

## Vaccination against SARS-CoV-2 in specific groups of patients with rare cardiac diseases



The board of the European Reference Network for rare, low prevalence and complex diseases of the heart (ERN GUARD-Heart) advises all adult patients with a hereditary heart disease to get vaccinated against the corona virus (the SARS-CoV-2).

The board of the ERN GUARD-Heart recommends a priority for vaccination against the SARS-CoV-2 for the following patient groups:

- Patients with the Brugada syndrome (including patients diagnosed by a positive drug challenge test without additional diagnostic criteria).
- Patients who carry a (probable) pathogenic variant in the cardiac sodium channel gene *SCN5A*.
- Patients with primary arrhythmia syndrome and a history of symptomatic arrhythmias.
- Patient with cardiomyopathy (or congenital heart disease) and risk factors (reduced left ventricular systolic function, heart failure N.Y.H.A. III/IV or pulmonary hypertension).

The board of the ERN GUARD-Heart recommends patients with the Brugada syndrome and a spontaneous type 1 ECG and patients with a (probable) pathogenic variant in *SCN5A* to take paracetamol 1 hour before administration of the vaccine (1000 mg in adults; adjusted dosage according to prescription in children) and continue using paracetamol in a total of 3 days after vaccination (1000 mg 3 times a day in adults; adjusted dosage according to prescription in children).

The board of the ERN GUARD-Heart recommends patients with primary arrhythmia syndrome and a history of arrhythmias and patient with cardiomyopathy and risk factors (as described above) to measure their temperature regularly and take paracetamol in case of fever ( $>38.5^{\circ}\text{C}$ ).

If, despite the measures described above, fever ( $>38.5^{\circ}\text{C}$ ) occurs, patients are recommended to contact and/or follow the recommendations of their treating physician.

Finally, it must be noted that, due to lack of data in extremely rare inheritable cardiac diseases, it is yet unknown whether unanticipated and undesired reactions may occur due to vaccination (for example an abnormal immune response in patients with the Timothy syndrome). However, although additional caution is required, the board of the ERN GUARD-Heart advises that these groups should not be routinely withheld from vaccination against the SARS-CoV-2.