

First ESC recommendations for arrhythmias and chronic kidney disease published

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The first ESC recommendations for patients with cardiac arrhythmias and chronic kidney disease (CKD) are presented today¹ at EHRA EUROPACE - CARDIOSTIM 2015 and published in EP Europace.²

The paper was produced by the European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology (ESC), and is endorsed by the Heart Rhythm Society (HRS) in the US and the Asia Pacific Heart Rhythm Society (APHRS).

Professor Giuseppe Boriani, chair of the writing group, said: "CKD occurs in more than 10% of adults and has a major impact on treatment decisions in patients with arrhythmias. Choice of antiarrhythmic strategy, drugs and specifically anticoagulants, and whether or not to implant a cardiac device should take impairment in [renal function](#) into account."

"There is increasing awareness in the [cardiology](#) community that renal impairment influences how we treat patients with arrhythmias," added Professor Boriani. "The introduction of non-vitamin K oral anticoagulants (also called new oral anticoagulants or NOACs) as an alternative to warfarin brought this issue to the fore since renal function determines whether or not they can be prescribed. The ESC decided it was a good time to introduce recommendations."

Significant interactions occur between the heart and kidney, and even mild kidney disease is associated with an increased risk of

cardiovascular disease. Sudden cardiac death is the most common cause of death in dialysis patients including children, accounting for 50% of cardiac deaths and 25% of all deaths.

The paper published today was written by an international group of cardiologists specialised in arrhythmia management and nephrologists. It outlines:

- The association between CKD and hypertension, heart failure and [atrial fibrillation](#)
- How CKD affects management of patients with arrhythmias or cardiac devices
- Risk of stroke and bleeding in patients with atrial fibrillation and CKD
- How arrhythmias and cardiac devices affect management of CKD.

The authors recommendations include using estimated glomerular filtration rate (eGFR) as a more reliable method for classifying the severity of CKD than serum creatinine. Kidney function should be measured and monitored in all patients with a cardiac disease or rhythm disturbance, such as atrial fibrillation or sustained ventricular tachyarrhythmias, to detect CKD.

Doctors are urged to choose medication dosages according to the extent to which a drug is eliminated through the kidney. When renal function is markedly reduced some drugs, including NOACs, may be contraindicated.

Thromboprophylaxis in patients with atrial fibrillation and end-stage CKD is a controversial issue and the authors recommend when to use NOACs or warfarin. Professor Boriani said: "Patients with atrial

fibrillation and CKD have a greater risk of both thromboembolism and major bleeding which makes decision making particularly challenging in this setting."

Patients with advanced CKD are at higher risk of adverse outcomes associated with cardiac devices including pacemakers and defibrillators. This needs to be taken into account when conducting a risk-benefit analysis on whether or not implant a device. The risk of device infection is higher in patients with renal impairment and requires personalised decision making on where to place leads.

"Increasing specialisation in internal medicine is a positive evolution overall but there is a need for more communication between cardiologists and nephrologists to improve the care of very complex patients," said Professor Boriani. "The association between [kidney disease](#) and cardiovascular disease is growing as the population ages, leading to higher costs and a greater imperative to manage patients together."

Collaboration is also needed in research to improve the definition of risk-benefit of specific therapies; find new anticoagulants that can be used in patients with severe renal function; and create care delivery models for [patients](#) who have severely compromised renal function.

More information: 1. Professor Boriani will present the recommendations during the session "New EHRA Scientific Documents-2 on 24 June at 11:00 in the Napoli Lecture Room: See here spo.escardio.org/SessionDetail...essId=0&searchQuery=%2fdefault.aspx%3feevtid%3d1087%26days%3d%26topics%3d%26types%3d%26rooms%3d%26freetext%3dboriani%26sort%3d1%26page%3d1%26showResults%3dTrue%26nbPerPage%3d20%26WithWebcast%3d%26WithSlides%3d%26WithAbstract%3d%26WithReport%3d%26scroll%3D300%23.VXAY_c9Viko

2. Chronic kidney disease in patients with cardiac rhythm disturbances or implantable electrical devices: clinical significance and implications for decision-making. Europace. [DOI: 10.1093/europace/euv202](https://doi.org/10.1093/europace/euv202)

Provided by European Society of Cardiology

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