

Index

- Abbott's artery, 430, 431
 abnormal systemic venous connections, 407
 absent pulmonary valve syndrome, 280
 aggregated cardiomyocytes, 325
 alternative therapy, 252
 anomalous pulmonary venous drainage
 supracardiac totally, 421
 ansa subclavia, 9
 anterior interventricular coronary artery, 263
 anterior papillary muscle, 177
 antero-cephalad limb, 170
 aorta, the, 70–73
 ascending aortic trunk, 71
 coarctation of, 245
 coronary arteries and, 113
 posterior, 332
 proximal descending, 431
 aortic arch, 438
 double, 437, 441, 443
 interrupted at the isthmus, 432
 interruption, 433
 interruption of, 447
 interruption of the, 430–434, 432, 434
 left-sided, 442
 right, 445, 447
 right-sided, 443, 445
 tubular hypoplasia of the, 427
 Type A interruption, 433
 Type B interruption, 433
 Type C interruption, 434
 with mirror-imaged branching of the right, 446
 aortic atresia, 316, 347
 with mitral stenosis, 284
 aortic coarctation, 286, 427, 429, 431
 role of ductal tissue and, 427
 shelf lesion of, 427
 with enlarged intercostal arteries, 429
 aortic insufficiency, 252
 aortic isthmus
 interruption at the, 432, 433
 aortic leaflet, 91
 aortic regurgitation, 241
 aortic root, 460
 location of, 392
- aortic sinuses
 pulmonary trunk and, 336
 aortic stenosis
 patients with, 246
 aortic valvar insufficiency, 252
 aortic valve, the, 100–105
 aortopulmonary foramen, 29
 closure of, 29
 aortopulmonary septum, 28, 31
 aortopulmonary window, 451, 454, 455
 aorto-ventricular tunnels, 459
 anomalies of the, 456
 apposition, zone of, 103
 arch
 double, 441
 hypothetical double, 440
 arch arteries, 437
 arrhythmia, 138
 arrhythmia surgery
 congenital heart disease and, 148–149
 arterial channel, 6
 arterial duct, 444, 452, 454
 operative intervention, 451
 patent, 453
 persistence of the, 451, 455
 arterial duct, patent, 452
 arterial ligament, 6
 arterial trunk
 common, 369, 370, 382
 with absent intrapericardial pulmonary arteries, 370
 arterial trunks, 117, 169, 170, 332, 333, 369, 392–393, 458, 469
 common, 380, 446
 double outlet ventricle and, 353
 fibrous walls of, 98
 intrapericardial, 27, 33, 372, 374
 morphologically right ventricle and, 354
 morphology of the, 169
 normal spiraling of the, 392
 parallel, 398–406, 402
 relationship of the, 357, 360
 relationships of the, 169
 right ventricle and, 354, 356
 solitary, 369
 arterial trunks, 114
- arterial valvar morphology, 169
 arterial valvar sinuses
 lesions in, 147
 arterial valves, 170
 abnormalities of the, 239
 arrangement of, 95–99
 morphology of, 169
 asplenia, 468
 atresia, 438, 470
 atrial appendage, 157
 atrial appendages, 41, 157
 isomerism of the
 morphologically left, 474
 isomerism of the right, 472, 473
 morphologically left, 471
 morphologically right, 471
 right, 71
 right-sided morphologically right, 472
 atrial chambers
 appearance of the, 13
 atrial depolarization, 34
 atrial fibrillation
 interventional therapy and, 146
 treatments of, 149
 atrial flutter, 144
 atrial foramen, 13
 atrial septal defects,
 133, 177
 lesions from the, 149
 atrial septal structures
 deficiencies of, 180
 atrial septum, 175
 arrangement of the, 285
 atrio-Hisian tracts, 138
 atriotomy, 185
 left, 41
 opening the heart through an, 55
 right, 56, 58, 60, 64, 98, 131, 133, 176, 181, 184, 185, 187, 195, 196, 222
 right-sided left, 62
 standard, 124
 atrioventricular bundle, 135, 170
 atrioventricular canal, 22, 34
 formation and septation of, 18, 22
 atrioventricular canal, expansion of, 372
- atrioventricular conduction axis, 34, 133, 136, 139, 232, 308
 branching component of, 135
 location of, 139
 path of, 309
 atrioventricular conduction tissue, 316
 in hearts with isomerism, 477
 atrioventricular connections, 141, 169, 317, 350, 470
 absence of, 312
 absence of the right, 399
 discordant, 347
 ventricular mass and, 164
 atrioventricular cushions, 19
 atrioventricular endocardial cushions, 22
 atrioventricular groove, 13
 atrioventricular junctions, 14, 20–22, 83, 158, 165, 202
 dilation of the, 235
 features associated with, 169
 fibrous, 126, 334
 atrioventricular muscular strands, 139
 atrioventricular node, 34, 36, 51
 atrioventricular orifice, danger area of, 308
 atrioventricular septal defect, 249, 250
 atrioventricular septal defects, 166, 191, 191, 195, 200
 four-chamber cut and, 207
 haemodynamic shunting and, 202
 left ventricular outflow tract in, 210
 septal defects, 176
 variant, 197
 various forms of, 196, 199
 with atrioventricular junction, 204, 209
 atrioventricular septal malalignment, 230
 atrioventricular septum, 175
 atrioventricular valvar atresia, 300
 atrioventricular valve
 anomalous attachment of, 249
 components of the, 89
 atrioventricular valves, 77, 88–89, 234

- atrioventricular-arterial junctions, 321
- atrium
left, 63
right, 145, 315, 351
small right, 415
- azygos venous system, 470
azygos vein, 6, 9, 73, 132, 410, 412, 419
- azygous vein
dilated, 411
- Bachmann's bundle, 50
- biventricular atrioventricular connections, 471, *See also* atrioventricular connections
- Blalock-Hanlon septostomy, 323
- brachiocephalic artery, 72
- brachiocephalic trunk, 6
- bundle branch
right, 138
- bundle branch, left, 136, 137
- bundles of Kent, 139
- cardiac catheters, 65
- cardiac cavities, 1
- cardiac chambers, 55, 283, 465, 467
anatomy of, 41, 48
- cardiac conduction system
development of, 34–37
- cardiac impulse
conduction system and, 34
- cardiac lymphatics, 131–132
- cardiac malformations, 46, 465
- cardiac rhythm
problem of, 138–144
- cardiac subsystems, valves and, 108
- cardiac valves, 81
- cardiomyocytes, 34, 50
- cardiovascular malformations
of the aortic arch, 430
- Carnegie stage 10, 12
- Carnegie stage 11, 11, 12
- Carnegie stage 12, 13, 13, 24
pharyngeal arches, 437
- Carnegie stage 13, 14, 18, 20, 24
cavities of developing heart at,
19
embryo at, 19
human embryo at, 20
left ventricle and the, 22
- Carnegie stage 14, 15, 24, 27, 438
atrioventricular canal at, 20
human embryo at, 28
the cranial button and, 28
- Carnegie stage 15, 30, 34, 439
human embryo at, 36
- Carnegie stage 16
human embryo at, 21
pharyngeal arches at, 439
- Carnegie stage 17, 23
dissected heart at, 21
embryo at, 34
- Carnegie stage 18
extrapericardial arterial pathways at, 35
- Carnegie stage 19, 34
human embryo at, 36
- Carnegie stage 20, 32, 440
arterial pathways, 35
- Carnegie stage 21, 15, 18
pulmonary root, 32
- Carnegie stage 23, 33, 38
echocardiographic projection at, 33
- Carnegie stages 15 and 16, 28
- Carnegie stages 18–19
developing human heart at, 22
- Carnegie stages 19, 24
- caval vein, 3
- cavotricuspid isthmus, 148
- cleft, true, 238
- coarctation lesion, 428
- complete median sternotomy, 1
- computed tomogram, 168
- concordant and discordant connections, 159
- concordant atrioventricular discordant ventriculo-arterial connections with, 322
- concordant atrioventricular and discordant ventriculo-arterial connections, 321
- concordant atrioventricular connections, 321
- concordant ventriculo-arterial connections, 315
- conduction system, 133
- congenital atresia, 459
- congenital cardiac malformations
describing, 153
- congenital heart disease arrhythmia surgery for, 148–149
- congenital malformations, 9
- congenital pulmonary valvar stenosis
treatment of, 254
- congenital pulmonary venous, 419
- congenital segmental stenosis, 418
- coronary arterial circulation, 121
- coronary arteries, 335, 336, 386
anomalies of the, 456
- anomalous epicardial course, 459
- anomalous origin of, 456–459
- communications between the, 459
- epicardial, 459
- morphology of the, 333, 339
- coronary arteries, the, 113–126
- coronary artery
anomalous origin of the left, 457
- congenital atresia of the left, 459
- left, 457
- origin of the right, 459
- silk ligature and the left, 456
- coronary circulation, 109–111, 113
- coronary arteries, 113–126
- coronary veins, 127–129
development of, 38, 39
- coronary files, 83
- coronary sinus, 109, 130, 195, *See also* left atrium communication with, 190
unroofing of the, 186, 190
- coronary veins, the, 127–129
- Cox maze III/IV procedures, 148
- cryoablation lesions, 150
- deficient atrioventricular septation, 264
- dextrocardia, 465
- dextroposition, 465
- dextrorotation, 465
- direct surgical correction, 316
- discordant atrioventricular and ventriculo-arterial connections, 322
- discordant atrioventricular connections, 467
- discordant ventriculo-arterial connections, 310, 321
Fontan procedure and, 315
- distal outflow cushions, 22
- diverticulum of Kommerell, 442, 445
dual compressing fibrous remnants of, 445
- dominant right ventricle, 312
- dorsal mesenchymal protrusion, 13
- double inlet and double outlet right ventricle, 310
- double inlet atrioventricular connection, 300
- double inlet left ventricle, 163, 302, 404
- double inlet right ventricle, 311
- double inlet to the dominant ventricle, 319
- double inlet ventricle, 309
- double inlet, to a dominant right ventricle, 301
- double outlet right ventricle/ ventricles, 170, 172, 322, 367, 368
abnormal ventriculo-arterial connection to, 261
- ductal anomalies and, 448
with subpulmonary defect, 235
- double outlet the right ventricle/ ventricles, 359
- double outlet ventricle, 353–368
- doubly committed and juxtap- arterial, 332
- doubly committed subarterial ventricular septal defects. *See also* ventricular septal defects
- ductal anomalies, 448–451
- dysplastic valves, 238, 239
- Ebstein's malformation, 140, 145, 236, 236, 239, 316, 318, 344, 349
- surgical treatment for, 238
- Ebsteins' malformation, 238
- echocardiographic plane, 222
- Eisenmenger's syndrome, 411
- electrocardiogram
adult type of, 34
- embryonic period, end of, 38
- endocardial primordiums, 11
- endothelial cardiac tube, 11
- endothelial-to-mesenchymal transformation, 22
- epigastrium, 466
- Eustachian ridge, 54
- Eustachian valve, 315
- exteriorisation, of the heart, 465, 467
- extrapericardial arterial pathways, 33, 35
- fasciculo-ventricular connections, 138
- fetal development, 38–39
- fibromuscular tunnel, 248
- fibrous raphe, 435
- fibrous shelf, 348
- fibrous tissue tag, 348
- fibrous triangle, 83
- fishmouth arrangement, 29
- fixed stenosis, 247
- fixed subaortic obstruction, 248
- Fontan procedure, 299, 309, 312, 315
conversion procedure, 149
- failed Fontan circulations, 148
- Fontan circulation, 132, 133, 146, 235, 283, 285, 300, 301, 316, 347
modified, 316
surgical palliation and, 312
- free-standing septoparietal trabeculations, 263
- Gerbode defect, 60
- Gerbode defects, 191, 220, *See also* atrioventricular septal defects
direct, 194
- German Working Group, 87
- Glenn procedure, 307
- great arteries, the, 2, 170, 361
access to, 4
adventitial coverings of, 41
- double outlet connections and, 169
posterior surface of, 41
- transposition of, 321
- gross fibroelastosis, 284
- gross lymphangiectasia, 286
- gross pulmonary valvar insufficiency, 270
- heart tube
cardiomyocytes, 34
- linear, 11
- looping of, 11
- heart, the
abnormal positioning of, 465, 466

Index

- heart, the (cont.)
 abnormal segmental connections and, 283
 after a pericardial incision, 42
 an infant, 460
 atrial arrangement, 154–158
 base of, 350
 Carnegie stage 13, 25
 chamber planes in, 176
 conduction axis reconstructed, 137
 displacement of, 451
 dissected, 21
 double outlet right ventricle, 353–368
 essential anatomy, 299
 exteriorisation of, 465, 467
 fibrous skeleton of the, 55–60
 four-chamber echocardiographic view, 177, 229, 313
 hypoplasia of the left, 316
 intracardiac malformations of, 172
 left morphology, 476
 left side of the reconstructed, 473
 location of, 1
 mirror-image organs arrangement and, 422
 myocardial bridging and, 128, 461
 outlet of the right ventricle, 263
 position of, 171–172
 right-sided, 409, 466–467
 right-sided atrium, 476
 segments of, 153
 septal structures in, 175
 surgery and the lymphatic drainage, 131–132
 surgical approaches to the, 1–9
 the position and support of the valves in, 80–88
 unroofing of the coronary sinus, 188
 valvar anatomy of, 77
 valvar complexes of, 77, 80
 vascular pedicle of the, 71
 with isomeric atrial appendages, 468–471
 with transposition, 339
 hepatic venous connections, abnormal, 407
 hepatocardiac channels, 13
 His, Wilhelm, 13
 hole, closing clinically significant, 215
 Holmes heart, 400
 Horner's syndrome, 9
 human development, 11
 hypertrophy, 263
 right-sided, 467
 hypoplastic left heart syndrome, 164, 283, 286, 290, 293, 294, 297, 299, 313, 316, 318, 416
 aortic stenosis and, 291
- atrioventricular connection and, 284
 intact atrial septum and, 295
 mitral valve and, 285
 pulmonary trunk and, 297
 right atrium and, 294
- inferior caval vein, 470
 abnormalities of, 408–411
 inferior cavo-tricuspid isthmus, 146
 inferior sinus venosus defect, 184
 infero-caudal margin, 262
 infero-caudal rim, 262
 infero-septal recess, 102
 infundibular morphology, 170
 interatrial communications, 177, 190, 426
 superior sinus venosus, 407
 surgical treatment of, 188
- interatrial shunting, 177
 intercostal muscles, 5
 intercostal neurovascular bundle, 5
 intercostal space
 fourth, 4
 second left, 73
 sixth, 4, 7
 intermediate sinus venosus defect, 186
 interventional catheterization, 451
 interventricular communication, 262, 365
 interventricular membranous septum, 262
 intracardiac anatomy of tetralogy, 264
 intracardiac malformations, 470
 intrapericardial arterial trunks, 27, 33
 isolated pulmonary stenosis, 253
 isolated ventricular inversion, 399, 400
 isomeric atrial appendages problems with, 468–471
 isomeric left atrial appendages, 405
 isthmus, 148, 288
 aortic, 5, 34, 286
 atresia of the, 431
 constriction of aortic, 428
 inferior cavo-tricuspid, 145
 of the transverse arch, 284
 septal, 145
- juxta-arterial, 228
 juxta-arterial interventricular communication, 374
 Juxta-arterial ventricular septal defect, 216, 223, 228, 229, 262, 267, 326, 343–346, 361–364, 374, 377, 380, 430
- Koch's triangle, 195
- Lancisi, muscle of, 94
 laryngeal nerve, 6, 7
- latissimus dorsi, preservation of, 5
 left appendages, 154, 165, 408
 isomeric, 470
 isomerism of the, 156
 morphologically, 44, 476
 left atrium. *See also* right atrium
 morphologically, 60–61
 left coronary artery, circumflex branch of the, 124
 left isomerism, 157, 158, 406, 411, 465, 470
 arterial trunks and, 400
 left superior caval vein, 408
 left ventricle/ventricles, 457
 morphologically, 68, 71
 left-sided incomplete left ventricle, 311
 Leiden convention, 115
 lesions, 283, 299
 anatomic, 264
 cryoablation lesions, 150
 in transposition, 325
 pathological, 234
 subpulmonary obstruction and, 347
 tetralogy of Fallot and, 264
 levoatrial cardinal vein, 286, 411–412, 418
 linear tube. *See* heart tube
 lower sternum, 466
 lung/lungs
 cobble-stoning of, 286
 hypoplastic left heart and right, 295
 posterior retraction of the, 5
 lymphangiectasia, gross, 286
 lymphatic drainage system, 131
 Mahaim connections, 143
 malalignment ventricular septal defect, 327
 malposition, 393
 Marshall, ligament of, 73
 Marshall, vein of, 15
 maze procedure, 146
 medial papillary muscle, 219, 221
 mediastinum, 1
 entering the, 41
 middle, 5
 pericardial sac in the, 3
 vessels and nerves within, 2
 membranous septum, area anterior to, 144
 mesenchymal cap, 13
 mesocardium, 11
 middle mediastinum, 5
 mirror-imaged atrial arrangement, 323
 mitral atresia, 283, 313, 316, 318, 411
 mitral valve, 90–93, 92, 239, 240
 aortic leaflet of the, 83
 imperforate, 319
 mural leaflet of the, 90
 papillary muscles of the, 93
 parachute arrangement of the, 242
- morphogenesis, 11
 morphological method, 153–154
 mural leaflet, 92
 muscle of Lancisi, 94
 muscular defect, 221, 223
 muscular hypertrophy, 254
 muscular inlet defect, 327
 muscular outlet septum, 363
 muscular rims, 224, 327, 382
 deficiency of the, 218
 superior, 223
 muscular ventricular septum, 20, 221
 misalignment of, 230
 Mustard procedure, 323–325
 myocardial fishmouth, 29
 myocardial-arterial junctions, 61, 65, 68, 70, 71, 77, 78, 79, 86, 98, 100, 101, 148, 242, 280
 anatomic, 147
 circular anatomic, 65
 myocardium, 11
 neonatal development, 38–39
 nodoventricular connections, 138
 nodule of Arantius, 95
 Norwood sequence, 285
 Norwood sequence of procedures, 285
 ostium primum defect, 195, 242, 377
 outflow tract, 31
 outflow tract tachycardias substrates for, 147, 148
 outlet septum, 354
 outlet ventricular septal defects, muscular, 332
 oval fossa, 50, 53
 defect within the, 184
 defects within the, 177, 184
 pacemaker electrodes, 65
 paired dorsal aortas, 11
 parachute deformity, 238, 239
 paraspetic pathways, 138
 partial defects, 203
 pathological lesions, 234
 pathways
 left-sided, 139
 right-sided accessory, 139
 pericardial cavity
 arrangement of, 41
 pericardial recess, 41
 pericardial reflection, 72
 pericardium, 41
 perimembranous defects, 219, 222, 326, 327, 343
 perimembranous ventricular septal defect, 346
 persistent truncus arteriosus, 377
 pharyngeal arch arteries, 25
 pharyngeal arches, 24, 25, 395, 437, 438, 439
 fourth, 27
 pharyngeal mesenchyme, 13, 26
 growth of, 13

- phrenic nerves, 3–4, 4, 5, 6
 left, 73
- pleural space, 5
- polysplenia, 468
- postero-caudal deviation, 332
- Postero-inferiorly, 73
- primary atrial foramen, 34
- primary ring, 34
- prolapse, 89, 92, 221, 238
 leaflet of the aortic valve, 223
 mitral valve leaflets, 85
 of a leaflet, 89
 of the leaflets, 225, 252, 257
- proximal septal defect, aortic arch and, 430
- pulmonary arterial anomalies, 448–451
- pulmonary arterial sling, 451
- pulmonary arteries, 73, 75, 264, 281, 307–308, 315
- pulmonary artery/arteries
 anomalous origin of the right, 449
 conduit from the
 morphologically right ventricle to the, 347
 conduit to from left ventricle, 309
 development of, 27
 intrapericardial, 169, 369–371
 left, 448, 450
 left from the right pulmonary artery, 450
 right, 448, 449
- pulmonary atresia, 255, 264, 317, 347, 369
 with ventricular septal defect, 264
- pulmonary collateral arteries, 266
- pulmonary hypertension, 448
- pulmonary hypertensive vascular disease, 449
- pulmonary pathways, 449
 formation and septation of, 24, 33
- pulmonary root
 opening of, 147
- pulmonary stenosis, 344, 470
- pulmonary trunk, 71, 259, 321,
 See also pulmonary arteries and left pulmonary artery, 451
- dilation of, 279
- hypoplastic left heart syndrome and, 297
- pulmonary trunk, atretic, 371
- pulmonary valvar insufficiency, 270
- pulmonary valvar leaflets, 83, 119
 absence of, 271
- pulmonary valve, the, 69, 81, 105–107, 147, 258, 343, 357, 364
 dysplasia of the leaflets of the, 258
- pulmonary veins, 418, 420
 congenital segmental stenosis, 418
- pulmonary venous atrium, 323
- pulmonary venous connection
- totally anomalous, 420
- pulmonary venous connections, 418–426
- pulmonary venous tributaries, 38
- Rastelli or Nikaidoh operations, 332
- restrictive subaortic infundibulum, 435
- restrictive ventricular septal defect, 431, 436
- retro-esophageal right subclavian artery, 433
- right appendages
 intracardiac malformations, 470
 isomerism of the, 156, 470
 morphologically, 154
- right atrioventricular connection, absence of, 314
- right atrium, 46, 60. *See also* opening of, 53
- right superior caval vein, 407, 414
 with brachiocephalic vein, 409
- right ventricle/ventricles, 60. *See also* left ventricle
 apical component of the, 65
 morphologically, 61, 68
- Ross procedure, 107
- second heart field, 11
- secundum defects, 177, 184
- Senning procedure, 323–325
- septal defects, 175, 180
 perimembranous, 333
- septal deficiency, 60
- septomarginal trabeculation, 67, 95, 222, 224, 261, 262, 325, 361
- septoparietal trabeculations, 67, 67, 172, 177, 180, 226, 262, 268
- deviated septum and, 261
- free-standing, 263
- malaligned muscular outlet septum and the, 353
- muscular outlet septum and the, 261
- serratus anterior, preservation of, 5
- shelf
 fibrous, 348
 subvalvar fibrous, 247
- Shone's syndrome, 239
- sinus impulse, 34
- sinus node, 34, 308
- sinus venosus defects, 177, 181–188, 426
- sinutubular junction, 72, 241
- solitary zone of apposition, 244
- spina vestibuli, 13
- splenic morphology, 470
- splenic syndromes, 470
- stenosis
 isolated pulmonary, 253
 treatment of congenital pulmonary valvar, 254
- sternotomy, 466
 complete median, 1
- median, 3, 42, 188
- subaortic defect, 353
- subaortic obstruction, 249
- subaortic outflow tract, 251
- subclavian arteries
 left, 6, 9
- subclavian sympathetic loop, 9
- subpulmonary infundibular stenosis, 364
- subpulmonary infundibulum, 243, 333, 335
 free-standing, 224
 myocardium of the, 33
- subpulmonary infundibulum, removal of, 107, 113
- subvalvar fibrous shelf, 247
- subvalvar obstruction
 dynamic, 250
- subvalvar stenosis, 246
- superior caval vein, 181
 abnormalities of the right, 407–408
 cannulation of the, 323
 connected to the left atrium, 414
 left, 189
 persistence of the left, 411
- superior intercostal vein, 6
 left, 8
- superior sinus venosus defect, 185, 187
- supero-inferior ventricles, 467, 470
- supradiaphragmatic drainage, 419
- supravalvar aortic stenosis, 252
- supravalvar stenosis
 true, 254
- supraventricular crest, 66, 123
 formation of, 179
- supraventricular tachycardias
 substrates for, 144, 147
- surgical correction, direct, 316
- sutureless repair, 418
- swiss cheese septum, 221
- systemic venous connection, 411, 415
 totally anomalous, 415
- systemic venous drainage, 470
- systemic venous sinus, 11
- systemic venous tributaries, 13
- Taussig-Bing malformation, 362, 435
- tendon of Todaro, 51, 133. *See also* tertiary interventricular communication, 217
- tetralogy of Fallot, 148, 171, 235, 261, 261, 270, 276, 353, 353–359, 368, 372, 407
 and an atrioventricular septal defect, 272
- ductal anomalies and, 448
- Eisenmenger's syndrome and, 411
- lesions and, 264, 270
- morphology of, 364
- normal outflow tract and, 261
- outflow tracks in heart with, 171
- overriding aortic valve and, 263
- statistics and, 446
- with pulmonary atresia, 255, 274
- tetralogy, intracardiac anatomy of, 264. *See also* tetralogy of Fallot
- Thebesian valve, 131
- thoracic artery, 3
- thoracic duct, 6, 430
 location of, 132
- thoracotomy
 anterior right or left, 9
 lateral, 3
 muscle sparing, 5
 right, 6
 standard lateral, 4
- thymus gland, 2, 3, 5, 72
 in an infant, 3
- trachea, 442
- transposition, 148, 321, 322, 339, 393
 congenitally corrected, 321, 334, 339, 344, 351
 muscular defect, 328
- perimembranous defect with, 326
- position of the aorta in, 334
- specimen of, 324
- stranding and overriding tricuspid valve, 329
- ventricular septal defects and, 326
- with perimembranous defect, 328
- with ventricular septal defect, 330
- without any other anomaly, 343
- triangle of Koch, 51, 57, 138, 140–143, 175, 177, 191, 218, 219, 231, 238, 238, 307, 325, 334, 426
- ablation at base of, 144
- atrial boundary of the, 85, 87
- atrial septum and, 193
- atrioventricular conduction axis and, 133, 309
- boundaries of, 56
- conduction axis and, 108, 109
- conduction tissues within the, 134
- landmarks of, 176
- location of, 56
- atrial hearts, 154
- tricuspid atresia, 148, 312, 315
 absence of the right atrioventricular connection and, 399
- causes of, 316
- classical, 307, 315
- Ebstein's malformation and, 238
- left-sided atresia and, 316
- morphologically right atrium and, 312

Index

- tricuspid valve, 93–95
 parachute malformation of the, 239
 straddling and overriding, 234
 straddling of the, 235
 trisinuate root, 242
 truncal relationships. *See also* valvar relationships
 tubular aorta, 458
 tubular hypoplasia, 285
 Turner syndrome, 245
 twisted atrioventricular connections, 467, 470
 umbilical venous tributaries, 14
 univentricular atrioventricular connections, 158, 161, 163, 299, 312
 hearts with, 169
 univentricular hearts, 148, 160, 299
 upper sternum, 467
 vagus nerves, 3, 5–9, 73, 451–453
 valvar anatomy
 importance of, 77
 valvar aortic stenosis, 242
 valvar complexes, 77, 80
 valvar morphology, 161–163
 valvar orifice, 234
 valvar relationships, 170
 valvar stenosis, 344
 valves
- atrioventricular, 88–89
 atrioventricular and arterial, 80–88
 mitral valve, 90–93
 tricuspid valve, 93–95
 Van Praagh, Richard, 153, 159, 383
 vascular rings, 437, 447
 vein of Marshall, 15
 venous plexuses, 11
 venous tributaries,
 reconstruction of, 16
 ventral aortas, 11
 ventricle/ventricles
 formation of the, 22–23
 incomplete right, 404
 left, 404
 left-sided, 351
 left-sided morphologically right, 403
 morphologically left, 393
 septal surface of the right, 180
 ventricular conduction tissues, 307
 ventricular cone, 46, 285
 ventricular infundibulum
 right, 83
 ventricular loop, 11, 18
 formation of, 24
 ventricular mass, 169
 ventricular myocardium, 34
 ventricular outflow tract, 27, 170, 263, 355, 372, 395
 dissection of the, 179
 dissection the right of the, 66
 left, 22, 23, 60, 83, 102–105, 104, 108, 196, 246, 327
 left ventricular entrance and, 356
 narrowing of the, 210
 narrowing of the left, 206
 obstructions in, 325, 344
 obstructions in the left, 250
 obstructions in the right, 240,
 See also tetralogy of Fallot
 opening the heart through the, 379
 right, 71, 327, 379
 rotation of, 332
 stenosis of the right, 252
 with transposition, 331
 ventricular pre-excitation, 138–144
 ventricular relationships, 167–169
 ventricular repair, 235
 ventricular septal defect, 252, 305, 326
 malalignment, 327
 restrictive, 431, 436
 ventricular septal defects, 226, 330
 anatomy of, 264
 ventricular septum, 175, 176, 249
 musculature of the, 224
 ventricular tachycardias
 curing, 147
 ventricular topology, 470
 basic patterns of, 165
 ventriculo-arterial connections, 163, 168, 169, 226, 392, 453
 concordant, 169, 235, 330, 399, 403
 discordant, 169
 ventriculo-arterial junctions, 77, 169, 170, 263, 321, 369
 ventriculo-infundibular fold, 107, 111, 170, 246, 247, 248, 261, 262, 263, 327, 361–365
 fusing with the septomarginal trabeculation, 222, 224, 262
 fusion with septal band, 325
 left-side, 110
 medial margin of, 143
 underside of, 95
 with the supraventricular crest, 123, 179, 261
 ventriculo-pulmonary arterial junction rights, 279
 visceral heterotaxy, 407
 Wolff-Parkinson-White syndrome, 138, 139
 xiphoid process, 1