

Stroke is the second most frequent cause of death in Europe and regionally it has even become the most frequent one. Population-attributable risk studies have shown that stroke lists among the most frequent burdening diseases. It causes severe chronic disability to its survivors and represents a heavy burden to spouses, caregivers and the community alike. To prevent stroke therefore is a major challenge to the medical community but also to health authorities and political decision makers as we see an increase of stroke cases around the world being caused by the demographic shift to older age groups. At the same time we also see an increase of stroke cases among younger age groups in most European countries caused by an increase of risk factors and their insufficient control.

To control risk factors such as arterial hypertension and diabetes, but also smoking and other risk behaviour as well as to reduce environmental risk factors is a crucial and formidable task for the present and near future. It needs political as well as economical support. To ensure legislation for better tobacco control, to reduce sodium levels in processed foods and to enable healthier food intake is imperative. We know that this can not be achieved by medical means alone and legislation is needed for preservation and protection of health on a population scale. Only then individual prevention can become significantly effective.

One of the most important risk factors for stroke is atrial fibrillation. Both its chronic and paroxysmal form are dangerous. About 10% of the population have atrial fibrillation. It causes approximately 1/5th of all strokes and it is the leading cause of embolic stroke.

These strokes are among the most severe strokes with highest rates of mortality and residual disabilities.

Without prevention, approximately 1 in 20 patients will have a stroke each year.

For protection: aspirin does not provide sufficient protection from atrial fibrillation caused embolic stroke. Until recently, warfarin has been used as the only effective drug to reduce the risk of embolic stroke in such patients. Unfortunately, its use varies extensively around the world. In Europe, it varies between 28% in Eastern Europe and 44% in Western Europe.

The reasons why it is used in a rather low percentage of afib patients is:

- Narrow therapeutic range
- Frequent food/drug interactions
- Slow onset/offset of action
- Regular coagulation monitoring needed
- High risk of bleeding
- Doubles the risk of intracranial bleeding

New oral anticoagulants are better than warfarin. These new anticoagulants that primarily target either thrombin or factor Xa have been developed and have now entered the clinical routine. We are convinced of the advantages of these new drugs to prevent stroke in patients with atrial fibrillation as well as to reduce the risk for cerebral and enteric bleeding

Hardly any new medications have entered our field of stroke prevention with more anticipation than the new anticoagulants. Compared to warfarin they provide

- Rapid onset of action
- Predictable and consistent anticoagulant effects
- Low potential for drug–drug interactions
- No drug–food interactions
 - No requirement for routine coagulation monitoring
- Short half-lives compared with warfarin
 - Simplifies anticoagulation management for patients undergoing invasive procedures
 - Shorter treatment interruption minimizes period of suboptimal stroke protection

Everyone with an increased risk such as measured by the CHADS2 Score higher than 1 should receive anticoagulation, preferably with the new oral anticoagulants. Which one of the 3 (or 4) new drugs is best can not be decided as there are no direct comparison studies. At present, it must be assumed that they are all equal in efficacy and efficiency.

With these new drug options in place, stroke prevention has entered a new phase. Warfarin still has its place in patients who do well with it or have other causes of embolic stroke risk such as artificial heart valves. As with all new drugs, costs are a major issue and readier availability should be guaranteed to all Europeans in need. The initial costs of new drugs are always almost very high compared to older drugs and politics can play a role in reducing costs to the consumer where needed.

As with all new developments in medicine, they give way to many more questions in need of an answer. Some of them include neurological issues of treating patients who suffer a strokes while on new oral anticoagulants but also other clinical situations have to be explored. We are therefore in an exciting new phase of clinical research and have to focus our work on discovering the best strategies for drugs, risk factor control and behaviour modification.

In sum, ladies and gentlemen, the European Stroke Organisation asks you to consider taking action to prevent strokes in Europe and to reduce its devastating consequences.

Michael Brainin, MD

