## Subject Index

Note: Page numbers in italics refer to illustrations; page numbers in bold refer to tables.

Abbreviations: MT/P – medical thoracoscopy/pleuroscopy; VATS – video-assisted thoracic surgery

### A
- acute respiratory distress syndrome (ARDS) 40, 41, 63
- adenocarcinoma, lung see under lung cancer
- adenovirus infection, pleural effusions in 132
- adhesions 153
  - fibrinous 127, 128, 129, 131
  - pleural 33, 136
  - blunt dissection technique 79–80, 81
  - dense, introduction of endoscope 80
  - from nonspecific pleuritis 132
  - preventing MT/P 33, 34, 58
  - removal/cauterization by Jacobaeus 8, 8, 9
  - in rigid thoracoscopy 87, 89
  - pleuropulmonary 132
  - in tuberculosis 127, 128, 129
  - vascularized 87, 106, 148
- air embolism 60
- air evacuation, spontaneous pneumothorax 42–44, 43
- air leakage in drainage systems 97
- prolonged, MT/P complication 62
- alfentanil 85
- alveolar filling 147
- alveolar proteinosis 147
- anatomy 66, 78
  - artificial pneumothorax induction 82, 82
  - knowledge needed for MT/P 65, 66
  - rigid thoracoscopy 88
- anesthesia general 78, 84
  - local see local anesthesia for MT/P 78, 84–86
  - for VATS 16, 18
- aneurysm, arteriovenous, of lung 154

### B
- animals, MT/P in 54–55, 100
- anthracosilicosis 148
- anthracosis 148
- anthracotic pigmentation 105, 113, 116, 117, 128
- sarcoidosis 145
- anti-reflux procedures 20
- arrhythmias, MT/P complication 61, 63, 86
- arteries, anatomy 82, 82, 138
- arteriovenous aneurysm, of lung 48, 154
- artificial pneumothorax complications 60
  - in diffuse lung disease 47, 144, 145, 146, 147, 148, 149
  - history of development 4
  - induction method 79, 80, 81–83
  - instruments for 75–76, 76
  - pleural pressure 83, 83
  - set-up for 80
  - sites 82, 82
  - timing of 83
  - water manometer for 83, 83
  - requirement for 47, 58
- asbestos-induced disease 28, 113
- benign asbestos pleural effusion (BAPE) 28, 113
  - see also mesothelioma, malignant
- aspiration, primary spontaneous pneumothorax 42, 43
- atelectasis 133, 138, 140
- hemorrhagic pulmonary infarct and 153
- lateral segment of middle lobe 154
- secondary spontaneous pneumothorax with 141
- Atlas of Diagnostic Thoracoscopy (Brandt et al.) 7, 12, 12, 53
- Atlas Thoracoscopicon (Cova) 7, 8, 8
- autoclavning 70, 71
- autofluorescence thoracoscopy 56, 90, 121
- autofluorescence videothoracoscopy 29, 34
- axillary triangle 78

### C
- cannulas 87, 94
- cardiac arrhythmias, MT/P complication 61, 63, 86
- cardiac tamponade 50
- cardiophrenic angle, lipoma in 155
- catheter indwelling pleural 36
- removal during MT/P 51, 52
costovertebral region, in tuberculosis 127
cough/coughing 67, 86, 87, 97
Cova, Felix 7, 8, 9–10
Cruise, Francis-Richard 5, 6
cysts aspiration of 90
pleuropericardial 155

D
decortication 20
desquamative interstitial pneumonia (DIP) 146
diagnostic MT/P 7, 16, 23, 23
advantages 3
further development 11–12, 11–14, 12
history/development 5–7
indications see indications
(for thoracoscopy)
see also medical thoracoscopy/pleuroscopy (MT/P)
diaphragm 133, 152, 155
adhesions 127, 132, 135
diseases 51
tumor nodules on 117, 118, 123
diazepam 85
diffuse lung diseases, MT/P in
46–48, 143–149
“direct thoracoscopy” 14
disinfection 70
documentation 99
drainage systems 95, 95–96, 96, 97
assessment/monitoring 96–98
constant-suction 97, 97
see also chest tube drainage
drugs, during/after MT/P 84, 85
dyspnea 26, 44

E
effusions, pleural see pleural effusions
electrocautery
in lung biopsy 91
instruments 71, 75
emphysema 106
bullous 141
subcutaneous 60, 62, 63
emphyema, pleural 31–32, 32
fibrolytics 31
fibroinopurulent stage 131
management
historical 5, 10
VATS 20
as MT/P complication 62
tuberculous 129
endoscopy room 69–71
equipment 71–76
chest drainage systems 95, 95–96, 96, 97
MT/P 16, 69–70
rigid thoracoscopy 71, 72, 72–73
semirigid pleuroscopy 73–76, 74, 75, 76
for sympathectomy 49
see also rigid thoracoscope;
semirigid ( semiflexible) pleuroscope
for pneumothorax 75–76, 76
predisinfecting cleaning 70
resuscitation trolley 70
sterilization 70, 71, 74
used by Jacobaeus 6
VATS 16, 17–18, 21
esophagectomy procedures, VATS 20
esophagectomy 20
Ewing sarcoma, metastases 119
“extended thoracoscopy” 14, 33, 58, 79–80

F
fentanyl 85
fever, postoperative 62, 64
fibrin deposits 126, 127, 134, 135, 139
fibrous bands 88, 106, 127, 128
fibrous bands 87, 136
flumazenil 85, 86
fluorescein use, in pneumothorax 140
fluorescence 29
see also entries beginning
autofluorescence
fluoroscopy 79, 79, 87
forceps
“Kelly”, for blunt dissection 79–80, 81
lung biopsy 90–91
semirigid ( semiflexible) pleuroscopy 74, 75
Forlanini, C. 4, 6

Loddenkemper/Praveen/Noppen/Pyng, Medical Thoracoscopy/Pleuroscopy: Manual and Atlas
(ISBN 9783131082213), © 2011 Georg Thieme Verlag KG
G

gastric cancer, metastases 119
granulomata 89
tuberculous 30
guidelines
  on closed needle pleural biopsy 27
  on thoracoscopy 16
guide-wire technique 81

H

hamartochondroma 152
hemorrhage see bleeding
history (of thoracoscopy) 4–15
  medical thoracoscopy 3–4, 69
  artificial pneumothorax for 4
  as diagnostic method 5–7
  diagnostic uses 7
  therapeutic 6, 7–10
  surgical thoracoscopy 3–4
Holmgren, Israel 6
honeycomb lung 48
hyaline plaques 110, 113, 114
hydrothorax 135
hypercarbia 58
hyperemia 106, 116, 126, 133
  capillary 135
hyperhidrosis
  therapeutic MT/P 10, 21, 49, 50
  VATS 21
hypersensitivity reactions 61
hypotension, MT/P complication 61
hypoxemia
  MT/P complication 61
  MT/P contraindications 58
hypoxia 86

I

idiopathic pulmonary fibrosis 146, 147
immunocytoma, pleural effusion 123
immunosuppressed patients, MT/P
  in 46–47, 57
  children 53
  mortality 63
indications (for thoracoscopy)
  MT/P 3, 11, 17, 19, 21, 22–52
  in children 53
  diffuse lung diseases 46–48
  miscellaneous 48–51
  pleural effusions see pleural effusions
  pneumothorax see pneumothorax
  recent changes in, and reasons 22, 23, 24–25
  therapeutic MT/P 24, 25, 35–41
  in West Germany 22
  VATS 16–17, 18, 22–23
  esophageal 20
  lung 18–19
  mediastinal 20–21
  pleural 19–20, 45
  infants, rigid thoracoscopy 72
  inflammatory reaction
    malignancy differentiation 89
    to thoracoscopic talc pleurodesis 41, 41, 62, 63
  information for patients, on MT/P 57
  instruments see equipment
  intercostal muscles 78
  intercostal vessels 82, 126, 138
  internal mammary artery 82
  internal thoracic artery 138
  interstitial lung disease 47, 56
  respiratory bronchiolitis associated (RBILD) 147
  investigations, before MT/P 57, 65

J

Jacobaeus, Hans-Christian 5, 5, 8, 29, 69
  diagnostic thoracoscopy
    development 5–7, 6, 7
  therapeutic medical thoracoscopy
    6, 7–10, 8, 10
  “Jacobaeus operation” 6, 7–10, 29

K

“kinematography” 10, 10

L

Langerhans cell histiocytosis 46, 146
laparoscopy 6
laser coagulation 47, 151
learning, thoracoscopy see training/learning
left-ventricular failure, pleural effusions 136
leiomyofibroma 152
lidocaine 61, 86
lipoma 154, 155
liver
  anatomy 65, 66
  cirrhosis 33, 135
  lobectomy, VATS 17, 19
  local anesthesia 69, 84
  drugs used 84, 85
  hypersensitivity reactions 61
  techniques 84–86
lung
  collapse 67, 120, 135
  entrapment 67
  hemorrhagic congestion 153
  injury, MT/P complication 58, 61
  interlobar septae thickening 146, 147
  lobes, appearance 114, 133, 136, 144, 145, 146, 149, 152, 155
  procedures performed with VATS 18–19
  reexpansion after MT/P 37, 86, 94
  solitary lesions 51
  tethering 136
  wedge resection 18
lung biopsy 46
  contraindications 58, 90
  forceps, during MT/P 46, 90–91
  open surgical 46, 48
  perihilar 91
  specimen sizes 91–92, 92
  thoracoscopic (MT/P) 46, 46, 47, 47
  advantages/disadvantages 48
  in animals 54
  bleeding control 48, 90
  techniques 90, 91, 90–91
  transbronchial 47, 48
  VATS 18, 46
  wedge 48, 91
lung cancer
  adenocarcinoma 105, 106, 107
  malignant retraction 151
  malignant pleural effusions 25, 103–107
  metastatic see lung metastases non-small-cell, pleural effusions 35
  prognosis 35
  small-cell 104, 105
  squamous cell carcinoma 106
lung cancer
staging 22
cervical mediastinoscopy vs VATS 21
MT/P 28
lung disease
bullous 62, 91
diffuse 46–48, 143–149
interstitial 47–48, 56, 147
knowledge needed for MT/P 65
lung metastases 149
VATS indication 18–19
lung volume reduction surgery (LVRS) 19
lymphadenectomy, thoracic 21
lymphangiosis 111, 117
lymphangiosis carcinomatosa 149
lymphangitis 89
lymphatics 67, 144
lymphomas, malignant pleural effusions 25, 122–123
malignant lymphoma 28, 34, 123
manometer, pneumothorax apparatus 83, 83
mediastinal shift 26, 86
mediastinal tumors 51
mediastinoscopy, cervical, VATS vs 21
mediastinotomy, anterior, VATS vs 21
mediastinum 146
adhesions 106
anatomy 65, 66
anterior, effusions 135
distended veins 107, 135
masses, VATS for 20
posterior 106
VATS indications 20–21
medical history 57
medical thoracoscopy/pleuroscopy (MT/P)
adhesions preventing 33, 34, 58
advantages 16, 21, 24, 25, 28
in animals 54–55, 100
children 47, 53, 72
clinical prerequisites 57
complications see complications, of MT/P
contraindication 33, 34, 57, 58, 58–59
definitions 16
demand for 24–25
recent changes in, and reasons 22, 22–23, 23, 24–25, 51
diagnostic see diagnostic MT/P
false-negative (malignant effusions) 28
history see history (of thoracoscopy)
indications see indications instruments see equipment
knowledge and skills for 65–68
minimum number per annum 100
mortality rates 16, 63–64
personnel involved 14–15, 15, 71
principles 69
research 22, 54, 56
sensitivity/specificity 27, 28, 30
technique see techniques (thoracoscopy)
terminology and origin of term 4, 14–15
therapeutic see therapeutic MT/P
VATS/surgical thoracoscopy differences 16, 16–21
medications/drugs 84, 85
mesothelioma, malignant, diagnostic MT/P
biopsy method comparisons 28, 28
biphasic 109, 110, 111
diffuse 109, 110
epithelioid 110, 111
pleural effusions due to 108–112
with pleural plaque 110
point of entry 78
research 56
sarcomatoid 112
staging 22
tumor cell seeding of chest wall 63
metastases
malignant pleural effusions from 115–121
pleural 26, 27, 27
see also lung metastases
methemoglobinemia 61
midazolam 85
minimally invasive thoracic surgery see video-assisted thoracic surgery (VATS)
minithoracoscopes, rigid 73
minithoracoscopy 14
minithoracotomy 16
mitral stenosis, pleural effusions 136
monitoring of patient 71, 86
morphine 85
mortality rates, MT/P 16, 63–64
MT/P see medical thoracoscopy/pleuroscopy (MT/P)
mustine, pleurodesis 37
myelofibrosis, pleural effusion 123
myeloproliferative neoplasms 123
myocardial infarction 58, 136
N
naloxone 85
narcotics 85
narrow-band imaging (NBI), during semirigid pleuroscopy 29, 34, 107
National Emphysema Treatment Trial (NETT) 19
neurovascular bundle, intercostal 78
Nissen fundoplication 20
nodules
miliary, tuberculous pleural effusion with 125, 126
sarcoidosis 144, 145
tumor see tumor nodules
O
open lung biopsy 46, 48
ovarian carcinoma, metastases 120, 149
oxygenation 86
P
pain 61
after MT/P 62
analgesia for 84, 85, 86, 94
before MT/P 61, 84
during MT/P 61
talc application and 61, 94
pancreatitis
pleural effusions after 33, 135
thoracoscopic splanchnicectomy 50
"paramalignant effusions" 26, 26, 33, 106
parapneumonic effusions see pleural effusions
paratracheal nodes, dissection 21
patient information, on MT/P 57
patient monitoring 71, 86
pleural effusions 20, 23, 34

patient positioning see positioning of patient

patient preparation 71

for anesthesia 84

for rigid thoracoscopy 86

pericardial effusions

malignant 151

recurrent 50

pericardial fenestration 50, 151

pericardial window 20, 50

pericardium 140, 151, 155

personnel, for MT/P 14–15, 15, 71

pleural adhesions see adhesions, pleural

hyperemia 126

mediastinal, venous varices 135

metastases 26, 27, 27

parietal 67, 104, 106, 120

biopsy methods 89, 89–90, 90, 91

hyaline plaque 114, 136

thickening 106, 129, 136

in tuberculosis 129

pathophysiology 67

procedures performed with VATS 19–20

visceral 67

thickened, in tuberculosis 129

pleural biopsy 24, 78

closed needle 24, 25

malignancy diagnosis 26, 26–27

tuberculosis diagnosis 29–31, 30

number, in malignancy 90

parietal pleura 89, 89–90, 90, 91

semiflexible pleuroscope 89–90, 91

techniques, in rigid thoracoscopy 89–91

pleural catheter, indwelling 36

pleural drainage

history and development 5

total lung capacity and 47, 48

in tuberculosis 31

see also chest tube drainage; thoracentesis

pleural effusions 20, 23–41, 135

in adenovirus infection 132

in animals 54

asbestos-related 113, 114

benign asbestos (BAPE) 28, 113

causes 23, 25, 25, 34

chronic 29

chronic congestive 136

chylous 33, 133

diagnostic MT/P for 20, 22, 23–34, 25

advantages 25

algorithm 24

image-guided 79

point of entry 78

research 56

talc poudrage with 29, 41

drainage see pleural drainage

exudative 25, 67

fibrinopurulent 32, 131

fibrous 134

hemorrhagic 109, 110, 112, 117, 120, 133

hepatic 33, 135

idiopathic 33–34

incidence 23

indeterminate origin 32–33, 34

left-sided, appearance 37

liver cirrhosis causing 33

loculated rheumatoid 134

malignant 23, 25–29

biopsy method comparison 26–27, 27, 28, 28

eye use of diagnostic MT/P 7

grading, spread 29

incidence/prevalence 25, 35

lung cancer causing 103–107

lymphomas/myeloproliferative tumors causing 122–123

management options 35, 35

mesothelioma causing 108–112

MT/P advantages in diagnosis 26–27, 27, 28, 35

paramalignant effusions vs 26, 26, 33

secondary to metastases 115–121

talc pleurodesis see talc pleurodesis (thoracoscopic)

management 35, 35–41

goals 35

methods 35–41

see also pleurodesis; thoracentesis

massive 26, 79

moderate-to-large 26, 79, 88

myocardial infarction and 136

nonmalignant 33–34

pancreatitis and 33, 135

paramalignant 26, 26, 33, 106

parapneumonic 31–32, 32, 131

management algorithm 32, 33

pathophysiology 67

persistent 25

pneumonia and 33

previous symptomatic, MT/P technique 80, 81

pulmonary infarct with 33, 106, 133

recurrent 33

rheumatoid 33, 134

serous 104, 106, 107, 111, 116, 117, 118, 123

in systemic lupus erythematosus 133

therapeutic MT/P for 24, 25, 35–41

see also talc pleurodesis (thoracoscopic)

transudative 67

tuberculous 29–31, 124–129

biopsy method comparisons 29–31, 30

frequency 25, 29–30

MT/P development 6

see also pleural fluid; pleuritis; pleurodesis

pleural empyema see empyema, pleural

pleural fibroma, solitary 155

pleural fibrosis 39

pleural fluid 67

accumulation mechanism 67

aspiration method 79, 87

continuing production 63

evaluation 24, 26

formation 67

removal, before talc pleurodesis 93

see also pleural effusions

pleural lavage 56

pleural metastases 26, 27, 27

pleural plaque, hyaline 110, 113, 114

pleural porosity 42

pleural pressure negative 67

after talc insufflation 94

artificial pneumothorax 83, 83

positive (atmospheric) 67

pleural space 67

access, introduction of endoscope 78–83

direct/video-controlled inspection 88

lack/obliteration 59

MT/P contraindication 58, 59, 78–79

pleural symphysis 79

pleurodesis

talc poudrage with 29, 41

visible poudrage with 41

after talc insufflation 94

artificial pneumothorax 83, 83

positive (atmospheric) 67

thoracentesis

negative 67

after talc insufflation 94

artificial pneumothorax 83, 83

positive (atmospheric) 67

MT/P development 6

removal, before talc pleurodesis 93

see also pleural effusions

pleural lavage 56

pleural metastases 26, 27, 27

pleural plaque, hyaline 110, 113, 114

pleural porosity 42

pleural pressure negative 67

after talc insufflation 94

artificial pneumothorax 83, 83

positive (atmospheric) 67

pleural space 67

access, introduction of endoscope 78–83

direct/video-controlled inspection 88

lack/obliteration 59

MT/P contraindication 58, 59, 78–79

pleural symphysis 79
pleural thickening, fibrous
pleuritis
fibrous 114
fibrous, with pulmonary infarct 153
nonspecific 132
rheumatoid 134
see also pleural effusions
pleuritis exsudativa see pleural effusions, tuberculous
pleurodesis 37–41
bleomycin 37, 38, 40
chemical, chest tube thoracostomy with 37, 38
failure 38, 63
nonsurgical see talc pleurodesis (thoracoscopic)
talc see talc pleurodesis (thoracoscopic)
tetracycline 37, 38, 40, 40
pleuropericardial cyst 155
pleuroperitoneal shunt 36
pleuropulmonary adhesions 33
pleuroscopes see semirigid (semi-flexible) pleuroscope
pleuroscopy (pleural endoscopy) 3, 9, 13, 15
see also medical thoracoscopy/pleuroscopy (MT/P)

Pneumocystis carinii pneumonia
47, 53

Pneumocystis jirovecii (carinii) 44
pneumonia
desquamative interstitial (DIP) 146
pleural effusions after 33
pneumonitis, interstitial 53
pneumothorax 41–45, 67, 137–142
artificial see artificial pneumothorax
catamnial 19, 45
classification 41, 41
definition 41
induction see artificial pneumothorax
nonspontaneous 41
partial 79, 93
persisting, MT/P complications 62
preexisting partial 79
primary spontaneous 41, 41, 42–44, 138–140
management 42–44, 43, 56
management in West Germany 22, 23
MT/P 19, 22, 23, 42–44
MT/P advantages 42
MT/P vs VATS 43
point of entry 78
predispoding factors 42
recurrence 42, 140
recurrence prevention 43–44
research 56
staging by MT/P 22
thoracoscopic talc pleurodesis 10, 44
VATS for 19–20, 43–44
recurrent 19
secondary spontaneous 41, 44–45, 141–142
bullous emphysema 44, 141
causes 44, 45
management 44–45
traumatic iatrogenic 45, 152
traumatic noniatrogenic 45
pneumothorax needles 79, 81, 82
positioning of patient 65, 76–77, 84
medical thoracoscopic sympathectomy 49, 49
rigid thoracotomy 86
postoperative cavities, MT/P for 51, 52
postpleuroscopic complications 60, 62–64
premedication 84
preoperative preparation see patient preparation
propofol 84, 85
publications, on thoracoscopy 7, 12, 14
pulmonary edema, reexpansion 62, 67, 95
pulmonary emboli, recurrent 153
pulmonary fibrosis 47, 134
idiopathic 146, 147
pulmonary infarct
anemic, recurrent pulmonary emboli 153
fibrous pleuritis with 153
hemorrhagic 153
pleural effusions after 33, 106, 133
pulmonologists 15
medical thoracoscopy by 14, 69
techniques used by 13
pulmonology, interventional 3

R
radiography, before MT/P 57, 65
radiotherapy, prophylactic 63, 64
renal carcinoma, metastases 120
reports and documentation 99
research, MT/P in 22, 56
in animals 54
respiratory bronchiolitis associated interstitial lung disease
(RBILD) 147
respiratory insufficiency 58
resuscitation trolley 70
rheumatoid effusions 33, 134
ribs 65, 66, 78, 82, 87, 138
hyaline plaques 110, 114
MT/P appearance 104, 116, 126, 138, 141, 142, 153
rigid minithoracoscopes 73
rigid thoracotome 4, 13, 29, 71, 72, 72–73
advantages 92
angles of vision 73
Karlstorz GmbH 13, 71, 72, 72
Olympus Medical Systems Europa GmbH 73, 73
Richard Wolf GmbH 13, 73, 73
rigid thoracotomy 71, 72, 72–73, 73, 86–91
advantages 92
biopsy techniques 89–91
insertion of thoracoscope 79–83, 87, 87
inspection method 88–89
technique 86–91
semirigid technique comparison 92

S
sarcoïdosis 47, 144, 145
Sattler, Anton 10, 10
scars, lung adenocarcinoma with malignant retraction 151
sclerosants, in pleurodesis 37, 62
see also bleomycin; talc; tetracycline
sedation 84
semirigid (semi-flexible) pleuroscope 4, 13, 15, 69, 71, 73–76
advantages 92
development and manufacturer 13–14, 69
LTF160 model 74
pleural biopsy with 89, 91
structure 73–74, 74
Subject Index

semirigid (semiflexible) pleuroscopy auxiliary instruments 75, 75–76, 76
corcoscs for 74, 75
narrow-band imaging during 29, 107
technique 92
sensitivity, of MT/P 27, 28, 30
silicosis 148
Singer, J. J. 11
single-bottle drainage system 95
single-lung ventilation 16, 18
single-port/entry site 13, 69, 78
lung biopsy 90
pleural biopsy 89
skills needed for MT/P 67–68
solitary lung lesions, MT/P for 51
specimens evaluation 93
size, rigid vs semirigid techniques 92
splanchnicectomy 50
spleen, enlarged leukemic 61, 63
squamous cell carcinoma, lung 106
staging see lung cancer; mesothelioma
sterilization, equipment 70, 71
sterile conditions 70
stellar ganglion 138
stapler, endoscopic 18, 19, 91
stelate ganglion 138
sterile conditions 70–71
sterilization, equipment 70, 71, 74
Steritalc formulations 93
strepotkinase 98
subclavian artery 138
subclavian vein 138, 149
subcutaneous emphysema 60, 62, 63
suction drainage see drainage systems
sufentanil 85
surgical thoracoscopy see video-assisted thoracic surgery (VATS)
sympathectomy 21
medical thorascopic 48–50, 49
bilateral, positioning for 77
equipment and technique 49
indications 49
results and complications 49–50
sympathetic chain, thoracic 48–49
sympathetic trunk 138
sympatholysis, thorascopic 49, 49–50
symposia, on thoracoscopy 14
systemic inflammatory response 63
systemic lupus erythematosus 33, 133

T
talc 37
composition 93
distribution, after poudrage 39
effect on malignant cells 41
optimal dose 93
particle sizes 40, 63, 93
sterilization 70
talc insufflation 44, 54, 94
talc pleurodesis (thoracoscopic) 3, 19, 38–41
advantages 38–39, 39, 39, 41
animal research 54
bleomycin/tetracycline pleurodesis vs 40, 40, 41
complications 40–41
early or late 63
inflammatory reaction 41, 41, 62, 63
pain 61
with diagnostic MT/P 29, 41
distribution of talc 39
dose and particle size 93
failure 63
hepatic effusions 33
history 3, 10
mechanisms of action 39, 40
mortality rates 63
refractory effusions 33
repeated 62
research 54, 56
spontaneous pneumothorax recurrence prevention 44
talc slurry instillation vs 39, 39–40
technique 93–94
chest tube placement 95, 95
talc pleurodesis, VATS 38
talc poudrage see talc pleurodesis (thoracoscopic)
talc slurry 38, 39, 63
thorascopic talc poudrage vs 39, 39–40
teaching see training/learning techniques (thoracoscopy)
MT/P 59, 59, 69–98
anesthesia see anesthesia endoscopy room 69–71
introduction of endoscope 78–86
patient monitoring 71
patient preparation 71
personnel 14–15, 15, 71
phases 76–78
pneumothorax induction see artificial pneumothorax
point of entry selection 78, 79
rigid thoracoscopy 86–91
semirigid pleuroscopy 92
sterility for 70–71
see also equipment; rigid thoracoscopy; semirigid (semiflexible) pleuroscopy
video-assisted thoracic surgery (VATS) 16, 17, 18–19
tetracycline pleurodesis 37, 38, 40, 40
therapeutic MT/P 16, 23, 23, 24
further development 12
history 6, 7–10
nontuberculous disease 7–8, 10
tuberculosis 9–10, 11
see also adhesions, pleural; talc pleurodesis (thoracoscopic)
thoracectomy 23
large-volume 37
malignant pleural effusions 26, 27
serial 35
see also pleural drainage
thoracic anatomy see anatomy
thoracic duct ligation 20
thoracic lymphadenectomy 21
thoracic surgeons 14, 15
thoracic sympathetic chain 48–49
thoracocautery 8, 8, 9, 11
thorascopic talc pleurodesis see talc pleurodesis (thoracoscopic)
thoracoscopy table 69
thoracostomy, chest tube 37, 38, 96
thoracotomy, open 11, 34
three-bottle drainage systems 97, 97
thymectomy 20
thyroid carcinoma, metastases 149
training/learning 3, 21, 65–68
courses 100
methods 100
MT/P 3, 4, 12
animal use 54–55, 100
requirements for 100
skills needed 67–68
trapped lung 36, 62, 93, 106
trocar 59, 72
diameter 72
history (Jacobaeus) 6
introduction technique 79
for rigid thoracoscopy 86
for semiflexible pleuroscope 73–74, 74
tuberculoma, multiple bilateral 152

### Subject Index

<table>
<thead>
<tr>
<th>Tuberculosis, Pulmonary</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>venous thrombosis, prevention</td>
</tr>
<tr>
<td>Pleural Effusions</td>
<td>veterinary medicine, MT/P in</td>
</tr>
<tr>
<td>Therapeutic MT/P</td>
<td>video-assisted thoracic surgery</td>
</tr>
<tr>
<td>Pulmonary Tuberculosis</td>
<td>VATS</td>
</tr>
<tr>
<td>Granulomas</td>
<td>Anesthesia</td>
</tr>
<tr>
<td>Tuberculous Pleurisy, Early Use of Diagnostic MT/P</td>
<td>Anterior mediastinotomy vs</td>
</tr>
<tr>
<td>Tumor Markers</td>
<td>Cervical mediastinoscopy vs</td>
</tr>
<tr>
<td>Tumor Nodules</td>
<td>Contraindications</td>
</tr>
<tr>
<td>Adenocarcinoma of Lung</td>
<td>For diffuse lung diseases and biopsies</td>
</tr>
<tr>
<td>Malignant Mesothelioma</td>
<td>Entry sites</td>
</tr>
<tr>
<td>From Metastatic Cancers</td>
<td>Equipment</td>
</tr>
<tr>
<td>116, 118, 119, 120</td>
<td>History and Development</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>Indications see indications (for thoracoscopy)</td>
</tr>
<tr>
<td>Small-cell Lung Cancer</td>
<td>MT/P Differences</td>
</tr>
<tr>
<td>104, 105</td>
<td>Overlap with Open Surgery</td>
</tr>
<tr>
<td>Two-bottle Drainage System</td>
<td>Parapneumonic Effusions and Empyema</td>
</tr>
<tr>
<td>Two-entry Site Technique</td>
<td>Personnel Using</td>
</tr>
<tr>
<td>Lung Biopsy</td>
<td>For Primary Spontaneous Pneumothorax</td>
</tr>
<tr>
<td>Parietal Pleural Biopsy</td>
<td>Sympathectomy</td>
</tr>
<tr>
<td>Ultrasound Guidance</td>
<td>Talc Poudrage</td>
</tr>
<tr>
<td>Pleural Biopsy</td>
<td>Video-controlled Inspection</td>
</tr>
<tr>
<td>Ultrasound Pneumomia</td>
<td>Water Seal Principle</td>
</tr>
<tr>
<td>W</td>
<td>Wedge Lung Biopsy/Resection</td>
</tr>
<tr>
<td>White-light Thoracoscopy</td>
<td>(WLT)</td>
</tr>
<tr>
<td>Wound Infection</td>
<td>YAG Laser, After Lung Biopsy</td>
</tr>
</tbody>
</table>

**U**

- Ultrasound Guidance | 79
- Pleural Biopsy | 27
- Usual Interstitial Pneumonia (UIP) | 146
- Uterine Cancer, Metastases | 116