ATLAS OF
NEOPLASTIC
PULMONARY
DISEASE

ATLAS OF NEOPLASTIC PULMONARY DISEASE PATHOLOGY, CYTOLOGY, ENDOSCOPY AND RADIOLOGY

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DEDICATION

To: S. Donald Greenberg, MD

PREFACE

The diagnosis of lung cancer and benign pulmonary tumors can be challenging. This diagnosis can be facilitated by the study of images that allow recognition of patterns of disease, both at the clinical and pathologic levels. Conceptually defined, atlases are specialized books that rely heavily upon images to illustrate any subject matter. Fitting with such a concept, this atlas was developed to fill a void in the approach to diagnosis. In contrast to previous conventional atlases, this atlas is unique in that images from four major disciplines (endoscopy, radiology, histopathology, and cytopathology) involved in the study and diagnosis of lung tumors are brought together in a single volume.

In preparing this work, we had two objectives: (1) to illustrate the common while not ignoring the esoteric by recognizing the need to cover some entities that may only infrequently cross the paths of the practitioner; and (2) to provide a quick, reliable tool that may facilitate diagnosis through recognition of images using an interdisciplinary approach. To achieve these aims, we have selected and

put forward images that in our opinion best represent the tumor entities. In some instances, we have recruited the collaboration and materials from other workers in the field.

The atlas is organized into 11 parts containing 41 chapters, closely following the 2004 Classification of Lung Tumors by the World Health Organization (WHO). Accordingly, the chapters represent a wide range of neoplastic lung entities. It begins with tumors of children followed by sections on benign epithelial tumors, salivary gland tumors, mesenchymal neoplasms, lymphoproliferative disorders, carcinoid tumors, and a section of miscellaneous tumors. The atlas further includes a chapter on WHO-recognized variants of pre-invasive lung disease, major epithelial malignancies, and concludes with a chapter on metastatic lung tumors.

We hope and believe that our efforts during the preparation of this atlas have resulted in a useful, state-of-the-art work that will educate trainees and guide and support the best efforts of practitioners managing lung tumors.

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our busy professional lives to allow us to make room for the substantial amount of time required to put in this atlas together.

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WORLD HEALTH ORGANIZATION

HISTOLOGICAL CLASSIFICATION OF TUMOURS OF THE LUNG *

Malignant epithelial tumours

- Squamous cell carcinoma
 - Papillary
 - Clear cell
 - Small cell
 - Basaloid
- Small cell carcinoma
 - Combined small cell carcinoma
- Adenocarcinoma
 - Adenocarcinoma, mixed subtype
 - Acinar adenocarcinoma
 - Papillary adenocarcinoma
 - Bronchioloalveolar carcinoma
 - Nonmucinous
 - Mucinous
 - Mixed nonmucinous and mucinous
 - Solid adenocarcinoma with mucin production
 - Fetal adenocarcinoma
 - Mucinous (“colloid”) carcinoma
 - Mucinous cystadenocarcinoma
 - Signet ring adenocarcinoma
 - Clear cell adenocarcinoma
- Large cell carcinoma
 - Large cell neuroendocrine carcinoma
 - Combined large cell neuroendocrine carcinoma
 - Basaloid carcinoma
 - Lymphoepithelioma-like carcinoma
 - Clear cell carcinoma
 - Large cell carcinoma with rhabdoid phenotype
- Adenosquamous carcinoma
- Sarcomatoid carcinoma
 - Pleomorphic carcinoma
 - Spindle cell carcinoma
 - Giant cell carcinoma
 - Carcinosarcoma
 - Pulmonary blastoma
- Carcinoid tumours
 - Typical carcinoid
 - Atypical carcinoid
- Salivary gland tumours
 - Mucoepidermoid carcinoma
 - Adenoid cystic carcinoma
 - Epithelial-myoepithelial carcinoma
- Preinvasive lesions**
 - Squamous carcinoma *in situ*
 - Atypical adenomatous hyperplasia
 - Diffuse idiopathic pulmonary neuroendocrine cell hyperplasia

Mesenchymal tumours

- Angiosarcoma
- Epithelioid haemangioendothelioma
- Pleuropulmonary blastoma
 - Chondroma
 - Congenital peribronchial myofibroblastic tumour
 - Diffuse pulmonary lymphangiomatosis
- Inflammatory myofibroblastic tumour
- Lymphangioleiomyomatosis
- Synovial sarcoma
 - Monophasic
 - Biphasic
- Pulmonary artery sarcoma
- Pulmonary vein sarcoma

Benign epithelial tumours

- Papillomas
 - Squamous cell papilloma
 - Exophytic
 - Inverted
 - Glandular papilloma
 - Mixed squamous cell and glandular papilloma
- Adenomas
 - Alveolar adenoma
 - Papillary adenoma
 - Adenomas of the salivary gland type
 - Mucous gland adenoma
 - Pleomorphic adenoma
 - Others
 - Mucinous cystadenoma

Lymphoproliferative tumours

- Marginal zone B-cell lymphoma (MALT type)
 - Diffuse large B-cell lymphoma
 - Lymphomatoid granulomatosis
 - Langerhans cell histiocytosis

Miscellaneous tumours

- Hamartoma
- Sclerosing hemangioma
- Clear Cell tumour
- Germ cell tumours
 - Teratoma, mature
 - Immature
 - Other germ cell tumours
- Intrapulmonary thymoma
- Melanoma

Metastatic Tumours

* Modified from WHO Pathology and Genetics. Tumours of the Lung, Pleura, Thymus and Heart, WD Travis, E. Brambilla, H. Konrad Müller-Hermelink and CC Harris, IARC Press, Lyon, 2004

Contents

	Dedication	v
	Preface	vii
	Acknowledgments	ix
	World Health Organization	xi
	Contributors	xvii
PART I	Tumors of Childhood	1
Chapter 1	Lymphangiomatosis	3
	<i>Megan K. Dishop</i>	
Chapter 2	Pleuropulmonary Blastoma	7
	<i>Megan K. Dishop</i>	
Chapter 3	Congenital Pulmonary Myofibroblastic Tumor	13
	<i>Megan K. Dishop</i>	
PART II	Benign Epithelial Tumors	17
Chapter 4	Alveolar Adenoma	19
	<i>Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 5	Uncommon Endobronchial Surface Tumors	23
	<i>Tetsu Tsukamoto, Seikan Suzuki, Armin Ernst, Toshiaki Kawai, Yuichi Ozeki, Philip T. Cagle, Timothy C. Allen and Armando E. Fraire</i>	
PART III	Salivary Gland Tumors (Benign and Malignant)	31
Chapter 6	Mucous Gland Adenoma	33
	<i>Richard S. Irwin, Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 7	Pleomorphic Adenoma	35
	<i>Armando E. Fraire, Philip T. Cagle, and Timothy C. Allen</i>	

Chapter 8	Mucoepidermoid Tumor 39 <i>Shanda Blackmon, Armin Ernst, Philip T. Cagle, Dina R. Mody and Armando E. Fraire</i>	
Chapter 9	Adenoid Cystic Carcinoma 43 <i>Armin Ernst, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
PART IV	Mesenchymal Tumors (Benign and Malignant)	47
Chapter 10	Inflammatory Polyps 49 <i>Richard S. Irwin and Armando E. Fraire</i>	
Chapter 11	Inflammatory Pseudotumor 51 <i>Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 12	Pulmonary Chondroma 53 <i>Armin Ernst, Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 13	Pulmonary Hamartoma 55 <i>Richard S. Irwin, Armin Ernst, Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 14	Localized Fibrous Tumor 59 <i>Armin Ernst, Shanda Blackmon, Toshiaki Kawai, and Armando E. Fraire</i>	
Chapter 15	Lipomas and Liposarcomas 63 <i>Richard S. Irwin, Ana Gimenez, and Armando E. Fraire</i>	
Chapter 16	Cystic Lymphangioma 67 <i>Shylashree Chikkamuniyappa, Josephine Heim-Hall, Jaishree Jagirdar, and Armando E. Fraire</i>	
Chapter 17	Lymphangioleiomyomatosis 69 <i>Helmut H. Popper, Nader Morad, Issam A. Al-Bozom, Imaad Bin Mujeeb, and Armando E. Fraire</i>	
Chapter 18	Epithelioid Hemangioendothelioma 73 <i>Toshiaki Kawai, Armin Ernst, Carol F. Farver, Armando E. Fraire, and Anjali Saqi</i>	
Chapter 19	Pulmonary Artery Sarcoma 77 <i>Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 20	Synovial Sarcoma 81 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	

PART V	Lymphoid Neoplasms	85
Chapter 21	Marginal Zone B-Cell Lymphoma (Maltoma) 87 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, N. Paul Otori, Elise R. Hoff, and Armando E. Fraire</i>	
Chapter 22	Diffuse Large B-Cell Lymphoma 91 <i>Shanda Blackmon, Armin Ernst, Philip T. Cagle, Timothy C. Allen, N. Paul Otori, Elise R. Hoff, and Armando E. Fraire</i>	
Chapter 23	Lymphomatoid Granulomatosis 93 <i>Thomas V. Colby, William G. Morice, and Armando E. Fraire</i>	
Chapter 24	Langerhans Cell Histiocytosis 97 <i>Timothy C. Allen, Philip T. Cagle, Dina R. Mody, and Armando E. Fraire</i>	
PART VI	Carcinoid Tumors	101
Chapter 25	Typical and Atypical Carcinoids 103 <i>Shanda Blackmon, Richard S. Irwin, Armin Ernst, Philip T. Cagle, Timothy C. Allen, N. Paul Otori, Elise R. Hoff, Dina R. Mody, and Armando E. Fraire</i>	
PART VII	Miscellaneous Tumors	107
Chapter 26	Teratoma 109 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 27	Melanoma 111 <i>Toshiaki Kawai, Philip T. Cagle, Timothy C. Allen, Takayuki Haga, Kuniaki Nakanishi, and Armando E. Fraire</i>	
Chapter 28	Thymoma 115 <i>Shanda Blackmon, Richard S. Irwin, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 29	Glomus Tumor of the Lung 119 <i>Hassan F. Nadrous and Armando E. Fraire</i>	
Chapter 30	Sclerosing Hemangioma 123 <i>Armando E. Fraire, Giulio Rossi, Alberto Cavazza, and Dina R. Mody</i>	
PART VIII	Preinvasive Disease	127
Chapter 31	Preinvasive Disease 129 <i>Keith M. Kerr, Dina R. Mody, and Armando E. Fraire</i>	

PART IX	Common Major Malignant Epithelial Tumors	137
Chapter 32	Squamous Cell Carcinoma 139 <i>Shanda Blackmon, Armin Ernst, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, N. Paul Otori, Elise R. Hoff, and Armando E. Fraire</i>	
Chapter 33	Adenocarcinoma 145 <i>Shanda Blackmon, Armin Ernst, Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 34	Large Cell Carcinoma 151 <i>Armin Ernst, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 35	Small Cell Carcinoma 155 <i>Armin Ernst, Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
PART X	Less Common Malignant Epithelial Tumors	159
Chapter 36	Adenosquamous Carcinoma 161 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, and Armando E. Fraire</i>	
Chapter 37	Bronchioloalveolar Carcinoma 165 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 38	Large Cell Neuroendocrine Carcinoma 169 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 39	Sarcomatoid Carcinoma 171 <i>Shanda Blackmon, Armin Ernst, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
Chapter 40	Pulmonary Blastoma 175 <i>Shanda Blackmon, Philip T. Cagle, Timothy C. Allen, Dina R. Mody, and Armando E. Fraire</i>	
PART XI	Metastatic Tumors	177
Chapter 41	Metastatic Tumors 179 <i>Shanda Blackmon, Armin Ernst, Dina R. Mody, and Armando E. Fraire</i>	
	Subject Index 187	

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