

Използвана литература:

1. Баевский РМ Анализ вариабельности сердечного ритма: история и философия, теория и практика. Клиническая информатика и телемедицина 2004 №1. – С.. 54-64
2. Баевский РМ, Берсенева АП Оценка адаптационных возможностей организма и риск развития заболеваний. Медицина, 1997-236
3. Миронова ТФ, Миронов ВА Вариабельностц сердечного ритма при ишемической болезни сердца . 2-е изд., испр. и доп. – Челябинск: Рекпол, 2008 173 с.
4. Миронова Т. и съавт. Периоперационная ритмография высокого разрешения в кардиохирургии. Мед. Науки 2013,1 doi:10.17513/sprno.2012.1
5. Михайлов ВМ Вариабельность ритма сердца: опыт практического применения метода /В.М. Михайлов – Иваново: Изд-во Ивановской гос. мед. акад., 2002.-290с.
6. Ноздрачев Д Физиология автономной (вегетативной) нервной системы/А. Д. Ноздрачев//Физиология человека: в 2-ъ т./Под ред. В.М. Покровского, Г.Ф. Коротко – М., 1997. – Т.1. -206-241
7. Airaksinen K, Juhani E, Markku J. Heart rate after coronary artery bypass grafting. Am. J. Cardiol. 1987;60:1395-7.
8. Akselrod, S. Components of heart rate variability. Heart rate variability. New York: Armonk, 1995, 146-164.
9. Al-Ani, M; Forcins, AS; Townend, JN; Coote, JH. Respiratory sinus arrhythmia and central respiratory drive in humans. Clin Sci, 1996, 90, 235-341.
10. Anrep GV; Pascual W; Rossler R. Respiratory variation of the heart rate. The reflex mechanism of the respiratory arrhythmia. Biol Sci, 1936, 119, 191-217.
11. Bacharova L, Baum OV, Muromtseva GA, et al. The relation between QRS amplitude and left ventricular mass in patients with hypertension identified at screening. Anatol J Cardiol, 2007;S1:153-8.
12. Batchvarov V, Christov I, Bortolan G, Behr E. Principal component analysis of the QRS complex during diagnostic ajmaline test for suspected Brugada syndrome. Comp Cardiol. 2010;37:501-4
13. Batchvarov VN, Christov II, Bortolan G, Govindan M, Behr ER. Automatic assessment of right ventricular repolarisation heterogeneity during diagnostic ajmaline test for suspected Brugada syndrome. Comput Cardiol. 2009;36:297-300.
14. Batchvarov VN, Bortolan G, Christov II. Effect of heart rate and body position on the complexity of the QRS and T wave in healthy subjects. Comp Cardiol. 2008;35:225-8.

15. Batchvarov VN, Christov II, Bortolan G et al. Post-extrasystolic changes of the vectorcardiographic T loop in healthy subjects. *Comp Card.* 2007;34:451-4.
16. Batchvarov V, Behr, E, Hnatkova K, Malik M. Irregular ST-T Wave alternans with QT prolongation during ajmaline test for suspected Brugada syndrome. *Heart Rhythm.* 2005;5:S50, (abstract).
17. Battler A, Froelicher V, Slutsky R, Ashburn W. Relationship of QRS amplitude changes during exercise to left ventricular function and volumes and the diagnosis of coronary artery disease. *Circ.* 1979;60:1004-12.
18. Bayevskiy R, Ivanov G, Chireikin L et al. Analysis of HRV with the use of various ECG systems. 2002, http://vestar.ru/article_print.jsp?id=1267
19. Bauernschmitt R, Malberg H, Wessel N, Kopp B, Schirmbeck EU, Lange R: Impairment of cardiovascular autonomic control in patients early after cardiac surgery. *Eur J Cardiothorac Surg* 2004, 25:320-326.
20. Bosner MS, Kleiger RE Heart rate variability and risk stratification after myocardial infarction / Heart rater variability /M. Malik, A.J. Camm – New York, 1995. – 1724-1737
21. Bellwon J, Siebert J, Rodowski J. Heart rate power analysis in patient before and 6 weeks after coronary artery bypass grafting. *J. Clin. Sci (Colch).* 1996;91Suppl.:19-21.
22. Berman JL, Wynne J, Cohn PF. Multiple-lead QRS changes with exercise testing. Diagnostic value and hemodynamic implications *Circ.* 1980;61:53-61.
23. Bigger JT, Jr., Fleiss JL, Steinman RC, Rolnitzky LM, Schneider WJ & Stein PK (1995) RR variability in healthy, middle-aged persons compared with patients with chronic coronary heart disease or recent acute myocardial infarction. *Circulation* 91(7): 1936–42.
24. Boineau JP; Cox JL Slow ventricular activation: A source of re-entrant premature ventricular contracctions. *Circulation* 1973 Vol.48(4) 702-713
25. Bloomfield DM, Steinman RC, Namerow PB, et al. Microvolt T-wave alternans distinguishes between patients likely and patients not likely to benefit from implanted cardiac defibrillator therapy. A solution to the multicenter automatic defibrillator implantation trial (MADIT) II conundrum. *Circ.* 2004;110:1885-9.
26. Boldueva SA, Burak TYa, Sukhov VK et al. Efect of coronary angioplasty ot the QT interval dispersion in the patients with coronary artery disease, *Newsletter of arrhythmias* 23/2001; 40-42
27. Bonaduce D. Independent and incremental prognostic value of heart rate variability in patients with chronic heart failure. *Am Heart J.* 1999;138:273-84

28. Bortolan G, Christov I. Noise processing in exercise ECG stress test for the analysis and the clinical characterization of QRS and T wave alternans. *Biomed Sign Proc & Control* 2015;18:378-85.
29. Bortolan G, Christov I. T-wave alternans detection by a combined method of principal component analysis and T-wave amplitude. *Phys Meas.* 2012;33:333-42.
30. Bortolan G, Christov I, Simova I, Dimitrov N. Clinical characterization of the QRS complex and T wave heterogeneity during stress test ECG. *Proceedings of Europ Med Phys and Eng Conf.* Sofia, 18-20 October, 2012:76-84,
31. Bortolan G, Bressan M, Christov I. Review on the diagnostic potentials of the T-loop morphology in VCG. *Bioautomation.* 2009;13(4):55-71.
32. Bortolan G, Christov II, Batchvarov VN, Behr ER. QRS&T wave alternans and beat-to-beat ventricular repolarization variability assessed from 12-lead Holters in patients with suspected Brugada syndrome. *Comp Cardiol.* 2009;36:305-8
33. Bortolan G, Bressan M, Golferini F. QT dispersion in the elderly. The ILSA study. *Aging Clin Experim Res.* 2004;16(5):342-8.
34. Bortolan G, Bressan M, Christov I. Gender and age influences in T-Loop morphology. *Comp Card.* 2003;30:513-6.
35. Bortolan G, Bressan M, Christov I. Longitudinal modifications of the T-loop morphology. *Comp Card.* 2002;29:685-8.
36. Bortolan G, Christov I. Myocardial infarction and ischemia characterization from T-loop morphology in VCG. *Comp Card.* 2001;28: 633-6.
37. Bremilla-Perrot B. et al. Alteration of sinus variability after cardiac surgery. Ann. Cardiol. Angeiol. (Paris) 1998. – Vol.47, N2. 194-154
38. Breslow MJ, Miller CF, Parker CD, et al. Changes in T-wave morphology following anesthesia and surgery: a common recovery-room phenomenon. *Anastesiology.* 1986;64(3):398-402.
39. Bronner F, Douchet MP, Quiring E et al. Variability of heart rate after heart surgery under extracorporeal circulation: aortocoronary bypass or aortic valve replacement. [In French]. *Ann Cardiol Angeiol (Paris)* 1998, 47:549-554.
40. Buchwald H, Avidor Y, Braunwald E Bariatric surgery: A systemic review and metaanalysis. *J of the Am Med Assoc* 2004 Vol. 292(4) 1742-1737
41. Casale PN, Devereux RB, Alonso DR, Campo E, Kligfield P. Improved sex-specific criteria of left ventricular hypertrophy for clinical and computer interpretation of electrocardiograms: validation with autopsy findings. *Circul.* 1987;75(3):565-72.

42. Camm A.J. , Frei L Risk stratification following myocardial infarction: Heart rate variability and other risk factors / Heart rater variability /M. Malik, A.J. Camm – New York, 1995. – 369-392
43. Cevese A, Grasso R; Poltronieri, R Schena, F. Vascular resistance and arterial pressure low-frequency oscillation in the anesthetized dog. Am J Physiol, 1995, 268, 7-16.
44. Chaitman B, Rosen A, Williams D, Bourassa M et al. Myocardial Infarction and Cardiac Mortality in the Bypass Angioplasty Revascularization Investigation (BARI) Randomized Trial Circulation. 1997; 96: 2162-2170
45. Chess GF; Tam RM; Carlaresu FR. Influence of cardiac neural inputs on rhythmic variation of heart period in cat. Am J Physiol, 1975, 228, 775-780.
46. Christov I, Bortolan G, Simova I. Load dependent changes of cardiac depolarization and repolarization during exercise ECG test. Comp Cardiol. 2013;40:547-50.
47. Christov I, Neycheva T, Schmid R, Stoyanov T, Abächerli R. Pseudo real-time low-pass filter in ECG, self-adjustable to the frequency spectra of the waves. Med & Biol Eng & Comput, 2017, 10 pages,
48. Christov I, Bortolan G, Simova I, Katova T. T wave and QRS complex alternans during stress ECG testing according to the presence or absence of diabetes mellitus. J Endocrin Metabolism 2012;2(1):32-8.
49. Christov I, Bortolan G, Simova I, Katova T. Influence of diabetes mellitus on T wave and QRS complex alternans during stress ECG testing. Comp Cardiol 2011;38:49-52.
50. Christov I, Bortolan G, Simova I, Katova T. T wave and QRS complex alternans during standard diagnostic stress ECG test. Comp Cardiol. 2010;37:1039-42.
51. Christov I, Simova I. Q-onset and T-end delineation: Assessment of the performance of an automated method with the use of a reference database. Physiol Meas. 2007; 28:213-21.
52. Christov I. Assessment of the performance of the adaptive thresholding algorithm for QRS detection with the use of AHA database. Bioautomation. 2007;6:27-37,
53. Christov II, Simova II Fully Automated Method for QT Interval Measurement in ECG, IEEE Comp Card. 2006;33:321-4.
54. Christov I, Daskalov IK. Filtering of electromyogram artifacts from the electrocardiogram. Med. Eng. & Phys. 1999;21:731-6.
55. Corti R; Binggeli C; Sudano I et al. The beauty and the Best: Aspects of the Autonomic Nervous System. News Physiol. Sci., 2000, 15, 125-129.

56. Coustet B, Lhuissier FJ, Vincent R, Richalet J-P. Electrocardiographic changes during exercise in acute hypoxia and susceptibility to severe high-altitude illnesses. *Circul.* 2015;131:786-94
57. Dao T, Youssef R, Gopaldas R et al. Autonomic cardiovascular dysregulation as a potential mechanism under-lying depression and coronary artery bypass grafting surgery outcomes. *J. Cardiothorac. Surg.* 2010;13:36.
58. Das MK, El Masry H. Fragmented QRS and other depolarization abnormalities as a predictor of mortality and sudden cardiac death. *Curr Opin Cardiol* 2010;25(1):59-64.
59. Daskalov IK, Dotsinsky IA, Christov II. Developments in ECG acquisition preprocessing parameter measurement and recording. *IEEE Eng. in Med. & Biol.* 1998;17:50-8.
60. De Boer, RV; Karemker, JM; Time delays in the human baroreceptor reflex. *J Auton Nerv Syst*, 1983, 9, 399-409.
61. DeBruyne MC, Hoes AW, Kors JA, et al. QTc dispersion predicts cardiac mortality in the elderly: the Rotterdam Study. *Circulation* 1998;97(5):467-472.
62. Demirel S, Akkaya V, Oflaz H et al. Heart rate variability after coronary artery bypass graft surgery: a prospective 3-year follow-up study. *Ann Noninvasive Electr cardioiol* 2002, 7:247-250.
63. Farrell TG, Paul V, Cripps et al. Baroreflex sensitivity and electrophysiological correlates in patients after acute myocardial infarction. *Circulation* 1991, Vol. 83(3); 945-952
64. Fihn S, Gardin J, Abrams J, Berra K et al. 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease Am Coll Cardiol. 2012;60(24):e44-e164
65. Fox K, Ford I, Steg G. Heart rate as a prognostic risk factor in patients with coronary artery disease and left-ventricular systolic dysfunction (BEAUTIFUL): a subgroup analysis of a randomised controlled trial. *Lancet* 2008;372:817-21.
66. Gentile R, Vitarelli A, Schillaci O et al. Diagnostic accuracy and prognostic implications of stress testing for coronary artery disease in the elderly. *Ital Heart J.* 2001 Jul;2(7):539-45.
67. Ghaffari S, Kazemi B & Aliakbarzadeh P (2011) Abnormal heart rate recovery after exercise predicts coronary artery disease severity. *Cardiol J* 18(1): 47–54.
68. Gospodinova E, Gospodinov M, Dey N, Domuschiev I, Ashour A, Sifaki-Pistolla D. Analysis of heart rate variability by applying nonlinear methods with different approaches for graphical representation of results. *Int J Advanced Comp Sci and Applic.* 2015;6(8):38-45.

69. Guzzetti S, Spyrou N, Rosen SD et al. Low frequency spectral component of heart rate variability and myocardial beta-adrenoreceptor density after acute myocardial infarction. Basic research in cardiology – 2002 – Vol.97(1) 97-104
70. Habib RH, Dimitrova KR, Badour SA, Yammine MB et al. Greater Benefit in Long-Term Outcomes With Multiple Arterial Bypass Grafting J Am Coll Cardiol. 2015;66(13):1417-1427
71. Hayano J, Sakakibara Y, Yamada M, Ohte N, Fujinami T, Yokoyama K, Watanabe Y & Takata K (1990) Decreased magnitude of heart rate spectral components in coronary artery disease. Its relation to angiographic severity. Circulation 81(4): 1217–24.
72. Hogue C, Domitrovich P, Stein P et al. RR interval dynamics before atrial fibrillation in patients after coronary artery bypass graft surgery. Circulation 1998 Vol. 98, N5 429-434
73. Hogue CW, Stein PK, Apostolidou I, et al. Alterations in temporal patterns of heart rate variability after coronary artery bypass graft surgery. Anesthesiology, 1994;81:1356-64.
74. Huikuri H, Mäkipallio TH (2001) Heart rate variability in ischemic heart disease. Auton Neurosci 90(1–2): 95–101.
75. Huikuri HV, Niemelä MJ, Ojala S, Rantala A, Ikäheimo MJ & Airaksinen KE (1994) Circadian rhythms of frequency domain measures of heart rate variability in healthy subjects and patients with coronary artery disease. Effects of arousal and upright posture. Circulation 90(1): 121–6.
76. Iellamo F, Pigozzi F, Spataro A, Lucini D, Pagani M. T-wave and heart rate variability changes to assess training in world-class athletes. Med Sci Sports Exerc. 2004;36:1342-6.
77. Ikeda T, Sakurada H, Sakabe K, Sakata T, Takami M, Tezuka N, Nakae T, Noro M, Enjoji Y, Tejima T, Sugi K, Yamaguchi T. Assessment of noninvasive markers in identifying patients at risk in the Brugada syndrome: Insight into risk stratification. J Am Coll Cardiol 2001; 37:1628-34
78. Iuliano S, Fisher S, Karasik P, et al. QRS duration and mortality in patients with congestive heart failure. Am Heart J. 2002;143(6):1085-91
79. Janssen BJA; Oosting J; Slaff DW; et al . Hemodynamic basis of oscillations in systemic arterial pressure in conscious rats. Am J Physiol, 1995, 62-71.
80. Jokinen V, Tapanainen JM, Seppänen T & Huikuri HV (2003) Temporal changes and prognostic significance of measures of heart rate dynamics after acute myocardial infarction in the beta-blocking era. Am J Cardiol 92(8): 907–12.
81. Kannel WB, Kannel C, Paffenbarger RS, Cupples LA. Heart rate and cardiovascular mortality: the Framingham Study. Am Heart J. 1987;113(6):1489-94.

82. Karabacak K, Celik M, Gokoglan Y, et al. Frontal planar QRS/T angle can be a prognostic factor in the early postoperative period of patients undergoing coronary bypass surgery. *Heart Surg Forum.* 2014;17(6):E288-92
83. Karemaker JM. Analysis of blood pressure and heart rate variability: theoretical consideration and clinical applicability. In: Low PA, editor. *Clinical autonomic disorders. Evaluation and management.* Boston: Little Brown and Co; 1993; 315-330.
84. Kardys I, Kors JA, van der Meer IM, et al. Spatial QRS-T angle predicts cardiac death in a general population. *Eur Heart J.* 2003;24(14):1357-64.
85. Kashani A, Barold S. Significance of QRS complex duration in patients with heart failure. *J Am Coll Cardiol.* 2005;46(12):2183-92.
86. Kaya E, Karabacak K, Kadan M, et al. Preoperative frontal QRS-T angle is an independent correlate of hospital length of stay and predictor of haemodynamic support requirement following off-pump coronary artery bypass graft surgery. *Interact Cardiovasc Thor Surg* 2015;1-6, <http://icvts.oxfordjournals.org/content/early/2015/04/29/icvts.ivv084.short?rss=1>
87. Ko W, Tranbaugh R, Marmor JD, Supino PG et al. Myocardial Revascularization in New York State: Variations in the PCI-to-CABG Ratio and Their Implications *J Am Heart Assoc.* 2012; 1: e001446 originally published April 24, 2012
88. Kotelnikov SA; Nozdratchev AD; Odinak MM et al. Heart rate variability: a notion of mechanisms. (In Russian). 2003;01:05. Available from: URL: Dr. Med. Ru. www. Medlincs.ru/article.php?sid=7234.
89. Khoueiry G, Abdallah M, Shariff M, Kowalski M, Lafferty J. Microvolt T-wave alternans in patients undergoing elective coronary artery bypass grafting: a pilot study. *Heart, Lung and Vess* 2014;6:3-10.
90. Kirchhof P, Eckardt L, Rolf S, Esperer HD, Paul M, Wichter T, Klein HU, Breithardt G, Böcker D. T wave alternans does not assess arrhythmic risk in patients with Brugada syndrome. *Ann Noninvas Electrcardiol* 2004; 9:162-5.
91. Lambiase PD, Ahmed AK, Ciaccio EJ, Brugada R, Lizotte E, Chaubey S, Ben-Simon R, Chow AW, Lowe MD, McKenna WJ. High-density substrate mapping in Brugada syndrome. Combined role of conduction and repolarization heterogeneities in arrhythmogenesis. *Circ.* 2009;120:106-17.
92. Lakusic N, Mahovic D, Sonicki Z et al. Outcome of patients with normal and decreased heart rate variability after coronary artery bypass grafting surgery. *Int J Cardiol.* 2013 Jun 20;166(2):516-8. doi: 10.1016/j.ijcard.2012.04.040. Epub 2012 May 5.

93. Laitio T.T., Huikuri H.V., Kentala E.S., Makikallio T.H., Jalonens J.R., Helenius H., Sariola-Heinonen K., Yli-Mayry S., Scheinin H. Correlation properties and complexity of perioperative RR-interval dynamics in coronary artery bypass surgery patients. *Anesthesiology* 2000;93:69-80.
94. LaRovere MT, Morata A, Pinna GD, Bernardin L Baroreflex sensitivity and heart rate variability in the assessment of cardiac autonomic status. *Heart rate variability / M Malik, AJ Camm* New York, 1995 189-205
95. Levkov Ch, Mihov G, Ivanov R, Daskalov I, Christov I, Dotsinsky I. Removal of power-line interference from the ECG: A review of the subtraction procedure. *Biomed. Eng. Online* 2005;4(50), <http://www.biomedical-engineering-online.com/content/4/1/50>.
96. Levy MN, Martin PJ (1979) Neural control of the heart. In: R. M. Berne (ed) *Handbook of Physiology*. Bethesda, American Physiological Society: 581–620.
97. Loeb H, Gunnar W, Thomas D. Is new ST-segment elevation after coronary artery bypass of clinical importance in the absence of perioperative myocardial infarction? *J Electrocardiol.* 2007;40(3):276-81.
98. Lombardi F, Sandrone G, Mortara A, Torzillo D, La Rovere MT, Signorini MG, Cerutti S & Malliani A (1996) Linear and nonlinear dynamics of heart rate variability after acute myocardial infarction with
99. Lucy SD; Hughson RL; Kowalchuk JM; et al. Body position and cardiac dynamic and chronotropic responses to steady-state isocapnic hypoxaemia in humans. *Exp Physiol*, 2000, 85, 227-237.
100. Madias JE, Narayan V. Augmentation of the amplitude of electrocardiographic QRS complexes immediately after hemodialysis: a study of 26 hemodialysis sessions of a single patient, aided by measurements of resistance, reactance, and impedance. *J Electrocard.* 2003;36:263-71.
101. Malik, M. Sympathovagal balance: a critical appraisal. *Circulation*, 1998, 98, 2643-2644.
102. Malliani, A; Pagani, M; Montano, N; Mela GS. Sympathovagal balance: a reappraisal. *Circulation*, 1998, 98, 2640-2643.
103. Malliani A, Schwartz PJ, Zanchetti A sympathetic reflex elicited by experimental coronary occlusion *Am J of Physiol.* 1969 Vol. 217(3) 703-709
104. Matveev M. Non-parametric criterion for estimation of the sensitivity of object's features to influences of a factor and its application in clinical practice. Proceed 32nd Int. Conf. on Inform Techn Interfaces, 21-24 June, Cavtat, Croatia, 2010:569-72.

105. Matveev M, Prokopova R. Prognostic value of the time related autonomic balance indicator for risk evaluation of cardiovascular events in patients with ischemic heart disease. *Comp Card.* 2008;35:201-4.
106. Matveev M, Prokopova R, Nachev Ch. Normal and abnormal circadian characteristics in autonomic cardiac control: new opportunities for cardiac risk prevention. Nova Science Publishers, Inc. New York, 2006.
107. Matveev M, Tsonev SN, Prokopova R, Donova T. Assessment of autonomic cardiac control in women with cardiac syndrome X using Time Related Autonomic Balance Indicator. *Comp Card.* 2010;37:1047-50.
108. McArdle WD, Katch FI & Katch VL (2001) *Exercise Physiology: Energy, Nutrition, and Human Performance*. Baltimore, Lippincott Williams & Wilkins.
109. McIntyre C, Burton J, Selby N, Leccisotti L, Korsheed S, Baker C, Camici P. Hemodialysis-induced cardiac dysfunction is associated with an acute reduction in global and segmental myocardial blood flow. *Clin J Amer Soc Nephrol.* 2007;3;19-26
110. Meijss MF, Bots ML, Vonken EJ, et al. Rationale and design of the SMART Heart study: A prediction model for left ventricular hypertrophy in hypertension. *Neth Heart J.* 2007;15(9): 295-8.
111. Melcher, A. Carotid baroreflex heart rate control during the active and assisted breathing cycle in man. *Acta Physiol Scand*, 1980, 108, 165-171.
112. Meloni C, Stazi F, Ballarotto C et al. Heart rate variability in patients with variant angina: effect of the presence of significant coronary stenosis *Italian Heart J* 2000 Vol.1 (7) 470-474
113. Michaelides AP et al. New coronary artery disease index based on exercise-induced QRS changes. *Am Heart J.* 1990;120:292-302.
114. Migliore F, Zorzi A, Michieli P et al. prevalence of Cardiomyopathy in Italian Asymptomatic Children With Electrocardiographic T-Wave Inversion at Preparticipation Screening. *Circ.* 2012;125:529-38.
115. Montano N; Gnechi Ruscone T; Porta A; et al. Presence of vasomotor and respiratory rhythms in the discharge of single medullary neurons involved in the regulation of cardiovascular system. *J Auton Nerv Syst*, 1996, 57, 116-122.
116. Montano N; Ruscone TG; Porta A; et al. Power spectrum analysis of heart rate variability to assess the changes in sympathovagal balance during graded orthostatic tilt. *Circulation*, 1994, 90, 1826-1831.
117. Morady F. Significance of QRS alternans during narrow QRS tachycardias. *Pacing Clin Electrophysiol.* 1991;14:2193-8.

118. Morin JF, Mistry B, Langlois Y, et al. Fluid overload after coronary artery bypass grafting surgery increases the incidence of post-operative complications. *World J. of Cardiovasc. Surg.* 2011;1(2): 18-22.
119. Nakamura S, Uzu T, Inenaga T, Kimura G. Prediction of coronary artery disease and cardiac events using electrocardiographic changes during hemodialysis. *Am J Kidney Dis.* 2000;36(3):592-9.
120. Nemes, J; Roth, E; Kapronczay, O; Mozsik, G. Effect of rilmenidine , a centrally acting imidazoline agonist on the renin-angiotensin-aldosterone and catecholamine system and on the parameters indicating oxidative stress in patients with essential hypertension. *Hypertension*, 2000, 18, Suppl.2, S119-S119.
121. Nichols M., Townsend N., Scarborough P. et al. European Cardiovascular Disease Statistics. European Heart Network and European Society of Cardiology, September 2012
122. Niemelä MJ, Airaksinen KE, Tahvanainen KU et al. Effect of coronary artery bypass grafting on cardiac parasympathetic nervous function. *Eur Heart J.* 1992 Jul;13(7):932-5.
123. Nozdratchev AD. Axon-reflex. A new opinion in old area. (In Russian). *Physiol J.*, 1995, 81, 136-144.
124. Oieru D, Shlomo N, Moalem I et al. A novel heart rate variability algorithm for the detection of myocardial ischemia: pilot data from a prospective clinical trial. *Isr Med Assoc J.* 2015 Mar;17(3):161-5.
125. Ojanen S, Koobi T, Korhonen P, Mustonen J, Pasternack A. QRS amplitude and volume changes during hemodialysis. *Am J Nephrol.* 1999;19(3):423-7.
126. Okin PM, Roman MJ, Devereux RB, et al. Time-voltage QRS area of the 12-lead electrocardiogram. Detection of left ventricular hypertrophy. *Hypertens.* 1998;31:973-42.
127. Pagani, M; Montano, N; Porta, A; et al. Relationship between spectral components of cardiovascular variabilities and direct measures of muscle sympathetic nerve activity in humans. *Circulation*, 1997, 95, 1441-1448.
128. Pantoni CB, Mendes RG, Di Thommazo-Luporini L et al. Recovery of linear and nonlinear heart rate dynamics after coronary artery bypass grafting surgery. *Clin Physiol Funct Imaging.* 2013 Dec 26. doi: 10.1111/cpf.12115.
129. Perin PC; Maule S; Quadri R. Sympathetic nervous system, diabetes, and hypertension. *Clin Exp Hypertens.* 2001, 23, 45-55.
130. Petretta M; Bianchi V; Marchiano F et al. Influence of left ventricular hypertrophy on heart period variability in patients with essential. *Journal of Hypertension*, 1995, 13, 1299-1306.

131. Pilhall M, Riha M, Jern S. Exercise-induced QRS changes in healthy men and women: a multivariate analysis on their relation to background data and exercise performance. Eur Heart J. 1992;13:1316-24.
132. Pokrovskii M Hierarchy of the heartrhythmogenesis levels is a factor in increasing the reliability of cardiac activity Med. Hypotheses 2006 Vol.66 Suppl.I P158-164
133. Pokrovskii M Integration of the heart rhythmogenesis levels: heart rhythm generator in the brain. J. Methodist De Bakey Heart Center 2006 Vol.2, N2 19-23
134. Ponikovski P, Anker SD, Chua TP et al. Depressed heart rate variability as an independent predictor of death in chronic congestive heart failure secondary to ischemic or idiopathic dilated cardiomyopathy. Am J of Cardiol. 1997, Vol.310(18); 1645-1650
135. Press G; Polosa C. Patterns of sympathetic neuron activity associated with Mayer waves. Am J Physiol, 1974, 226, 724-730.
136. Pradeep A, Rajagopalam S, Kolli HK, et al. High volumes of intravenous fluid during cardiac surgery are associated with increased mortality. HSR Proc. Intensive Care Cardiovasc. Anesth., 2010;2(4): 287–96.
137. Richter DV; Spyer KM. Cardiorespiratory control. General regulation of autonomic function. New York: Oxford Univ Press, 1990, 189-207.
138. Rimoldi O; Pierini S; Ferrary, A; et al. Analysis of shot-term oscillations of R-R and arterial pressure in conscious dogs. Am J Physiol, 1990, 258, 967-976.
139. Romhilt DW, Estes EH. A point-score system for the ECG diagnosis of left ventricular hypertrophy. Am. Heart J. 1968;75(6):752-8.
140. Saltykova M et al. Increased QRS voltage during dehydrating. Terapevticheskii arkhiv. 2006;794):18-22.
141. Sandercock GRH, Brodies DA The role of heart rate variability I prognosis for different modes od death in chronic heart failure. Pacing. Clin. Electrophysiol. 2006 – Vol. 29, N8. – P. 892-904
142. Saravanan S, Davidson N. Advances in arrhythmia and electrophysiology. Risk assessment for sudden cardiac death in dialysis patients. Circul: Arrhyth and Electophys. 2010;3:553-9
143. Sassi R, Cerutti S, Lombardi F, Malik M, et al. Advances in heart rate variability signal analysis: joint position statement by the e-Cardiology ESC Working Group and the European Heart Rhythm Association co-endorsed by the Asia Pacific Heart Rhythm Society. Europace. 2015, <http://europace.oxfordjournals.org/content/early/2015/07/14/europace.euv015.full>

144. Saul JP, Rea RF, Eckberg DL et al. Heart rate and muscle sympathetic nerve variability during reflex changes of autonomic activity. *Am J Physiol*, 1990, 258, 713-721.
145. Serruys PW, Morice M, Kappetein P, Colombo A et al. Percutaneous Coronary Intervention versus Coronary-Artery Bypass Grafting for Severe Coronary Artery Disease *N Engl J Med* 2009; 360:961-972 March 5, 2009
146. Sheehan J, Perry IJ, Reilly M, et al. QT dispersion, QT maximum and risk of cardiac death in the Caerphilly Heart Study. *Eur J Cardiovasc Prev Rehabil*. 2004;11(1):63-8.
147. Sandrone G, Mortara A, Torzlio D et al. Effects of beta blockers (atenolol or metoprolol) on heart rate variability after acute myocardial infarction *Am J of Card* 1994 Vol 74(4) 340-345
148. Simova I, Christov I, Bortolan G, Abächerli R, Kambova L, Jekova I. Hemodialysis-induced ST-segment deviation. *Comp. Card.* 2015;42:1133-6.
149. Simova I, Bortolan G, Kambova L, Christov I, Katova T. Episodes of T-wave and QRS complex alternans in haemodialysis patients. *EC Cardiol*. 2015;2(1):60-7,
<https://www.ecronicon.com/eccy/pdf/ECCY-02-00008.pdf>
150. Simova I, Christov I, Bortolan G. A review on electrocardiographic changes in diabetic patients. *Curr Diab Rev* 2015;11:102-6.
151. Simova I, Christov I, Kambova L, et al. QRS and T loops area changes during haemodialysis. *Comput Cardiol*. 2014;41:409-12.
152. Simova I, Christov I. Sources of variation in the QT readings: what should you be aware of? *Bioautomation*, 2007;6:78-91.
153. Simova II, Denchev SV, Christov II, Matveev MG. Comparison of flow mediated dilatation and QT interval dispersion as noninvasive methods for evaluation of coronary artery disease. *The Online Journal of Cardiology, Medical Teaching, McGill CME Cardiology*. 2007
<http://cme.med.mcgill.ca/php/hom.php?id=722>
154. Singer DH, Z. Ori Changes in heart rate variability associated with sudden cardiac death / Heart rater variability /M. Malik, A.J. Camm – New York, 1995. – 429-448
155. Singh N et al. Myocardial alterations during hemodialysis: insights from new noninvasive technology. *Am J Nephrol* 1994; 14: 173-81.
156. Singla V, Jindal A, Pargaonkar V et al. Examining QRS amplitude criteria for electrocardiographic left ventricular hypertrophy in recommendations for screening criteria in athletes. *J Elactrocardiol*. 2015;48:368-372.
157. Sleight, P; Bernardi, L. Sympathovagal balance. *Circulation*, 1998, 98, 2640.

158. Sokolow M, Lyon TP. The ventricular complex in left ventricular hypertrophy as obtained by unipolar precordial and limb leads. *Am Heart J.* 1949;37:161–186.
159. Spinnler MT, Lombardi F, Moretti C et al. Evidence of functional alterations in sympathetic activity after myocardial infarction *European heart journal* 1993 Vol. 14(10) 1334-1343
160. Surawicz B, Childers R, Deal B., et al. Expert consensus document. AHA/ACCF/HRS recommendations for the standardization and interpretation of the electrocardiogram. Part III: Intraventricular Conduction Disturbances. *J Am Coll Cardiol.* 2009;53(11):976-81.
161. Tada T, Kusano KF, Nagase S, Banba K, Miura D, Nishii N, Watanabe A, Nakamura K, Morita H, Ohe T. Clinical Significance of macroscopic T-wave alternans after sodium channel blocker administration in patients with Brugada syndrome. *J Cardiovasc Electrophysiol* 2008;19:56-61.
162. Takagi M, Doi A, Takeuchi K, Yoshikawa J. Pilsicanideinduced marked T wave alternans and ventricular fibrillation in a patient with Brugada syndrome. *J Cardiovasc Electrophysiol* 2002;13:837-8.
163. Takase B, Kusama Y., Nishizaki M. et al. Detecting Restenosis after Percutaneous Coronary Intervention Using Exercise-Stress Electrocardiogram Findings Including QT Dispersion *J. of Arrhythmia* Vol. 22, Iss. 4, 2006, P. 209-215
164. Taki K, Takayama F, Tsuruta Y, Niwa T. Oxidative stress, advanced glycation end product, and coronary artery calcification in hemodialysis patients. *Kidney Int* 2006;70:218–24.
165. Task Force of the European Society of Cardiology and the North American Society of Pacing and Electrophysiology. Heart rate variability standards of measurement, physiological interpretation, and clinical use. *Circul.* 1996;93:1043–65.
166. von Kanel R, Carney RM, Zhao S & Whooley MA (2011) Heart rate variability and biomarkers of systemic inflammation in patients with stable coronary heart disease: findings from the Heart and Soul Study. *Clin Res Cardiol* 100(3): 241–7.
167. Walder L, Spodick D. Global T wave inversion. *J Am Coll Cardiol.* 1991;17:1479-85.
168. White CM, Sander S, Coleman CI et al. Impact of epicardial anterior fat pad retention on postcardiothoracic surgery atrial fibrillation incidence: the AFIST-III Study. *J Am Coll Cardiol.* 2007 Jan 23;49(3):298-302. Epub 2007 Jan 8.
169. Woo et al. Complex heart rate variability and serum norepinephrine levels in patients with advanced heart failure. *J. Am. Coll. Cardiol.* 1994. – Vol.22.-P.565-569
170. Yavuz B1, Duman U, Abali G et al. Crit Care. Coronary artery bypass grafting is associated with a significant worsening of QT dynamicity and heart rate variability. 2005 Apr;9(2):R124-31. Epub 2005 Jan 26.

171. Zabel M, Acar B, Klingenheben T, et al. Analysis of 12-lead T-wave morphology for risk stratification after myocardial infarction. Circ. 2000;102(11):1252-7.
172. Годишен доклад на министъра на здравеопазването 2010. Състояние на здравето на гражданите и изпълнение на здравната стратегия ncphp.govtment.bg/files/doklad-zdrave_27_09_2011-last.pdf