

Personalized AF management needed to close mortality gap

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Personalised management is the only way to close the mortality gap for patients with atrial fibrillation (AF), according to an ESC consensus paper presented at ESC Congress 2013 by Professor Paulus Kirchhof (UK).

The Atrial Fibrillation competence NETwork (AFNET) and European Heart Rhythm Association (EHRA) consensus paper is published online in the *European Journal of Pacing, Arrhythmias, and Cardiac Electrophysiology (EP-Europace)*¹ and presented during the ESC Congress session on personalised cardiology.

Professor Kirchhof said: "Acute and 1-year mortality after [myocardial infarction](#) has dropped by two-thirds in the last 10 to 15 years primarily because of [medical interventions](#) aimed at the principal pathophysiology causing the disease. For example acute [revascularization procedures](#) are used to treat a thrombotic blockage of the artery while statins prevent the development and rupture of coronary plaques."

But he added: "We are in an intermediate position with AF. With the introduction of oral anticoagulant therapy we can prevent about two-thirds of all strokes in AF. But patients with AF still have a higher mortality compared to their age and [cardiovascular risk](#) matched peers without AF, and we are not able to reduce that mortality by much even when we apply all the evidence based therapies."^{2,3}

The fourth AFNET/EHRA consensus conference was convened to

discuss how to identify the underlying main pathophysiologies of AF in individual patients so that more targeted therapies could be developed to close the mortality gap. Professor Kirchhof said: "This requires understanding the [disease mechanisms](#) and translating them into parameters we can measure in patients. This is particularly difficult for AF because the [left atrium](#) is a small part of the heart located posteriorly in the body and difficult to access."

A certain degree of [personalisation](#) is already practised in AF. Stroke risk scores based on clinically measurable risk factors aid decisions on anticoagulant therapy while the severity of AF symptoms help to determine rhythm control therapy.

The consensus paper identifies three main ways to better characterise the underlying cause of AF in order to improve treatment: the electrocardiogram (ECG); imaging, especially echocardiography and magnetic resonance imaging (MRI); and biomarkers (proteins or genes measured in blood to identify the type of AF).

A new taxonomy of AF is proposed based on its pathophysiology. Professor Kirchhof said: "The classification is imperfect because there are overlaps between categories and the majority of AF patients fall into the 'unclassified AF' group. But it illustrates that we need a better understanding of why AF develops in an individual patient before we can classify them based on biomarkers, imaging or ECG, in addition to clinical parameters, and develop better therapies."

He added: "The hope is that within the next few years we will be able to propose personalised management of AF and thereby reduce the excess mortality associated with the disease."

Professor Kirchhof continued: "There is still plenty of room to improve the management of AF even if we apply all the evidence based therapies

currently available – for example the new oral anticoagulants have improved mortality by just 5-10%. And every fourth patient with AF is admitted to hospital at least once a year due to AF, which illustrates the high morbidity and healthcare costs associated with the disease."

He concluded: "This is the first European consensus document on personalised management of AF, which is the most promising way to further improve morbidity and mortality in AF patients."

More information: 1 Personalized management of atrial fibrillation: Proceedings from the fourth Atrial Fibrillation competence NETwork/European Heart Rhythm Association consensus conference. EP Europace 2013; doi: [DOI: 10.1093/europace/eut232](https://doi.org/10.1093/europace/eut232)

2 Guidelines for the management of atrial fibrillation. European Heart Journal. 2010;31:2369–2429.

3 2012 focused update of the ESC Guidelines for the management of atrial fibrillation. European Heart Journal. 2012;33:2719–2747.

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