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## New ESC Guidelines On Acute And Chronic Heart Failure



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The European Society of Cardiology (ESC) has published guidelines for the diagnosis and treatment of acute and chronic heart failure, with around 1-2 percent of adults in developed countries having this condition, according to a presentation at the [Heart Failure 2016](#) and the 3rd European Society of Cardiology in Florence, Italy.

At 55 years of age, the lifetime risk is 33 percent for men and 28 percent for women, according to the presentation at the congress. During one year, 17 percent of hospitalised and 7 percent of stable/ambulatory heart failure patients will die, primarily from sudden death and worsening heart failure.

The new guidelines were published in *European Heart Journal* and the *European Journal of Heart Failure* to coincide with the heart failure congress, and include LCZ696 for this first time. This drug is the first in the class of angiotensin receptor neprilysin inhibitors (ARNIs) and was shown in the PARADIGM-HF trial to be superior to the angiotensin-converting enzyme inhibitor (ACEI) enalapril for reducing the risk of death and hospitalisation in patients with heart failure with reduced ejection fraction (HFrEF) who met strict inclusion and exclusion criteria.

"The issue of how to include LCZ696 in the treatment algorithm generated a lot of discussion. We recommend that the drug should replace ACEIs in patients who fit the PARADIGM-HF criteria. The Task Force agreed that more data is needed before it can be recommended in a broader group of patients," said Professor Piotr Ponikowski, Chairperson of the guidelines Task Force.

Professor Adriaan A. Voors, Task Force Co-Chairperson, added: "Used in the right patients, LCZ696 will have a positive effect on prognosis. Adoption of LCZ696 may however be a challenge because patients and doctors are usually reluctant to change a drug they have used for decades. The cost of the swap will be relatively small compared to the new cancer drugs that extend life for just a few months."

A new category of heart failure with mid-range ejection fraction (HFmrEF) has been added for patients with a left ventricular ejection fraction (LVEF) ranging from 40 to 49 percent. It sits between HFrEF, defined as LVEF less than 40 percent, and heart failure with preserved ejection fraction (HFpEF), defined as LVEF above 50 percent. Prof. Ponikowski said: "There are no evidence based treatments for patients with LVEF 40 percent or above. Many patients fall into the mid-range category and this should stimulate research into novel therapies."

Cardiac resynchronisation therapy (CRT) is now contraindicated in patients with a QRS duration less than 130 msec after the EchoCRT study found it may increase mortality in this group. This is a change from the 120 msec cut-off in the 2012 guidelines. The indications for CRT vary according to the presence or absence of left bundle branch block and QRS duration.

The concept of 'time is muscle' in acute heart failure, adopted from acute coronary syndrome, is included in the guidelines for the first time and demands urgent diagnosis and treatment.

"Acute heart failure is a life-threatening condition and earlier appropriate treatment may prevent organ damage," said Professor Voors.

A new algorithm is introduced for the diagnosis of heart failure in the non-acute setting and is based on the evaluation of heart failure probability. "This algorithm will be more useful in clinical practice for general practitioners and other non-cardiologists faced with patients who may have heart failure," said Prof. Ponikowski. "It clearly defines when heart failure can be ruled out and when further tests are needed."

Adaptive servo-ventilation (ASV) is not recommended in patients with HFrEF and central sleep apnoea after mortality increased in the SERVE-HF trial. Added Ponikowski: "We took for granted that ASV benefitted these patients. The trial was a big surprise and ASV is now contraindicated in this situation."

Novel recommendations to prevent or delay the onset of heart failure and prolong life include: treatment of hypertension, statins for patients with or at high risk of coronary artery disease, and empagliflozin (a sodium-glucose cotransporter 2, or SGLT2, inhibitor) for patients with type 2 diabetes.

Prof. Voors explained: "We have better ways to treat comorbidities that increase the risk of heart failure. Several drugs for diabetes were associated with a higher risk of deterioration of heart failure but now we have an SGLT2 inhibitor that reduces the risk of heart failure hospitalisations in high risk patients, although studies with SGLT2 inhibitors in patients with established heart failure are still lacking."

Prof. Ponikowski concluded: "Heart failure is becoming a preventable and treatable disease. Implementing the guidelines published today will give patients the best chance of a positive outcome."

## References

2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. *European Heart Journal*. [doi:10.1093/eurheartj/ehw128](https://doi.org/10.1093/eurheartj/ehw128)

Recommendations on pre-hospital and hospital management of acute heart failure: a consensus paper from the Heart Failure Association of the European Society of Cardiology, the European Society of Emergency Medicine and the Society of Academic Emergency Medicine. *European Heart Journal*. 2015; doi:[10.1093/eurheartj/ehv066](https://doi.org/10.1093/eurheartj/ehv066)

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