

# Instructions for doctor to analyse the dispersive indices of system for screening of heart HeartVUE (HV)

## Analysis of the indices during the initial examination

The recommended solution is at the intersection of rows and columns the table below.

If the selection of decision is ambiguous, version with the highest number of icons ♥ is taken as the final.

Detailing indices	Main index MYOCARDIUM			
	0%...14% NORM	15%...18% BORDERLINE STATE	19%...23% SIGNIFICANT DEVIATION	24%...100% STRONG DEVIATION
<b>G1</b> or <b>G2</b> is above <b>NORM</b> and index of electrical instability is ■ green color	Variant of <b>NORM</b>	Control the dynamics using HV ♥	Consultation of cardiologist is expected ♥♥	Necessary to consult a cardiologist ♥♥♥
<b>G1</b> or <b>G2</b> is above <b>NORM</b> and index of electrical instability is ■ yellow color or ■ red	Control the dynamics using HV ♥	Consultation of cardiologist is expected ♥♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥
at least one the indices <b>G3</b> , <b>G4</b> , <b>G7</b> is above <b>NORM</b>	Variant of <b>NORM</b>	Consultation of cardiologist is expected ♥♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥
<b>G3</b> or <b>G4</b> and at the same time <b>G7</b> are above <b>NORM</b>	Control the dynamics using HV ♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥	Cardiologic examination is necessary ♥♥♥♥
<b>G5</b> or <b>G6</b> is above <b>NORM</b> and, at the same time <b>G3</b> and <b>G4</b> and <b>G7</b> are set in <b>NORM</b>	Control the dynamics using HV ♥	Control the dynamics using HV ♥	Consultation of cardiologist is expected ♥♥	Necessary to consult a cardiologist ♥♥♥
<b>G5</b> or <b>G6</b> is above <b>NORM</b> and at least one the indices <b>G3</b> , <b>G4</b> , <b>G7</b> , <b>G8</b> , <b>G9</b> is above <b>NORM</b>	Control the dynamics using HV ♥	Control the dynamics using HV ♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥
<b>G9</b> is above <b>NORM</b> and in successive surveys vibrations of <b>G9</b> exceed <u>4 units</u>	Control the dynamics using HV ♥	Consultation of cardiologist is expected ♥♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥
<b>G9</b> is <u>more than 9</u> and patient's age is <u>less than 18 years</u>	Control the dynamics using HV ♥	Control the dynamics using HV ♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥
<b>G9</b> is <u>more than 9</u> and patient's age is <u>more than 18 years</u>	Control the dynamics using HV ♥	Necessary to consult a cardiologist ♥♥♥	Cardiologic examination is necessary ♥♥♥♥	Cardiologic examination is necessary ♥♥♥♥

## Gradation NORM– DEVIATION for detailing indices

Detailing indices	NORM	BORDERLINE STATE	STRONG DEVIATION
<b>G1.</b> Right atrium depolarization	0, S, L, 1...5	6...11	12...17
<b>G2.</b> Left atrium depolarization	0, S, L, 1...3	4...6	7...10
<i>Deviation of G1 or G2 from NORM is registered when exist pathologies of myocardium of atrium of any etiology.</i>			
<b>G3.</b> Right ventricle depolarization	0, S, L	1...6	7...16
<b>G4.</b> Left ventricle depolarization	0, S, L	1...6	7...22
<i>Deviation of G3 or G4 from NORM is registered when exist ischemic changes of myocardium, as a consequence of myocarditis, cardiomyopathy, congenital abnormalities and other diseases leading to the morphological and electrical heterogeneity of the myocardium.</i>			
<b>G5.</b> Right ventricle repolarization	0, S, L	1	2, 3
<b>G6.</b> Left ventricle repolarization	0, S, L	1...6	7...14
<i>Deviation of G5 or G6 from the NORM is registered if exist the metabolic changes that include electrolyte imbalance, myocardial toxicity, hypoxia, hormonal changes, and some forms of cardiomyopathy. When the G5, G6 increases simultaneously with a set of G3, G4, G7 abnormal ventricular repolarization changes may appear.</i>			
<b>G7.</b> Symmetry of ventricular depolarization	0, S, L	1...3	4...21
<i>Deviation G7 from the NORM is registered if exist myocardial hypoxia, transient or permanent, as the indicator of ischemia. It may also be due to congenital anomalies (defects). Small deviations of index G7 of children can be an option of acceptable functional abnormalities.</i>			
<b>G8.</b> Intraventricular heart blocks, indicator of the symmetry of the depolarization	0, S, L	–	1, 2
<b>G9.</b> Compensatory response of myocardium of ventricles	0, S, L, 1...3	4...6	7...21
<i>Stable high values of G9 more than 9 of adult patients indicate about developing or existing ventricular hypertrophy, and significant changes of G9 in successive examinations is a sign of severe compensatory response of ventricular myocardium. Deviation of G9 from NORM is also registered when exist certain kinds of cardiomyopathies, compensatory sympathetic or neurohumoral influences. Athletes often have deviations of G9 during intense training, as well as children and adolescents. For children and adolescents isolated (that is without G3, G4 and G7) increase of G9 can reflect natural adaptation of myocardium to age-related physiological features. In this case more frequent repeated examinations appropriate.</i>			

## Control of dynamics in repeated examinations

1. Evaluate color dynamics of portraits. Mark out the examinations with sharp changes of color for following analysis of quantitative meanings of dispersion indices.
2. Evaluate dynamics of deviations in detailing indices. If on dedicated fragments exists increase of deviations of indices **G3** or **G4** or **G7**- it is sign of pathology. If at the same time in successive examinations significant variations of **G9** (more than 4 units) are observed, it is necessary to analyse the course of disease or try to reveal individual factors of risk. If indices **G3**, **G4** and **G7** have positive dynamics, but other indices have periodic changes, reasons of extracardiac origin are possible.
3. If changes exist only in indices **G5** or **G6** or **G9** and index **MYOCARD** persistently increases **consultation of cardiologist for exclusion of pathology of myocardium is expedient**. In the case of absence of deviations in **G3**, **G4** and **G7** one may do only frequent examinations for accurate definition of dynamics.