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ESC Guidelines 2022 – a Pragmatic Tool for the Practicing Cardiologist?

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Four new guidelines have been launched during the 2022 congress of the European Society of Cardiology (ESC), all of them being extremely complex and providing unique interdisciplinary perspectives on the management of cardiovascular diseases in different clinical scenarios.

For instance, the cardio-oncology guideline is the first ESC guideline dedicated to cardio-oncology, being developed together with the European Society of Hematology, European Society of Radiotherapy, and the International Society of Cardio-Oncology.[1] This guideline includes a large number of recommendations on the diagnosis, treatment, and prevention of cardiovascular toxicity associated with main oncologic treatments, at the same time providing clear recommendations on the management of cardiovascular diseases caused by cancer, directly or indirectly. The guideline underlines the need for a complex interdisciplinary approach and communication between different specialties (cardiologist, oncologist, hematologist) for the optimum management of the large variety of complex conditions that may occur in a patient with cancer.

The guideline includes a very pragmatic algorithm for assessment of the cardiovascular risk of patients scheduled for cytostatic treatment, the recommendation being adapted to each class of drugs used. At the same time, a new international definition of cancer treatment-related cardiovascular toxicity is provided, in which cardiovascular toxicity is classified in four severity groups, according to ECG, physical and metabolic status, and cardiovascular history. An ECG is recommended to all cancer patients, while a cardiologist consultation is recommended in all those with ECG, both indications being class I. It is also recommended that all patients with low risk for cardiovascular toxicity should be referred for immediate initiation of anti-cancer therapy.[1]

Echocardiography and biomarker determination have a central role in the assessment of cardiovascular risk. It is recommended that echocardiography and biomarkers to be performed repeatedly at different time intervals according to the specifics of the condition and treatment. Echocardiography remains the first-line option to assess ventricular function, while 3D echocardiography is the method of choice to quantify left ventricular ejection fraction.[1]

Cancer patients who present with neoplasm and Takotsubo syndrome should undergo a computed tomography (CT) angiography examination to exclude an acute coronary syndrome, and a cardiac magnetic resonance imaging (MRI) to exclude myocarditis or myocardial infarction, both indications being class I.

Another group of recommendations refer to anticoagulant treatment in cancer patients with atrial fibrillation or venous thromboembolism, the guideline indicating continuation of non-vitamin K antagonist oral anticoagulants (NOAC) (apixaban, rivaroxaban or edoxaban) in all patients with venous thromboembolism (indication class I).

Among the new recommendations mentioned in the new guideline for the management of patients with ventricular arrythmia and prevention of sudden cardiac death, a large number refer to the installation of external defibrillators in public spaces, which is hoped to reduce the fatality rate of sudden cardiac death occurring out of hospital.[2] Another new recommendation is related to the implantation of an implantable cardioverter-defibrillator (ICD) in all patients with coronary artery disease and a left ventricular ejection fraction below 30%, despite an optimum management of minimum three months.

At the same time, several recommendations have been upgraded in comparison with the previous edition of the guideline. Programmed electrical stimulation in patients with prior ST-elevation myocardial infarction (STEMI), as well as the implantation of an ICD in symptomatic patients with long QT became a class I indication. However, several aspects remain unclear, such as the role of cardiac MRI in the stratification of the risk for sudden cardiac death in patients with chronic coronary syndrome, or how can we identify patients with chronic coronary syndrome and extremely low ejection fraction, at risk for sudden cardiac death.

The new guideline for pulmonary hypertension (PH) simplifies the algorithm of diagnosis of pulmonary hypertension in a three-step approach, from PH suspicion to echo-based detection and confirmation using cardiac MRI.[3] At the same time, the new guideline introduces new criteria based on MRI and echo for the confirmation of PH diagnosis. The guideline defines the criteria for PH centers, which are extremely complex and should have appropriate infrastructure, human resources, and experience. CT coronary angiography remains a class I indication to establish the etiology of chronic thromboembolic pulmonary hypertension (CTEPH). At the same time, interventional treatment using pulmonary balloon angioplasty for CTPEH is upgraded from class IIb to class I in the new guideline.

The fourth guideline launched by the ESC in 2022 regards the cardiovascular assessment and management of patients undergoing non-cardiac surgery, which provides extremely useful answers for clinicians.

One of the highest impact recommendations in these guidelines is the indication for coronary CT angiography to exclude coronary artery disease in all patients with low-intermediate probability of coronary artery disease (class IIa indication).[4] A frequent situation is the one related to discontinuation of antiplatelet treatment prior to a non-cardiac intervention, which can lead to stent obstruction. In these cases, it is recommended to postpone elective interventions to at least 6 months after the elective revascularization or up to 12 months post-acute myocardial infarction. When discontinuation of antiplatelet treatment is mandatory, the guideline recommends that this should be done with 3–5 days prior to intervention for ticagrelor, 5 days prior to intervention for clopidogrel, and 7 days for prasugrel. As for the anticoagulant treatment, immediate discontinuation of NOAC is recommended in the case of urgent surgery, which is recommended to be performed at least 12–24 hours after the last NOAC administration.[4]

In the 2022 edition of this guideline, low-risk patients scheduled for surgery with a low-intermediate risk do not require routine preoperatory ECG or biomarker determination, but a preoperatory ECG is recommended in all cases with known coronary artery disease, cardiovascular risk factors, or symptoms suggestive for coronary artery disease.

CONFLICT OF INTEREST

Nothing to declare.

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