

European Society of Cardiology Congress 2021 Highlights

In the current review we present the highlights of European Society of Cardiology Virtual Congress 2021. This year 4 updates guidelines were presented. We analyzed the results of 20 international clinical trials that investigated effectiveness and safety of pharmacologic agents and medical devices in patients with various cardiovascular disease.

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European Society of Cardiology (ESC) Virtual Congress was held on August 27–30, 2021. Over 39 thousand ESC members from 169 countries took part in the Congress.

4 new clinical practice guidelines were presented:

- CVD Prevention
- Cardiac Pacing
- Valvular Heart Disease
- Heart Failure

Full texts are available at [www.escardio.org/Clinical Practice Guidelines](http://www.escardio.org/Clinical-Practice-Guidelines).

Hot Line sessions, where the primary endpoints of novel clinical trials are presented, were, as always, the most interesting parts of the Congress. This year, 19 new randomized studies were presented over 4 days.

GUIDE-HF: Haemodynamic-guided management of heart failure did not result in a lower composite endpoint rate of mortality and total heart failure events compared with the control group at 12 months irrespective of ejection fraction. COVID-19 pandemic could've affected the results.

EMPEROR-Preserved Empagliflozin reduced the combined risk of cardiovascular death or hospitalization for heart failure in patients with heart failure and a preserved ejection fraction, regardless of the pres-

ence or absence of diabetes. These results make empagliflozin the first agent that improves the prognosis in patients with HF with preserved EF.

EMPEROR-Pooled. Pooled analysis of two randomised trials has demonstrated that empagliflozin reduced the risk of heart failure hospitalisation by about 30% in patients with heart failure with a reduced and preserved ejection fraction. The magnitude of the effect on heart failure hospitalisations was similar across a broad range of ejection fractions below 65%.

SMART-MI-ICMs. Implantable cardiac monitors in high-risk, postinfarction patients with cardiac autonomic dysfunction and moderately reduced left ventricular ejection fraction remote monitoring of implantable cardiac monitors (ICM) was effective in early detection atrial fibrillation, higher degree atrio-ventricular block, fast non-sustained ventricular tachycardia and sustained ventricular tachycardia/ventricular fibrillation.

MASTER-DAPT. Among patients with high bleeding risk who underwent percutaneous coronary intervention (PCI) with a biodegradable-polymer sirolimus-eluting stent abbreviated DAPT was noninferior to standard DAPT regarding net adverse clinical events and major adverse cardiac or cerebral events.

Abbreviated DAPT was superior to standard antiplatelet therapy regarding major or clinically relevant nonmajor bleeding.

ENVISAGE-TAVI AF. Edoxaban is noninferior to vitamin K antagonists (VKAs) for efficacy (the primary efficacy outcome, all-cause mortality, myocardial infarction, ischemic stroke, systemic thromboembolic event, valve thrombosis, or major bleeding) but did not meet criteria for noninferiority for bleeding (bleeding events, primarily gastrointestinal bleeding events, were higher). among patients undergoing transcatheter aortic valve replacement (TAVR) with AF.

FIGARO-DKD. Finerenone, a selective nonsteroidal mineralocorticoid receptor antagonist, has favorable effects on cardiorenal outcomes (the primary outcome was a composite of death from cardiovascular causes, nonfatal myocardial infarction, nonfatal stroke, or hospitalization for heart failure) in patients with stage 1–4 chronic kidney disease (CKD) with moderate to severe albuminuria. These effects were primarily due to reduced risk of hospitalization for HF.

FIDELITY. FIDELITY was a meta-analysis combining individual patient data from FIDELIO-DKD and FIGARO-DKD. The FIDELITY analysis demonstrates that finerenone reduced the risk of cardiovascular and kidney outcomes compared with placebo across the spectrum of chronic kidney disease in patients with type 2 diabetes.

APAF-CRT. Atrioventricular junction ablation plus cardiac resynchronization therapy was superior to pharmacological therapy in reducing mortality in patients with permanent atrial fibrillation and narrow QRS (≤ 110 ms) who were hospitalized for HF, irrespective of their baseline EF.

DECAAF II. Image-guided fibrosis ablation in addition to pulmonary vein isolation (PVI) does not improve ablation success rates compared to PVI alone in patients with persistent atrial fibrillation (AF). There was a significant benefit of substrate ablation in patients with stage I or II fibrosis at baseline but no benefit of image-guided fibrosis ablation on atrial arrhythmia recurrence in patients with stage III or IV stage fibrosis at baseline.

TOMAHAWK. Early coronary angiography in out-of-hospital cardiac arrest (OHCA) patients without ST-segment elevation is not superior to a delayed/selective approach for all-cause mortality at 30 days.

RIPCORN 2. Adding systematic fractional flow reserve (FFR) assessment to coronary angiography did not reduce costs, improve quality of life, or reduce major adverse cardiac events or revascularization

rates vs. angiography alone in patients undergoing diagnostic coronary angiography for stable angina or non-STEMI. Additional assessment increased the risks due to longer procedures, more contrast and radiation use.

ACST-2. Patients with severe unilateral or bilateral carotid artery stenosis underwent carotid artery stenting (CAS) or carotid endarterectomy (CEA). Patients were followed up for a mean 5 years. The risks of non-procedural stroke, lethal stroke or disabling stroke were similarly uncommon after competent CAS and CEA.

LOOP. In those patients undergoing electrocardiogram (ECG) monitoring using an implantable loop recorder atrial fibrillation was 3-times more frequently detected and treated with anticoagulation. However, it didn't reduce the risk of stroke or systemic arterial embolism in patients at risk.

SSaS. Replacing salt with salt substitute (about 75% sodium chloride and 25% potassium chloride) lowers the risk of stroke in people over 60 years old in 600 villages in rural areas of five provinces in China with high blood pressure or prior stroke.

IAMI. Influenza vaccination reduces the risk of all-cause death, myocardial infarction, or stent thrombosis at 12 months in hospitalised patients with myocardial infarction or high-risk coronary disease.

PRONOUNCE. Among patients with prostate cancer and concomitant atherosclerotic cardiovascular disease taking GnRH antagonist degarelix or the GnRH agonist leuprolidethere there was no difference in the time to first occurrence of a major adverse cardiovascular event (MACE), defined as a composite of death, myocardial infarction, or stroke through 12 months.

STEP. Aggressive blood pressure treatment (SBP target below 130 mmHg but no lower than 110 mmHg) in older hypertensive patients lowers the incidence of cardiovascular events (acute coronary syndrome, stroke, acute decompensated heart failure, coronary revascularisation, atrial fibrillation, or death from cardiovascular causes) compared to standard therapy (SBP target 130–150 mmHg) without increasing adverse outcomes. Rates of serious adverse events and renal outcomes did not differ between the two groups except hypotension.

AMULET IDE. The Amplatzer Amulet Left Atrial Appendage Occluder has shown superior left atrial appendage (LAA) closure and noninferior safety (procedure-related complications, all-cause death, or major bleeding through 12 months) and effectiveness (reduced risk of ischaemic stroke or systemic embo-

lism through 18 months) in patients with non-valvular atrial fibrillation (NVAf) compared to the Watchman device.

STOPDAPT-2. Among patients with ACS undergoing percutaneous coronary intervention (PCI) the use of one month of dual antiplatelet therapy (DAPT) and subsequent clopidogrel there was a trend toward an increase in cardiovascular events despite a reduction in major bleeding events compared with stan-

dard 12 months of DAPT with aspirin and clopidogrel. One-month DAPT and subsequent clopidogrel monotherapy failed to achieve noninferiority for net clinical benefit compared with standard 12-month DAPT after ACS.

The next ESC congress will be held in Barcelona, Spain on August 26–29, 2022.

All references can be found at <https://www.escardio.org>.