

Contents

List of abbreviations

Foreword

1 Soft tissue tumours

WHO classification of soft tissue tumours	2
TNM staging of tumours of soft tissues	4
TNM staging of gastrointestinal stromal tumours	5
Introduction	6
Adipocytic tumours	
Lipoma	13
Lipomatosis	16
Lipomatosis of nerve	18
Lipoblastoma and lipoblastomatosis	20
Angiolipoma	23
Myolipoma of soft tissue	25
Chondroid lipoma	27
Spindle cell lipoma and pleomorphic lipoma	29
Hibernoma	31
Atypical spindle cell / pleomorphic lipomatous tumour	34
Atypical lipomatous tumour / well-differentiated liposarcoma	36
Dedifferentiated liposarcoma	39
Myxoid liposarcoma	42
Pleomorphic liposarcoma	45
Myxoid pleomorphic liposarcoma	47
Fibroblastic and myofibroblastic tumours	
Nodular fasciitis	49
Proliferative fasciitis and proliferative myositis	51
Myositis ossificans and fibro-osseous pseudotumour of digits	53
Ischaemic fasciitis	55
Elastofibroma	57
Fibrous hamartoma of infancy	59
Fibromatosis colli	61
Juvenile hyaline fibromatosis	63
Inclusion body fibromatosis	65
Fibroma of tendon sheath	67
Desmoplastic fibroblastoma	69
Myofibroblastoma	71
Calcifying aponeurotic fibroma	74
<i>EWSR1-SMAD3</i> -positive fibroblastic tumour (emerging)	76
Angiomyofibroblastoma	78
Cellular angiofibroma	80
Angiofibroma of soft tissue	82
Nuchal-type fibroma	84
Acral fibromyxoma	86
Gardner fibroma	88
Palmar fibromatosis and plantar fibromatosis	90
Desmoid fibromatosis	93
Lipofibromatosis	96
Giant cell fibroblastoma	98
Dermatofibrosarcoma protuberans	100
Solitary fibrous tumour	104
Inflammatory myofibroblastic tumour	109
Low-grade myofibroblastic sarcoma	112
Superficial CD34-positive fibroblastic tumour	114
Myxoinflammatory fibroblastic sarcoma	116
Infantile fibrosarcoma	119
Adult fibrosarcoma	122
Myxofibrosarcoma	124
Low-grade fibromyxoid sarcoma	127

ix	Sclerosing epithelioid fibrosarcoma	130
x	So-called fibrohistiocytic tumours	
1	Tenosynovial giant cell tumour	133
2	Deep fibrous histiocytoma	137
4	Plexiform fibrohistiocytic tumour	139
5	Giant cell tumour of soft tissue	141
6	Vascular tumours	
	Haemangiomas	
	Synovial haemangioma	143
	Intramuscular angioma	145
	Arteriovenous malformation/haemangioma	147
	Venous haemangioma	149
	Anastomosing haemangioma	150
	Epithelioid haemangioma	152
	Lymphangioma and lymphangiomatosis	154
	Tufted angioma and kaposiform haemangioendothelioma	156
	Retiform haemangioendothelioma	159
	Papillary intralymphatic angioendothelioma	161
	Composite haemangioendothelioma	163
	Kaposi sarcoma	166
	Pseudomyogenic haemangioendothelioma	169
	Epithelioid haemangioendothelioma	172
	Angiosarcoma	176
	Pericytic (perivascular) tumours	
	Glomus tumour	179
	Myopericytoma, including myofibroma	182
	Angioleiomyoma	186
	Smooth muscle tumours	
	Leiomyoma	188
	EBV-associated smooth muscle tumour	190
	Inflammatory leiomyosarcoma	193
	Leiomyosarcoma	195
	Skeletal muscle tumours	
	Rhabdomyoma	198
	Embryonal rhabdomyosarcoma	201
	Alveolar rhabdomyosarcoma	205
	Pleomorphic rhabdomyosarcoma	209
	Spindle cell / sclerosing rhabdomyosarcoma	211
	Ectomesenchymoma	214
	Gastrointestinal stromal tumour	216
	Chondro-osseous tumours	
	Soft tissue chondroma	222
	Extraskelatal osteosarcoma	224
	Peripheral nerve sheath tumours	
	Schwannoma	226
	Neurofibroma	232
	Perineurioma	237
	Granular cell tumour	240
	Dermal nerve sheath myxoma	243
	Solitary circumscribed neuroma	245
	Ectopic meningioma and meningotheial hamartoma	247
	Benign triton tumour / neuromuscular choristoma	249
	Hybrid nerve sheath tumour	252
	Malignant peripheral nerve sheath tumour	254
	Malignant melanotic nerve sheath tumour	258
	Tumours of uncertain differentiation	
	Intramuscular myxoma	261
	Juxta-articular myxoma	264
	Deep (aggressive) angiomyxoma	266
	Atypical fibroxanthoma	268
	Angiomatoid fibrous histiocytoma	271
	Ossifying fibromyxoid tumour	274

Myoepithelioma, myoepithelial carcinoma, and mixed tumour	277	Osteoclastic giant cell-rich tumours	437
Pleomorphic hyalinizing angiectatic tumour of soft parts	280	Aneurysmal bone cyst	440
Haemosiderotic fibrolipomatous tumour	282	Giant cell tumour of bone	447
Phosphaturic mesenchymal tumour	284	Non-ossifying fibroma	447
NTRK-rearranged spindle cell neoplasm (emerging)	287	Notochordal tumours	
Synovial sarcoma	290	Benign notochordal cell tumour	449
Epithelioid sarcoma	294	Conventional chordoma	451
Alveolar soft part sarcoma	297	Dedifferentiated chordoma	454
Clear cell sarcoma of soft tissue	300	Poorly differentiated chordoma	456
Extraskelatal myxoid chondrosarcoma	303	Other mesenchymal tumours of bone	
Desmoplastic small round cell tumour	306	Chondromesenchymal hamartoma of chest wall	458
Extrarenal rhabdoid tumour	309	Osteofibrous dysplasia	460
PEComa	312	Adamantinoma of long bones	463
Intimal sarcoma	315	Simple bone cyst	467
Undifferentiated sarcoma	318	Fibrocartilaginous mesenchymoma	470
		Fibrous dysplasia	472
		Lipoma and hibernoma of bone	475
		Leiomyosarcoma of bone	478
		Undifferentiated pleomorphic sarcoma	480
		Bone metastases	483
2 Undifferentiated small round cell sarcomas of bone and soft tissue	321	Haematopoietic neoplasms of bone	
WHO classification of undifferentiated small round cell sarcomas of bone and soft tissue	322	Solitary plasmacytoma of bone	486
Ewing sarcoma	323	Primary non-Hodgkin lymphoma of bone	489
Round cell sarcoma with <i>EWSR1</i> -non-ETS fusions	326	Langerhans cell histiocytosis	492
<i>CIC</i> -rearranged sarcoma	330	Erdheim-Chester disease	495
Sarcoma with <i>BCOR</i> genetic alterations	333	Rosai-Dorfman disease	498
3 Bone tumours	337	4 Genetic tumour syndromes of soft tissue and bone	501
WHO classification of bone tumours	338	Introduction	502
TMN staging of tumours of bone	339	Enchondromatosis	506
Introduction	340	Li-Fraumeni syndrome	510
Chondrogenic tumours		McCune-Albright syndrome	514
Subungual exostosis	345	Multiple osteochondromas	517
Bizarre parosteal osteochondromatous proliferation	348	Neurofibromatosis type 1	520
Periosteal chondroma	351	Rothmund-Thomson syndrome	522
Enchondroma	353	Werner syndrome	525
Osteochondroma	356		
Chondroblastoma	359		
Chondromyxoid fibroma	362	Contributors	528
Osteochondromyxoma	365		
Synovial chondromatosis	368	Declaration of interests	535
Central atypical cartilaginous tumour / chondrosarcoma, grade 1	370		
Secondary peripheral atypical cartilaginous tumour / chondrosarcoma, grade 1	373	IARC/WHO Committee for ICD-O	536
Central chondrosarcoma, grades 2 and 3	375		
Secondary peripheral chondrosarcoma, grades 2 and 3	379	Sources	537
Periosteal chondrosarcoma	381		
Clear cell chondrosarcoma	383	References	544
Mesenchymal chondrosarcoma	385		
Dedifferentiated chondrosarcoma	388	Subject index	598
		Previous volumes in the series	607
Osteogenic tumours			
Osteoma	391		
Osteoid osteoma	394		
Osteoblastoma	397		
Low-grade central osteosarcoma	400		
Osteosarcoma	403		
Parosteal osteosarcoma	410		
Periosteal osteosarcoma	414		
High-grade surface osteosarcoma	417		
Secondary osteosarcoma	419		
Fibrogenic tumours			
Desmoplastic fibroma of bone	422		
Fibrosarcoma of bone	424		
Vascular tumours of bone			
Haemangioma of bone	426		
Epithelioid haemangioma of bone	428		
Epithelioid haemangi endothelioma of bone	431		
Angiosarcoma of bone	434		