Contents

Preface 9

Chapter 1. **Introduction. Phases in Cardiac Performance. Mechanical Aspects** ***(L. Mihóczy)*** **11**
References 14

Chapter 2. **Electrocardiography** ***(J. Tenczer)*** **15**
Holter electrocardiography 15
Exercise electrocardiography 25
Vectorcardiography 38
References 51

Chapter 3. **Phonocardiography** ***(G. Világi)*** **54**
Heart sounds 55
Heart murmurs 60
Diastolic murmurs 73
References 86

Chapter 4. **Echocardiography** ***(Mária Lengyel)*** **89**
Physical principles 90
Echocardiographic techniques 92
Doppler techniques 95
Other methods 99
Normal echocardiogram 100
Measurements 104
Haemodynamic information and left ventricular function 108
Clinical applications of echocardiography. Valvular heart disease 116
Prosthetic valve dysfunction 137
Cardiomyopathies 141
Congenital heart disease in adults 163
Summary 181
References 181
List of abbreviations 188

Chapter 5. **Mechanocardiography** *(E. Kékes and L. Mihóczy)* **190**
Apexcardiogram 190
Kinetocardiography 217
Carotid pulse curve 222
Jugular venous curve 228
References 232
List of abbreviations 234

Chapter 6. **Systolic and Diastolic Time Intervals** *(E. Kékes and L. Mihóczy)* **238**
Conventional determination of the systolic time intervals 238
Measurement of the systolic time intervals by apexcardiogram 243
Clinical application of systolic–diastolic time intervals 253
References 256
List of abbreviations 258

Chapter 7. **Non-invasive Methods of Clinicopharmacological Examination** *(L. Matos and L. Mihóczy)* **261**
Measuring systolic intervals in order to monitor the effects of drugs 262
References 270

Chapter 8. **Pharmacokinetic Examinations in Cardiology** *(Eszter Faragó)* **272**
The pharmacokinetics of cardiac drugs. Monitoring of cardiac glycosides 273
The pharmacokinetics of anti-anginal drugs and coronary vasodilators. Monitoring drugs of nitrate content 279
References 288

Chapter 9. **Ballistocardiography** *(L. Mihóczy)* **291**
References 298

Chapter 10. **Cardiac Radiology** *(I. Palik)* **301**
General part 301
Detailed part 318
References 335

Chapter 11. **Nuclear Cardiology** *(Mária Istvánffy)* **338**
Radiopharmaceuticals for cardiovascular investigations 339
Evaluation of central circulatory dynamics with radionuclide techniques 343
References 372

Chapter 12. **Non-invasive Diagnosis of the Right Ventricle** *(L. Mihóczy)* **378**
Clinical examination of right ventricular performance 386
References 393
List of abbreviations 395

Chapter 13. **Laboratory Examinations in Cardiac Diagnosis** *(Eszter Faragó)* **396**
Erythrocyte sedimentation rate (ESR) 397