

Index

Page numbers in **bold type** refer to illustrations.

■ A

- abscess
 lung, 69–70, **69–72**, **333**
 paravertebral, 319
 subphrenic, 229–230, **231**
- absorption atelectasis, 305
- accessory diaphragm, 326
- accessory fissures, pleura, 14, **15**, **16**
- accessory lung, 51
- acinar shadowing, confluent, in pulmonary edema, **198**
- acinus, **17**, 17–18, **18**
- acquired immune deficiency syndrome (AIDS), 97–99
 and cystic lung disease, 299
 infections, 97
 intrathoracic malignancy, 98–99
 lymphoproliferative disorders, 99
 and tuberculosis, 72
- actinomycosis, 85, **86**
- adenocarcinoma, 158, 161, **164**
 Noguchi classification, 161
 peripheral, 294
- adenoid cystic carcinoma, 152
- adenoma, bronchial, 152
- adult respiratory distress syndrome (ARDS), 108, **313**
 and trauma, 205, 208, **209**
- agenesis, pulmonary, 57–58, **58**
 differential diagnosis, 303
- AIDS, *see* acquired immune deficiency syndrome
- air
 leakage, 207
 in mediastinum, 274–275
 trapping, 298–299, 300, **300**
- air space nodules, in pneumonia, 69
- airways
 diseases, 117–125
 rupture, 207
- allergic angitis and granulomatosis, 103–104, **105**
- allergic bronchopulmonary aspergillosis, 82, **83**
- alveoli, **16**, **17**
 damage, diffuse, 208
 hyperventilation, 194–195
 microlithiasis, 347
 proteinosis, 294, **294**, 296, **314**
 sarcoidosis, 95, **95**
 shadowing, 321
- alveolitis, extrinsic allergic, 293–294, 330
- amebiasis, 86–87, **87**
- anatomy
 heart, 240, **240**
 lung, segmental, **36**, **37**
 pleura, 9–16
 vascular system, 20, **21**, **22**, **23**, 23–24
- aneurysm
 aorta, *see* aortic aneurysm
 coronary artery, **257**
 dissecting, 279, 281
 false, coil embolization, 355–356, **356**
 pulmonary artery, 341, **342**
 ventricular, calcified, **252**
- aneurysmal bone cyst, **237**
- angiography
 coronary, **261**
 pulmonary, 42, **42–44**, 189
- ankylosing spondylitis, 102–103
- ankylostomiasis, 91
- anomalous pulmonary venous drainage
 partial, 61–62, **62**
 total, 251, 253
- antiglomerular basement membrane disease, 105, **105**
- aorta
 anomalies, 276–278, **277–279**
 blunt injury, **211**, 211–212
 classification of dissection, **282**
 coarctation, 244, **245**, 246, **246**, **247**
 configuration, 240
 dissection, 279, 281, **282**, 283–284, **284**, **285**
 ectasia, 278
 regurgitation, 268, **268**
 stenosis, **241**, 244, **244**, **267**, 267–268
 thoracic, diseases, 276–285
 traumatic injury, **280**, 281, **281**
- aortic aneurysm, 282, **282**, **283**
- false, 279, **281**
- thoracic, 279
- true, 279
- aortic arch, 277, **277**, 278, **278**
- aortitis, 284
- aortography
 arch, and chest wall injuries, 200
 and blunt aortic injury, 211, **211**
- aortopulmonary window, **245**
- apical lordotic view, 4, **4**
- apical pleural cap, 11
- apicomediastinal angle, opacification, 315–317
- aplasia, pulmonary, 57–58, **58**, 303
- ARDS, *see* adult respiratory distress syndrome
- arms, upper, 9
- arrhythmia, severe, 256
- arterial catheterization, **42**
- arteriovenous malformations (AVMs)
 coil embolization, **354**, 354–355
 pulmonary, 61, **61**
- asbestos-induced pleural changes, 142–144, **142–144**, **223–224**, 348, **348**
- asbestosis, 142–144, **142–144**, **146**, 330
 with interstitial changes, 297, **297**
- ascariasis, 90–91, **91**
- aspergilloma, 82–83, **83**, **84**, **311**
- aspergillosis, 81–84
 allergic bronchopulmonary, 82, **83**
 invasive, airways, 82
 primary invasive, 81
 secondary angioinvasive, 81–82, **82**
- aspiration, and pneumothorax, 203, 204
- aspiration pneumonia, postictal, **68**
- asthma, bronchial, 125
- atelectasis, **154**, 207, **221**
 absorption, 305
 and asbestos-induced pleural changes, 144, **144**
 basal plate, 318, **319**
 in bronchial carcinoma, 163, **163**
 compression, 307
 and diaphragm diseases, 229
 differential diagnosis, 302, **302**
 discoid, 187
 lobar and segmental, 305, 307, **308**, **308–309**, **309**
 and opaque hemithorax, **301**
 plate, 327, **327**
 and pneumothorax, 203
 relaxation, 307
 round, 144, **144**, **307**
 segmental, 326
- atherosclerosis, 256
- atherosclerotic ulcer, 281
- atresia
 bronchial, congenital, 60, **60**
 pulmonary artery, 62–63, **63**
 tricuspid, **245**
- atrial enlargement, **242**, 243
- atrial fibrillation, 262, **263**
- atrial myxoma, 269, **269**
- atrial septal defect, 193, **194**, **245**, 247, **248**, **249**
- attenuation, lung, decreased, 297
- atypical lymphoproliferative disorder, 99

autoimmune disorders, 100–105
 AVMs, *see* arteriovenous malformations
 axillary folds, 8, 9
 azygoesophageal stripe, 12, 13, 13
 azygos lobe
 fissure, 14, 15
 pleural line, 317

■ B

ball-valve prosthesis, Starr–Edwards, 272, 272
 barrel chest, 111, 234, 235
 basal pleural reflection, 11
 bat's wing pattern, in pulmonary edema, 199
 B-cell lymphoma, 181
 bell-shaped chest, and osteomalacia, 235
 bifurcation, tracheal, 20
 biopsy, 349, 349–350, 350
 Blalock–Taussig shunt, 253
 bleomycin-induced pneumonitis, 109
 blue bloater, 111
 blunt trauma, 206, 207, 212
 aorta, 211, 211–212
 and diaphragmatic rupture, 212
 Bochdalek hernia, 231, 231, 232
 bone, eosinophilic granuloma, 154
 bone cyst, aneurysmal, 237
 BOOP, *see* bronchiolitis obliterans organizing pneumonia
 boot-shaped heart, 254, 254
 branching pattern, bronchi, 33–35
 breast carcinoma
 metastatic, 173
 and pleural effusion, 218
 bronchial adenoma, 152
 bronchial artery, embolization, 352–353, 353
 bronchial asthma, 125
 bronchial carcinoid, 152, 154, 154
 bronchial carcinoma, 157–172, 317, 342, 343
 classification, 158
 clinical features, 161
 computed tomography, 165, 166–168
 hematogenous spread, 165
 histologic types, 159
 intrathoracic spread, 165, 165
 lymph node metastases, 168, 170
 MRI, 172, 172
 nodal staging, 171
 non-small cell, lymph node metastases, 168
 osteolytic metastasis, 239
 pathology, 158, 161
 pneumonic form, 164
 with pulmonary venous thrombosis, 169
 radiographic signs, 162, 165
 radionuclide scintigraphy, 171
 staging, 161
 and superior vena cava encasement, 169, 170–171

 TNM classification, 153, 159, 160
 bronchial tree, 17
 bronchiectasis, 117–121, 327
 clinical features, 119
 cylindrical, 117, 119, 120, 121
 pathology, 117
 radiological findings, 119–121, 119–121
 saccular, 117, 121
 scintigraphy, 121
 varicose, 117, 121
 bronchioalveolar carcinoma, 294, 304
 bronchiolitis
 cellular, 122, 122, 295, 295
 constrictive, 122, 123, 123, 298–299, 300, 300
 follicular, and rheumatoid arthritis, 101, 101
 and interstitial pneumonia (BIP), 95
 postinfectious, 122
 and small airway disease, 122–125
 bronchiolitis obliterans organizing pneumonia (BOOP), 95, 109, 123, 124, 125
 bronchioalveolar carcinoma, 164
 bronchitis, chronic, 116, 116, 331
 bronchocele, 317
 bronchogenic cysts, 54–55, 55, 56
 bronchography, 45, 45–46
 bronchopneumonia, 64–65, 65
 plain chest radiograph, 65, 67–68
 bronchopulmonary sequestrations, 50–53, 319
 angiography, 52, 53
 clinical features, 51
 pathology, 50–51
 radiologic findings, 51, 51, 52
 bronchovascular bundle, and CT, 30, 30
 bronchus/bronchi, 20, 20
 atresia, congenital, 60, 60
 intermedius, 20
 left main, branching pattern, 35
 occlusion, 163
 post-traumatic stenosis, 206
 right main, branching pattern, 33–34
 rupture, 203, 207
 stenosis, 163
 tracheal, 59
 see also endobronchial
 bullous emphysema, 115, 115
 bundles, vascular, 23
 butterfly distribution, in pulmonary edema, 198, 198

■ C

calcifications
 cardiac, 251, 252
 coronary artery, 256, 259
 intrathoracic, 344, 344–348
 lymph nodes, 348
 metabolic, 347
 mitral annulus, 263, 265
 myocardium, 258
 pericardial, 273, 273
 pleural, 348

 pulmonary, 345, 345–346
 silicosis, 347, 348
 tracheobronchial, 347
 candidiasis, 80–81, 81
 cannonball pattern, pulmonary metastases, 175
 capillary hemangiomas, 195
 carcinoid
 bronchial, 152, 154, 154
 thymic, 290
 carcinoma
 bronchial, *see* bronchial carcinoma
 bronchioalveolar, 304
 large cell, 334
 multifocal bronchioalveolar, 294
 see also neoplasms; tumors
 carcinomatosis, pleural, 173, 302
 cardiac anomalies
 aortic stenosis, 244, 244
 with left-to-right shunt, 193–194, 194, 247–253
 pulmonary stenosis, 243–244, 244
 with right-to-left shunt, 253–255
 without shunt, 243–247
 see also cardio-; heart
 cardiac calcifications, 251, 252
 cardiac catheterization, 194, 263, 266, 268
 cardiac chamber enlargement, 242
 cardiac contour, 240, 241
 cardiac disease, 240–274
 acquired, 255–269
 congenital, 243–255
 cardiac failure, 255–256
 cardiac lobe, 14, 14
 cardiac magnetic resonance imaging, 260, 260
 cardiac neoplasms, 269, 269
 cardiac pacemakers, 269–270, 270
 cardiac size, 240, 241, 241
 cardiology, and CT, 29
 cardiomegaly, and pulmonary edema, 199
 cardiomyopathies, classification, 261
 cardiomyopathy, 261–262
 dilated, 262
 hypertrophic, 263
 cardiophrenic angle, opacification, 318–320
 catheter, fragment retrieval, 351, 351
 catheterization
 arterial, 42
 cardiac, 194, 263, 266, 268
 cavitating lung lesions, 332, 332–333, 333
 cavitation, 81
 pulmonary lesions, 298, 299
 tuberculous, 79
 in Wegener granulomatosis, 104
 CAVITY acronym, 335
 cellular bronchiolitis, 122, 122, 295, 295
 centrilobular emphysema, 112, 113, 297, 298
 cerebrospinal fluid fistula, 205, 215
 cervicothoracic sign, mediastinal masses, 287
 check-valve obstruction, 127

- chest wall, 5–9
 diseases, 234, **235–239**
 emphysema, 202, **202**
 flail chest, 200, **201**
 injuries, 200–201, **200–202**
 skeleton, 5, 8
 soft tissues, 8, 8–9
see also thoracic; thorax
- Chilaiditi syndrome, 230, **230**
- chlorine gas poisoning, **148**
- chondroma, pulmonary, **153**
- chronic hypercapnia syndrome, 195
- chronic obstructive pulmonary disease (COPD), 110–116
- chronic thromboembolic pulmonary hypertension (CTEPH), 187–193, **191, 192, 300, 300**
- Churg–Strauss disease, 103–104, **105, 311**
- chylothorax, and pleural effusion, 215, **216**
- cicatrical emphysema, 114, **114, 141**
- cigarette smoking, 157, 158
- clavicles, 8
 companion shadows, 9, **9, 325**
 coal-workers' pneumoconiosis, 142, 323, 333
- coccidioidomycosis, 84, **85**
- coeur en sabot* appearance, 254, **254**
- coil embolization
 arteriovenous malformations, **354, 354–355**
 false aneurysms, pulmonary arteries, 355–356, **356**
- collagen diseases, 261
- collar sign, and diaphragmatic rupture, 212
- colon carcinoma, metastases, **322**
- companion shadows
 clavicles, 9, **9**
 lateral chest wall, 10–11, **11**
 ribs, 10, **12, 325**
- compartments, mediastinal, 24, **25**
- compliance, vascular system, 20, **21**
- compression atelectasis, 307
- computed tomography (CT), 28–37
 in cardiology, 29
 ECG-gated, in cardiac disease, 257
 electron-beam, 29
 helical, 28
 high-resolution, 28–29, 293–300
 incremental, 28
 lung, segmental anatomy, **36, 37**
 multidetector (MDCT), 28, **29, 189, 259–260**
 non-ECG-gated, in cardiac disease, 256
 normal lung, **30, 30–31, 31**
 and PET, 42
 pneumoconiosis classification, 134, **135, 136**
 principle, 28, **28**
 pulmonary angiography, 189
 pulmonary disease, 293–300
 and solitary pulmonary nodule, 149–150
 technique, 28–29
 thorax, normal, 31, **32–37**
- congenital conditions
 aortic stenosis, 244
 bronchial atresia, 60, **60**
 cystic adenomatoid malformation, lung, 56–57, **57**
 heart disease, 243–255, **245**
 lobar emphysema, 59, **59**
- connective tissue diseases, 100–105
- consolidation
 and ground-glass opacification, 293
 multifocal airspace, **311**
 multifocal peribronchial, 294
 pneumonic, **305, 319**
- constrictive bronchiolitis, **122, 123, 123, 298–299**
- continuous diaphragm sign, 211
- contusion, pulmonary, **205, 205–206, 206, 207, 209, 311**
- conventional tomography, 25, **25–27**
- COPD, *see* chronic obstructive pulmonary disease
- coronary artery
 aneurysm, **257**
 angiography, **261**
 bypass graft, 270–271, **271**
 calcification, 256, **259**
 disease, MDCT, 259–260
- coronary stents, 271, **271**
- cryptococcosis, 86, **86**
- cryptogenic organizing pneumonia, 124
- cuffing, peribronchial, in pulmonary edema, **197, 198**
- cylindrical bronchiectasis, 117, 119, **120, 121**
- cystic lung disease, 334, **335–337**
- cysts
 bone, aneurysmal, **237**
 bronchogenic, 54–55, **55, 56**
 pericardial, 273, **273, 319**
- **D**
- D, five D's, 1
- Da Nang syndrome, 208
- defocused grid, 5
- densitometry, CT, and solitary pulmonary nodule, 149
- dependent viscera sign, 212
- dermatomyositis, 102, **103**
- desquamative interstitial pneumonia (DIP), 95–96
- diaphragm, 9, **10**
 accessory, 326
 continuous, in pneumo-mediastinum, 211
 diseases, 228–234
 elevation, and pulmonary edema, 199
 inversion, 219
 paralysis, 229, **229, 231**
 rupture, traumatic, 212, **213**
 tumors, 234
- DIC, *see* disseminated intravascular coagulation
- diethylenetriaminepentaacetic acid (DTPA), 38
- differential diagnosis, 1
- diffuse alveolar damage, 208
- dilated cardiomyopathy, 261, **262**
- dissecting aneurysms, 279, 281
- disseminated intravascular coagulation (DIC), 208
- diverticula, pericardial, 273
- double right heart contour sign, **267**
- drainage, 350–351
- Dressler syndrome, 256
- drug-induced lung disease, 108–109, **109, 331**
- DTPA, *see* diethylenetriaminepentaacetic acid
- ductus arteriosus, patent, 193, **245, 250–251, 251, 253**
- dumb-bell configuration, nerve sheath tumors, **292**
- **E**
- Ebstein anomaly, 254–255
- echinococcosis, 89–90, **90**
- Echinococcus*, collapsed endocyst, **333**
- echocardiography, 193, 199, **199**
see also sonography; ultrasound
- edema
 interstitial, 296
 pulmonary, 195–199, **314, 319**
- effusion
 fissural, 217, **219**
 interlobar, 217, **218, 326, 326**
 and opaque hemithorax, **301**
 pericardial, 272, **272**
 pleural, *see* pleural effusion
- eggshell calcification, and silicosis, **139**
- Eisenmenger reaction, 193, **194, 247, 251**
- electron-beam computed tomography, 29
- embolism, pulmonary, 69–70, **69–72, 187–193**
- embolization
 bronchial artery, 352–353, **353**
 pulmonary arteriovenous malformations, **354, 354–355**
- emphysema, 110–115, 202, **202, 297, 298**
 and barrel chest, 234, **235**
 bullous, 115, **115**
 centrilobular, 112, **113**
 chest radiograph, **111, 111–112, 112**
 cicatricial, 114, **114, 141**
 clinical features, 111
 compensatory, 115, 340
 computed tomography, 112–114, **113–114**
 lobar, congenital, 59, **59**
 panlobular, 113, **113**
 paraseptal, 113–114, **114**
 pathology, 110–111
 and silicosis, **141**
 subcutaneous, 202, **202**
- empyema, 70, **72**
- drainage, 350–351, **351**
- encasement
 pulmonary, 327, **328**
 superior vena cava, **169, 170–171**
- endobronchial hamartoma, **152**

endobronchial metastases, **173**, **175**
 endobronchial tumor, **166**
 endocyst, **333**
 endothelialized thromboemboli, **189**,
190, **192**
 enostosis, clavicle, **321**
 eosinophilia, pulmonary, 106–107
 eosinophilic granuloma, bone, **154**
 eosinophilic pneumonia, 106–107,
107
 epicardial fat pad, **319**
 epituberculosis, **75**
 esophageal rupture, **203**
 esophagus, air in, **274**
 Euler–Liljestrand reflex, **196**
 eventration, hemidiaphragm, **229**,
229
 examination
 apical lordotic view, **4**, **4**
 frontal, **2**
 lateral, **3**, **3**
 oblique, **3**, **3–4**
 technique, **1–49**
 extrapleural lipoma, **239**
 extrinsic allergic alveolitis, **293–294**,
330
 exudative tuberculosis, **74**, **76**, **77**, **78**

■ **F**

facies, mitral, **262**
 fallen lung sign, **207**
 Fallot tetralogy, **245**, **253–254**, **254**
 Fallot trilogy, **245**
 false aneurysm, aorta, **279**, **281**
 fat pad, epicardial, **319**
 FDG, *see* fluorodeoxyglucose
 fibrocirrhotic tuberculosis, **75**, **78**, **79**,
79
 fibrosarcoma, tibial, pulmonary
 metastases, **176**
 fibrosis
 pulmonary, *see* pulmonary fibrosis
 radiation, *see* radiation fibrosis
 fibrothorax, **205**, **222**, **224**, **224**, **225**
 differential diagnosis, **302**
 fissural effusion, **217**, **219**
 fissures
 interlobar, *see* interlobar fissures
 pleural, *see* pleura
 flail chest, **200**, **201**
 Fleischner lines, **327**
 fluorodeoxyglucose (FDG), **41**
 fluoroscopy, **4**
 focused moving grids, **4**
 follicular bronchiolitis, and rheuma-
 toid arthritis, **101**, **101**
 foreign body
 aspiration, **126**, **126–127**, **127**
 retrieval/extraction, **351**, **351–352**
 fractures
 ribs, **200**, **200**, **201**
 sternum, **200–201**, **201**
 vertebral, **201–202**
 frontal chest radiograph, **2**, **2**
 fumes, inhalation, **147**, **147–148**, **148**
 fungal diseases, lung, **80–86**
 funnel chest, **235**

■ **G**

galloping consumption, **72**
 gamut approach, **1**
 gases, toxic, inhalation, **147**, **147–148**,
148
 germ cell tumor, mediastinum,
290–291
 Ghon focus, **74**, **75**
 giant cell interstitial pneumonia, **95**
 goiter, thyroid, **285**, **287**
 gradient-recalled echo (GRE)
 sequences, **49**
 granuloma, sarcoidosis vs. tuberculo-
 sis, **91**
 granulomatosis
 allergic, **311**
 lymphomatoid, **181**
 Wegener's, **323**
 great vessels
 anomalies, **277**
 transposition, **245**, **254**
 grids, scatter-reduction, **4**, **4–5**, **5**
 ground-glass opacification
 and ARDS, **208**
 in BOOP, **125**
 and consolidation, **293**
 in EAA/hypersensitivity pneumo-
 nitis, **146**
 hyaline membrane disease, **313**
 hypersensitivity pneumonitis, **299**,
299
Pneumocystis pneumonia, **88**, **88**
 in pneumonia, **69**
 pulmonary disease, **293–294**

■ **H**

half-Fourier acquisition single-shot
 turbo spin echo (HASTE), **49**
 hamartoma
 endobronchial, **152**
 pulmonary, **151–152**, **152**, **153**
 Hampton hump, **187**
 Hand–Schüller–Christian disease, **154**
 hazy opacification, **307**
 bilateral symmetric, **312**, **313–314**
 and hemothorax, **205**
 hilar haze, in pulmonary edema,
198
 heart
 anatomy, **240**, **240**
 calcifications, **251**, **252**
 cardiomyopathies, **261–262**
 chamber enlargement, **242**
coeur en sabot appearance, **254**,
254
 disease, *see* heart disease
 double right contour sign, **267**
 MRI, **260**, **260**
 multivalvular disease, **268**
 neoplasms, **269**, **269**
 pericardial disease, **272–273**
 postoperative imaging, **269–272**
 prosthetic valves, **272**, **272**
 size, **240**, **241**, **241**
 valves, prosthetic, **272**, **272**
 valvular disease, acquired, **262–263**

see also atrial; cardiac; cardio-; left
 ventricle; ventricular

heart disease
 acquired, **255–269**
 congenital, **243–255**, **245**
 hypertensive, **269**
 ischemic, **256–261**
 hemangiomas, capillary, **195**
 hematoma
 intramural, **281**, **283–284**
 mediastinal, **284**
 pulmonary, **206**, **207**
 hemidiaphragm
 depression, **228**
 elevation, **187**, **229**, **229**
 eventration, **229**, **229**
 hemithorax
 hyperlucent, **339**
 opaque, **301**, **301–303**, **303**
 hemodynamic failure, **256**
 hemopneumothorax, **203**
 hemosiderosis, **331**, **347**
 hemothorax, **205**
 and rib fractures, **200**, **201**
 hernia
 Bochdalek, **231**, **231**, **232**
 diaphragmatic, **57**, **231–232**,
231–234, **319**
 hiatus, **232**, **233**, **234**
 Morgagni, **231**, **231**, **232**, **233**
 hexakis-2-methoxyisobutylisonitrile
 (HMIBI), **39**
 hilar dance sign, **193**
 hilar enlargement, **341–342**, **342**, **343**
 hilar haze, in pulmonary edema, **198**
 hilar mass, and bronchial carcinoma,
163
 histiocytosis, Langerhans cell,
154–157, **155–157**, **298**, **299**, **317**,
324, **336**
 histoplasmosis, **84**, **84**, **85**, **345**
 HMIBI, *see* hexakis-2-methoxy-
 isobutylisonitrile
 Hodgkin lymphoma, **178**, **179**, **180**
 holly leaf appearance, pleural thick-
 ening, **223**
 honeycomb pattern, **298**, **298**, **329**
 congenital, **54**
 in interstitial pneumonia, **95**, **96**,
96, **297**, **329**, **330**, **330**
 and leiomyomatosis, **322**
 and pleural fluid, **219**
 and pulmonary fibrosis, **298**, **298**
 in pulmonary fibrosis, **94**, **136**, **142**,
144, **329**
 in sarcoidosis, **94**
 horizontal fissure, pleura, **14**, **14**
 hot-tub lung, **145**
 hyaline membrane disease, **313**
 hydatid cysts, **89**, **89–90**, **90**
 hydropneumothorax, **218**
 hydrostatic pressures
 pleura, **10**, **10**
 pulmonary vessels, **20**, **21**, **22**
 hypercapnia syndrome, chronic, **195**
 hyperimmune cardiomyopathies, **261**
 hyperinflation, distal, and bronchial
 carcinoma, **163**

- hyperplasia, thymic, 288–289, **289**
 hypersensitivity pneumonitis, 145,
146–147, 293–294, 323, 330
 ground-glass opacification, 299, **299**
 hypersensitivity reactions, 108
 hypertension, pulmonary, 183–199,
 194–195, 341, **342**
 hypertensive heart disease, 269
 hypertrophic obstructive cardio-
 myopathy, 261, **263**
 hypogenetic lung, 53, **53**, **54**
 hypoplasia
 pulmonary, 57–58, **58**
 pulmonary artery, 62–63, **63**
- **I**
- iceberg, melting, 188
 idiopathic interstitial pneumonia,
 95–97, **96**, **97**
 idiopathic pulmonary hemosiderosis,
 105, **106**
 ILO, *see* International Labor Office
 imaging studies, interpretation and
 use, 1
 indications for examination, 1
 induration, in pulmonary edema, 196
 infarction, pulmonary, 187, **188**, 189,
189, **191**, 305
 infection, 64–109
 inflammatory disorders, 64–109
 inhalational lung disease, 126–148
 inhalation of toxic gases, **147**,
 147–148, **148**
 inorganic dusts, and pneumoconiosis,
 128, 136–144
 interlobar effusion, 217, **218**, 326, **326**
 interlobar fissures, 14, **14**, **15**, 16, **16**,
 30–31, **32**, 326
 interlobular septa, and CT, 30
 International Labor Office (ILO)
 classification
 forms, **129**, **131**, **135**
 pneumoconiosis, 128–134, **137**
 interstitial edema, 296
 interstitial pneumonia, 65, **65**, **68**,
 95–97, **96**, **97**, 329, **330**
 acute, 96–97, **97**
 and AIDS, 99
 and progressive systemic sclerosis,
102
 intervention, thoracic, 349–356
 intramural hematoma, 281, 283–284
 intrapulmonary cysts, 54
 ischemic heart disease, 256–261
- **J**
- jugular fossa, 9
 junction line, pleural, 12, **12**, **13**
- **K**
- Kaposi's sarcoma, 98, **98**, **99**
 Kartagener syndrome, **120**
 Kerley lines, **197**, 198, 328
 Kveim test, 91, 92
 kyphoscoliosis, 234
- **L**
- Langerhans cell histiocytosis,
 154–157, **155–157**, 298, **299**, 317,
 324, **336**
 large cell carcinoma, 161, **334**
 lateral chest radiograph, 3, **3**, **7**
 left ventricle
 ejection fraction, **255**
 enlargement, 240
 failure, 255, **255**
 thrombus, **259**
 leiomyomatosis, malignant, 322, **333**
 Letterer–Siwe disease, 154
 Liebow classification, idiopathic in-
 terstitial pneumonia, 95
 linear opacification, 324, **325**
 linear shadowing, 324–330
 lingular pneumonia, **67**
 lipoma, extrapleural, **239**
 lobar boundaries, 16, **16**
 lobar opacification, 304–314
 lobar pneumonia, 64, 65, **65**, **66–67**
 lobes, pulmonary, 18, **19**
 lobular pneumonia, 64–65
 lobule, pulmonary, 17, 17, 18
 Löffler infiltrate, 86, 107
 Löffler syndrome, 106, **107**
 Löfgren syndrome, 91
 lordotic view, apical, 4, **4**
 lucency, increased, pulmonary,
 337–338, **339**
 lung disease
 CT, high-resolution/thin-section,
 293–300
 drug-induced, 108–109, **109**
 inhalational, 126–148
 radiation-induced, 107–108, **108**,
 331
 lung/lungs
 abscess, 69–70, **69–72**, **333**
 accessory, 51
 arteriovenous malformations, 61,
61
 attenuation, decreased, 297
 benign tumors, 150–156, **151**
 blood supply, 20
 cancer, screening, 157–158
 cavitating lesions, **332**, 332–333,
333
 congenital cystic adenomatoid mal-
 formation, 56–57, **57**
 cysts, 299, 334, **335–337**
 encasement, 327, **328**
 fallen, 207
 fungal diseases, 80–86
 gravitational effects, 20, **21**
 hot-tub, 145
 hypogenetic, 53, **53**, **54**
 increased lucency, 337–338, **339**
 Langerhans cell histiocytosis,
 154–157, **155–157**, 298, **299**, 317,
 324, **336**
 lobar boundaries, 16, **16**
 lower, opacification, 318–320
 parenchyma, 16–18, **205–207**,
 205–208, **209**
- regions, 16, **16**
 segmental anatomy, 18, **19**, **36**, **37**
 shadows, 324
 shock, 208
 stiff, 208
 subdivision, 16, **16**
 tumors, 149–182
 upper lobe, bronchi, 20, **20**
 vanishing, **338**
 zone landmarks, 16, **16**
see also hilar; lobar; lobular; pul-
 monary
 lupus erythematosus, systemic, 100,
100
 Lutembacher syndrome, 247
 lymphadenitis, and pulmonary tuber-
 culosis, 75
 lymphangioliomyomatosis, **336**
 lymphangiomyomatosis, 298, **299**
 lymphangitis carcinomatosa, pulmo-
 nary, 173, **176**, **177**, 296, **296**
 lymph node enlargement
 Hodgkin's disease, **180**
 mediastinal, 164–165, 290
 in sarcoidosis, 92
 lymphocytic interstitial pneumonia,
 95, 294, 299
 and AIDS, 99
 lymphoma, 178–182, **179**, 341, **343**
 and AIDS, 98
 B-cell, 181
 classification, 178
 computed tomography, 179,
179–180
 pulmonary, 181, 294
 thymic, 290
 treated, 181–182
 lymphomatoid granulomatosis, 181
- **M**
- Mach effect, 10, **11**
 magnetic resonance imaging, 47,
47–48, 49
 maladie de Roger, 250
 malformations, 50–63
 MALT lymphoma, 99, 181, **181**
 manubrium sterni, 325
 Marfan's syndrome, 279
 Masson inclusion bodies, 124
 MDCT, *see* multidetector computed
 tomography
 mediastinal masses
 anterior, **288**
 cervicothoracic sign, **287**
 classification, **286**, 287
 vs. pulmonary, **286**
 mediastinitis, 276
 mediastinum, 24, **25**
 cysts, 54
 diseases, 274–292
 displacement, 203, **204**, **205**, 229,
 274, **274**
 hematoma, 284
 injuries, **210**, 210–212, **211**, **213**
 lymph node enlargement, 290
 neoplastic widening, 285–292
 non-neoplastic widening, 276

- mediastinum
 primary tumors, **290**, 290–291, **291**
 tumors, neurogenic, 291, **292**
 melting iceberg, 188
 meniscus sign, 90, **90**
 mesothelioma, pleural, 225–227,
226–228, **238**, 328
 differential diagnosis, 302
 metastases, pulmonary, *see* pulmo-
 nary metastases
 microlithiasis, alveolar, 347
 miliary stage, sarcoidosis, 92, **92**, **93**
 miliary tuberculosis, 74, 76, **76**, 79
 Milroy–Trenaunay malformation, **216**
 mitral annulus, calcification, 263, **265**
 mitral facies, 262
 mitral regurgitation, 263–266, **266**
 mitral stenosis, 262–263, **264**
 mitral valve, disease, **267**
 mitral valve ring, calcified, **252**
 Morgagni hernia, 231, **231**, 232, **233**
 mosaic attenuation/perfusion pattern
 bronchiolitis, 122, **123**
 on CT, 293, 299–300, **300**
 hypersensitivity pneumonitis, **147**
 pneumonia, 88
 pulmonary hypertension, **186**, 191,
192
 sarcoidosis, 95
 Swyer–James–MacLeod syndrome,
 124, **124**
 Mounier-Kuhn tracheobroncho-
 megaly, 117, **118**
 mucoepidermoid, 152
 mucoid impaction, 317
 mucosa-associated lymphoid tissue
 lymphoma, 99
 mucosa-associated lymphoid tissue
 (MALT) lymphoma, 181, **181**
 multidetector computed tomography
 (MDCT), 28, **29**, 189
 in coronary artery disease, 259–260
 multivalvular disease, 268
 muscularization, pulmonary arterio-
 les, 193
 mycetoma, **311**
 mycobacteria, 72
 and AIDS, 97
Mycobacterium avium complex, 97,
98
 mycoses, 86
 myocardial dysfunction, 256
 myocardial infarction, 256–261
 myocardial perfusion
 MRI evaluation, 49
 scintigraphy, 39–41, **40**, 256, **258**
 myocarditis, 261
 myocardium, calcification, **258**
 myxoma, left atrial, 269, **269**
- **N**
- National Lung Cancer Screening Trial,
 158
 neoplasms
 cardiac, 269, **269**
 pulmonary, 311
see also carcinoma; tumors
- nerve sheath tumors, mediastinum,
 291, **292**
 neurofibromatosis, type 1, **321**
Nocardia asteroides, 85
 nodal staging, bronchial carcinoma,
 171
 nodules, pulmonary, *see* pulmonary
 nodules
 Noguchi classification, adenocarci-
 noma, 161
 non-Hodgkin lymphoma, 178, **179**,
180
 nonspecific interstitial pneumonia, 96
 and rheumatoid arthritis, 101, **101**
 normal chest radiograph, 5–25
 systematic evaluation, 5, **6**, **7**
 normal findings, 1–49
 normal lung, CT, **30**, 30–31, **31**
 notching, *see* ribs
- **O**
- oblique fissures, pleura, 14, **14**
 oblique views, 3, 3–4
 off-center grid, 5
 oleothorax, **225**, **238**
 oligemia, 163, 187
 Ondine's curse syndrome, 195
 opacification
 cardiomeastinal, **318**
 cardiophrenic angle, 318–320
 hazy, *see* hazy opacification
 linear, 324, **325**
 lobar, 304–314
 lower lung, 318–320
 rounded, **321**
 segmental, 304–314
 upper zone, **315**, 315–317
 opaque hemithorax, **301**, 301–303,
303
 organizing pneumonia, 95, 109, 124,
125, 294
 ossification, idiopathic pulmonary,
 347
 osteomalacia, and bell-shaped chest,
235
 osteomyelitis, ribs, 234, **236**
 osteophyte formation, 319
 osteosarcoma, scapular, **239**
 ostium primum defect, 248, **250**
 ostium secundum defect, 248, **249**
 oxygen lung, 208
- **P**
- pacemakers, 269–270, **270**
 Pancoast tumor, 158, **165**, **236**, **315**,
 317
 panlobular emphysema, 113, **113**,
 297
 para-aortic stripe, **11**, **12**, 13, **13**
 PA radiograph, **2**, **6**
 paragonimiasis, 90, 347, **347**
 paralysis, diaphragm, 229, **229**, **231**
 paraseptal emphysema, 113–114, **114**
 parasitic infections, 86–91, 347
 paratracheal stripe, right, **12**, 13
 paravertebral stripe, **11**, **12**, 13, **13**
- parenchyma, lung, 16–18
 trauma, **205–207**, 205–208, **209**
 partial anomalous pulmonary venous
 drainage, 61–62, **62**
 patent ductus arteriosus, 193, **245**,
 250–251, **251**, **253**
 pectus carinatum, **235**
 pectus excavatum, **235**
 penicillamine, and bronchiolitis oblit-
 erans, 109
 perfusion scintigraphy, myocardial,
 39–41, **40**
 peribronchial cuffing, in pulmonary
 edema, 198
 pericardial cysts, 273, **273**, 319
 pericardial disease, 272–273
 pericardial diverticula, 273
 pericardial effusion, 272, **272**
 pericarditis, constrictive, 272–273, **273**
 peripulmonary pleura, 10, **11**
 PET, *see* positron emission tomogra-
 phy
 phrenic nerve dysfunction, 229
 physiology, pleura, 9–10
 Pickwickian syndrome, 195
 pigeon chest, **235**
 pink puffer, 111
 plate atelectasis, 327, **327**
 pleura, 9–16
 accessory fissures, 14, **15**, **16**
 anatomy, 9–10
 asbestos-induced changes,
 142–144, **142–144**
 calcifications, 348, **348**
 carcinomatosis, 173, 302
 and CT, 31, **33**
 diseases, 214–228
 effusion, *see* pleural effusion
 fissures, 14, **14**, **15**, **16**
 hydrostatic pressures, 10, **10**
 injuries, 203–205
 opacities, 326
 peripulmonary, 10, **11**
 physiology, 9–10
 reflections, 12, **12**, **13**
 split pleura sign, **72**
 thickening, *see* pleural thickening
 pleural effusion, 214–220, **313**
 atypical forms, 217, **217–219**
 basal, **319**
 chest radiograph, 215, **215–218**, 217,
 219
 clinical features, 215
 CT, 219–220
 differential diagnosis, 302
 drainage, 350–351, **351**
 etiology, 214
 fissural, 217, **219**
 interlobar, 217, **218**
 and mesothelioma, 225
 MRI, 220
 parapneumonic, 68
 pathology, 215
 and pulmonary edema, 199
 and pulmonary embolism, 187, 188
 and rheumatoid arthritis, 101
 tuberculosis, 76, **77**
 ultrasound, 219

- variants, **217**
 vs. pleural thickening, **222**
- pleural junction line, **12, 12, 13**
- pleural line, in pneumothorax, **203, 204**
- pleural mesothelioma, **225–227, 226, 227, 228, 238**
 differential diagnosis, **302**
 staging system, **226, 227**
- pleural stripe, **11, 33**
- pleural thickening, **222, 223–224, 225, 225**
 apical, **317, 317**
 basal, **319**
 differential diagnosis, **302**
 and mesothelioma, **226, 226, 228**
- pleurisy, exudative, **74**
- pneumatocele, **340**
- pneumoconiosis, **128–144, 347, 348**
 coal-workers', **142, 323, 333**
 CT classification, **134, 135, 136**
 ILO classification, **128–134**
 and inorganic dusts, **128, 136–144**
 interpretive criteria, **132–134**
 pathology, **128–144**
 and pulmonary nodules, **296**
- Pneumocystis jiroveci/carinii* pneumonia, **87–88, 88, 89, 293**
- pneumocytes, **16**
- pneumomediastinum, **202, 202, 210, 210–211, 274–275**
- pneumonectomy, **303, 303, 338**
- pneumonia, **64–69, 311**
Candida, **81**
 clinical features, **65**
 CT, **68–69**
 differential diagnosis, **302**
 distal, and bronchial carcinoma, **163**
 eosinophilic, chronic, **294**
 evolution, **64**
 idiopathic interstitial, **95–97, 96, 97, 297**
 interstitial, **65, 65, 68, 329, 330**
 lingular, **67**
 lobar, **64, 65, 65, 66–67**
 lobar and segmental, **305, 306, 307**
 lobular, **64–65**
 with lung abscess, **70**
 and opaque hemithorax, **301**
 organizing, *see* organizing pneumonia
 pathology, **64–65**
 plain chest radiograph, **65–68**
Pneumocystis jiroveci/carinii, **87–88, 88, 89**
 postictal aspiration, **68**
 in trauma patient, **207**
 tuberculous, **304**
 varicella, **345, 346**
- pneumonitis
 bleomycin-induced, **109**
 drug-induced, **297**
 extrinsic allergic alveolitis/hypersensitivity pneumonitis, **145, 146–147**
 hypersensitivity, **293–294, 323, 330**
 radiation, **108, 108, 311, 317**
- pneumoperitoneum, **326**
 and subdiaphragmatic gas, **230, 230**
- pneumothorax, **202, 202, 203–204, 203–204, 207, 220, 221–222, 326**
 and aspiration, **203, 204**
 and biopsy, **350**
 drainage, **350**
 and increased lucency, **340, 340**
 and mediastinal displacement, **203, 204, 205**
 peripheral, **203**
 residual, **222**
 spontaneous, **220, 221**
 tension, **203, 204**
 volume estimation, **203**
- positron emission tomography (PET), **41, 41–42**
 bronchial carcinoma, **171, 171–172**
 and CT, **42**
 and progressive massive fibrosis, **140**
 and solitary pulmonary nodule, **149–150**
 in treated lymphoma, **181–182**
- postoperative imaging, heart, **269–272**
- Potts shunt, **253**
- primary complex, tuberculosis, **74, 75, 75, 76**
- progressive massive fibrosis (PMF), **140**
- progressive systemic sclerosis (PSS), **101, 102**
- prosthetic valves, heart, **272, 272**
- proteinosis, alveolar, **294, 294, 296, 314**
- puffer, pink, **111**
- pulmonary agenesis, **57–58, 58, 303**
- pulmonary angiography, **42, 42–44, 191, 193, 193**
- pulmonary aplasia, **57–58, 58, 303**
- pulmonary arteries, **23, 24, 44**
 false aneurysms, coil embolization, **355–356, 356**
 hypoplasia, **340**
- pulmonary arterioles, muscularization, **193**
- pulmonary artery
 aneurysm, **341, 342**
 atresia, **62–63, 63**
 hypoplasia, **62–63, 63**
- pulmonary atelectasis, **207, 221**
- pulmonary calcifications, **345, 345–346**
- pulmonary chondroma, **153**
- pulmonary circulation, waterfall model, **20, 21**
- pulmonary congestion, and edema, **195–199**
- pulmonary contusion, **205, 205–206, 206, 207, 209, 311**
- pulmonary edema, **195–199, 293, 294, 314, 319, 331**
 basal, **198, 198**
 chest radiograph, **196–198, 196–199**
 computed tomography, **199, 199**
 pathology, **196**
- pulmonary emboli, septic, **69–70, 69–72**
- pulmonary embolism, **187–193, 188, 189, 190**
- pulmonary eosinophilia, **106–107**
- pulmonary fibrosis, **330**
 and honeycombing, **298, 298**
 and sarcoidosis, **92, 94, 94, 330, 331**
 and silicosis, **139, 140**
- pulmonary hamartoma, **151–152, 152, 153**
- pulmonary hematoma, **206, 207**
- pulmonary hemorrhage, **293, 296, 311**
- pulmonary hypertension, **183–199, 341, 342**
 and alveolar hyperventilation, **194–195**
 chronic thromboembolic, **187–193, 191, 192, 300, 300**
 and mosaic perfusion, **300, 300**
 postcapillary, **195, 195**
 primary, **184, 184–187, 185, 186**
- pulmonary hypoplasia, **57–58, 58**
- pulmonary infarction, **187, 188, 189, 189, 191, 305**
- pulmonary lobule, **17, 17, 18, 30, 31**
- pulmonary lymphangitis carcinomatosa (PLC), **173, 176, 177, 296, 296**
- pulmonary lymphoma, **181, 294**
- pulmonary masses, vs. mediastinal, **286**
- pulmonary metastases, **172–174, 173, 174, 175–177, 296, 322**
 cannonball pattern, **175**
 endobronchial, **173, 175**
 from thyroid carcinoma, **177**
 from tibial fibrosarcoma, **176**
- pulmonary nodules, **295, 296, 319–324**
 diagnostic approach, **320–322, 321, 322**
 discrete, **172–173**
 peripheral, **164**
 in pneumoconiosis, **296**
- pulmonary ossification, idiopathic, **347**
- pulmonary parenchymal trauma, **205–207, 205–208, 209**
- pulmonary stenosis, **243–244, 244**
- pulmonary torsion, **207**
- pulmonary tuberculosis, **72–80, 80, 323, 345, 345**
 frequency distribution, **74**
 pathology, **73–75**
 postprimary, **72, 73, 76**
 primary, **72, 73, 75**
 stages, **74**
- pulmonary valve, congenital stenosis, **244**
- pulmonary vascular resistance, increased, **183**
- pulmonary veins, **23, 24, 44**
 and CT, **30**
 thrombosis, and bronchial carcinoma, **169**
- pulmonary veno-occlusive disease (PVOD), **195, 195**

- pulmonary venous drainage
 partial anomalous, 61–62, **62**
 total anomalous, 251, 253
 pulmonary venous pressure, increased, 183
 pulmonary ventilation, altered, 207
 pulmonary vessels, **44**
 pyopneumothorax, 69
- **R**
- radiation exposure, 1
 radiation fibrosis, 311, **312**
 radiation-induced lung disease, 107–108, **108**, 331
 radiation pneumonitis, 108, **108**, 311, **312**, **317**
 radiographic anatomy
 pleura, 10–16
 vascular system, **23**, 23–24
 radiographic signs, 301–348
 radionuclide imaging, **38**, **38**, **39**
see also scintigraphy
 Recklinghausen's neurofibromatosis, **321**
 reflections, pleura, 12, **12**, **13**
 reflex oligemia, and bronchial carcinoma, 163
 regurgitation
 aortic, 268, **268**
 mitral, 263–266, **266**
 relaxation atelectasis, 307
 respiratory bronchiolitis interstitial lung disease, 95–96, **96**
 restrictive cardiomyopathy, 261
 reticular shadowing, 328–329
 retrosternal stripe, 12
 retrotracheal stripe, **12**, 13
 reversed 3 configuration, aorta, **246**
 rhabdomyoma, cardiac, 269, **269**
 rheumatoid arthritis, 100–101, **101**
 rheumatoid lung disease, **298**
 ribs, 5, 8
 companion shadow, 10, **12**, 325
 fractures, 200, **200**, **201**
 lesions, **236**
 notching, 234, **236**, **246**
 ring shadows, 334, **335–337**
 road traffic accidents, 200
 Roger disease, 250
 rounded atelectasis, and asbestos-induced pleural changes, 144, **144**
 rule of 20, 157
- **S**
- saccular bronchiectasis, 117, **121**
 sail-shaped shadow, thymic hyperplasia, **289**
 sarcoidosis, 91–95, 295, **295**, **312**, 323, **324**, 330, **331**, 341–342, **343**
 alveolar, 95, **95**
 stage I, 92, **92**, **93**
 stage II (miliary), 92, **92**, **93**
 stage III (pulmonary fibrosis), 92, **94**, **94**
 scapula, 8
 osteosarcoma, **239**
 shadow, 325, **325**
 scatter-reduction grids, 4, 4–5, 5
 schistosomiasis, 88–89, **89**
 scimitar syndrome, 53, **53**, **54**
 scintigraphy
 bronchial carcinoma, 171
 bronchiectasis, 121
 bronchitis, chronic, 116
 lung, 38, **38**, **39**
 myocardial perfusion, 39–41, **40**, 256, **258**
 and pulmonary embolism, 187, 189, **189**, **190**
 in treated lymphoma, 181–182
 ventilation–perfusion, 187, **190**
 scleroderma, 347
 sclerosis
 progressive systemic, 101, **102**
 tuberous, 298, **299**
 scoliosis, **237**, 303
 screening, lung cancer, 157–158
 see-saw phenomenon, diaphragm, 229
 segmental atelectasis, 326
 segmental opacification, 304–314
 segments, pulmonary, 18, **19**
 septal lines, in pulmonary edema, **197**, 198
 septal thickening, intra- and interlobular, **296**, 296–297
 septic pulmonary emboli, 69–70, **69–72**
 sequestrations
 bronchopulmonary, 50–53, 319
 extralobar, 50, 51
 intralobar, 50–51, **51**, **52**
 shadowing, 329
 acinar, in pulmonary edema, **198**
 alveolar, 321
 linear, 324–330
 reticular, 328–329
 ring, 334, **335–337**
 sail-shaped, thymic hyperplasia, **289**
 scapula, 325, **325**
 shaggy-heart sign, 143
 shock lung, 208
 signs, radiographic, 301–348
 silicoproteinosis, acute, 140
 silicosis, 136, **138–140**, 140, **141**, 317, 323, 333, 342
 calcifications, 347, **348**
 sinus venosus defect, 248
 Sjögren syndrome, 102, **102**
 small airway disease, and bronchiolitis, 122–125
 small cell carcinoma, 158
 soft tissues, chest wall, 8, 8–9
 solitary pulmonary nodule, 149–150
 sonography, bronchopulmonary sequestrations, 51
see also echocardiography; ultrasound
 spine, thoracic, changes, **236**
 spin echo, 47
 split pleura sign, **72**
 spontaneous pneumothorax, 220, **221**
 squamous cell carcinoma, 158, **165**, **170**
- Starr-Edwards ball-valve prosthesis, 272, **272**
 stationary grid, 5, 5
 stenosis
 aortic, **241**, 244, **244**, **267**, 267–268
 congenital aortic, 244
 mitral, 262–263, **264**
 pulmonary, 243–244, **244**
 sternocleidomastoid muscle, 9
 sternum, 8, 325
 fractures, 200–201, **201**
 stiff lung syndrome, 208
 stomach, air in, 274
 stripes, pleural reflections, 11–13
 strongyloidiasis, 91
 subclavian artery, aberrant, 277, **277**, 278
 subphrenic abscess, 229–230, **231**
 superior vena cava
 encasement, in bronchial carcinoma, **169**, **170–171**
 persistent left, **279**
 supraclavicular fossa, 9
 Swiss cheese pattern, ventricular septal defect, 250
 Swyer-James-MacLeod syndrome, 123–124, **124**, 338, **339**
 systemic lupus erythematosus, 100, **100**
- **T**
- Takayasu's disease, 279
 technetium-99, 39
 technical parameters, chest radiographs, 2
 tension cyst, **55**
 teratoma, mediastinal, **290**, 290–291, **291**
 tetralogy of Fallot, **245**, 253–254, **254**
 thallium-201, 39
 Thibierge-Weissenbach syndrome, 347
 thoracic aorta
 aneurysm, 279
 diseases, 276–285
 dissection, **282**
 elongated, **280**
 thoracic images, five D's, 1
 thoracic intervention, 349–356
 thoracic scoliosis, differential diagnosis, 303
 thoracic skeleton, 5, 8–9
 thoracic trauma, 200–213
 thoracoplasty, and oleothorax, **238**
 thorax
 bony, fractures and dislocations, **201**
 normal CT findings, 31, **32–37**
see also chest wall; thoracic
 thromboemboli, endothelialized, 189, **190**, **192**
 thromboembolic pulmonary hypertension, chronic, 187–193, **191**, **192**
 thromboembolism, 187, 341
 thrombus, left ventricular, **259**
 thymic carcinoid, 290
 thymic hyperplasia, 288–289, **289**

- thymic lymphoma, 290
 thymic tumors, 289–290, **290**
 thymolipoma, 290
 thymoma, **289**
 thyroid carcinoma, pulmonary
 metastases, **177**
 thyroid goiter, 285, **287, 288**
 TNM classification, bronchial carcinoma, 153, 159, **160**
 tomography, conventional, 25, **25–27**
 see also computed tomography
 torsion, pulmonary, 207
 torulosis, 86
 total anomalous pulmonary venous drainage, 251, 253
 toxic gases, inhalation, **147, 147–148, 148**
 toxoplasmosis, 87, **87**
 trachea, 18, 20
 rupture, 207
 tracheal bifurcation, 20
 tracheobronchial calcifications, 347
 tracheobronchial rupture, 207
 tracheobronchial system, 18, 20
 tracheobronchomegaly, Mounier-Kuhn, 117, **118**
 traffic accidents, 200
 transfusion lung, 208
 transposition of great vessels, **245, 254**
 trauma
 aorta, **211, 211–212, 280, 281, 281**
 and ARDS, 205, 208, **209**
 blunt, 206, 207, 212
 and diaphragmatic rupture, 212
 parenchymal, pulmonary, **205–207, 205–208, 209**
 and pneumonia, 207
 thoracic, 200–213
 traumatic aortic injury, **211, 211–212**
 tricuspid atresia, **245**
 trilogy of Fallot, **245**
 truncus arteriosus, **245**
 tuberculin skin test, 92
 tuberculoma, 76, **77**
 tuberculosis, 342
 and AIDS, 72
 cavitating, 75, 79, **333**
 differential diagnosis, 303
 exudative, 74, 76, **77, 78**
 fibrocirrhotic, 75, **78, 79, 79**
 frequency distribution, 74
 miliary, 74, 76, **76, 79**
 pleural effusion, 76, **77**
 primary complex, 74, 75, **75, 76**
 productive, 74–75
 pulmonary, *see* pulmonary tuberculosis
 upper lobe, **316**
 tuberculous pneumonia, 304
 tuberous sclerosis, 298, **299**
 tumors
 diaphragm, 234
 lung, 149–182, 150–156, **151**
 mediastinal, primary, **290, 290–291, 291**
 mediastinum, 285–292
 thymic, 289–290, **290**
 vanishing, 206
 see also carcinoma; neoplasms
 turbo spin echo, 47
- **U**
- ulcer, atherosclerotic, 281
 ultrasound, 42
 pleural effusion, 219
 see also echocardiography;
 sonography
 upper zone opacification, **315, 315–317**
 usual interstitial pneumonia (UIP), 95, **96, 101**
- **V**
- valvular heart disease, acquired, 262–263
 vanishing tumor, 206
 varicella pneumonia, 345, **346**
 varicose bronchiectasis, 117, **121**
 vascular bundles, **23**
 vascular malformations, 61–63
 vascular resistance, pulmonary,
 increased, 183
 vascular system, 20–24
 anatomy, 20, **21, 22, 23, 23–24**
 compliance, 20, **21**
 veno-occlusive disease, pulmonary,
 195, **195**
 venous drainage, pulmonary, partial
 anomalous, 61–62, **62**
 venous pressure, pulmonary, increased, 183
 ventilation, pulmonary, altered, 207
 ventilation–perfusion scintigraphy,
 38, **39**
 ventricular aneurysm, calcified, **252**
 ventricular enlargement, 240, **242, 243**
 ventricular failure, left, 255, **255**
 ventricular septal defect (VSD), 193, **245, 247, 248, 250**
 vertebral column, 8
 vertebral fractures, 201–202
 VICTIM acronym, 1
 viruses, and AIDS, 98
 viscera, dependent, and diaphragmatic rupture, 212
- **W**
- waterfall model, pulmonary circulation, 20, **21**
 water lily sign, 90, **90**
 wedge-shaped opacities, 187, **191**
 Wegener granulomatosis, 103, **103, 104, 323**
 Westermark sign, 187
 WHO classification
 lung tumors, 151
 non-Hodgkin lymphoma, 178
 wooden-shoe heart, 254, **254**
- **Z**
- zone, upper, opacification, **315, 315–317**
 zone landmarks, lungs, 16, **16**