

---

# Contents

## Part I Fundamentals

<b>1</b>	<b>Liver Anatomy and Function . . . . .</b>	<b>3</b>
	Jeffrey B. Kaplan, Avash Kalra and Scott W. Biggins	
<b>2</b>	<b>Imaging Characteristics of Normal Liver and Liver Tumors . . . . .</b>	<b>13</b>
	Ali A. Haydar, Layla Antoine Nasr and Hero K. Hussain	
<b>3</b>	<b>Assessment of Liver Function: Focus on the ALBI Score . . . . .</b>	<b>31</b>
	Philip J. Johnson, Harun Khan and Sarah Berhane	
<b>4</b>	<b>Radiation Sensitivity of the Liver: Models and Clinical Data . . . . .</b>	<b>39</b>
	Issam El Naqa, Kyle Cuneo, Dawn Owen, Theodore S. Lawrence and Randall K. Ten Haken	
<b>5</b>	<b>Radiation Oncology: Fundamentals and Controversies . . . .</b>	<b>49</b>
	Jeffrey Meyer and Tracey E. Schefter	

## Part II Principles of Surgery, Intra-arterial Therapies, and Thermal Ablation

<b>6</b>	<b>Surgical Considerations. . . . .</b>	<b>59</b>
	Ana Luiza Mandelli Gleisner	
<b>7</b>	<b>Principles of Intra-Arterial Therapies . . . . .</b>	<b>69</b>
	Keshav M. Menon, Ankaj Khosla and Clayton K. Trimmer	
<b>8</b>	<b>Principles of Thermal Ablation . . . . .</b>	<b>77</b>
	Camille L. Stewart, Barish H. Edil, Robert K. Ryu and M. Reza Rajebi	

## Part III Principles of Radiation Therapy

<b>9</b>	<b>External Beam Radiation Therapy for Liver Tumors: Simulation, Treatment Planning, and Advanced Delivery Techniques . . . . .</b>	<b>91</b>
	David C. Westerly and Karyn A. Goodman	

<b>10 Particle Radiation Therapy for Liver Tumors: Simulation and Treatment Planning . . . . .</b>	<b>107</b>
Matthew Knecht, Andrew Wroe and Gary Y. Yang	
<b>11 Yttrium-90 Selective Internal Radiation Therapy . . . . .</b>	<b>121</b>
D. Thor Johnson and Adam Leon Kesner	
<b>12 Interstitial Brachytherapy for Liver Tumors: Practical Issues . . . . .</b>	<b>133</b>
Michael R. Folkert and Brian Hrycushko	
<b>Part IV Hepatocellular Carcinoma</b>	
<b>13 Hepatocellular Carcinoma: Epidemiology, Basic Principles of Treatment, and Clinical Data . . . . .</b>	<b>149</b>
Amit G. Singal, Purva Gopal and Adam C. Yopp	
<b>14 Radiation Therapy for Hepatocellular Carcinoma: Clinical Data . . . . .</b>	<b>179</b>
Erqi L. Pollom, Yushen Qian, Julie L. Koenig, Albert C. Koong and Daniel T. Chang	
<b>Part V Intrahepatic and Hilar Cholangiocarcinoma</b>	
<b>15 Intrahepatic and Hilar Cholangiocarcinomas: Epidemiology, Basic Principles of Treatment, and Clinical Data . . . . .</b>	<b>201</b>
S. Lindsey Davis	
<b>16 Radiation Therapy for Intrahepatic and Hilar Cholangiocarcinoma: Clinical Data . . . . .</b>	<b>223</b>
Sagar A. Patel, Florence K. Keane and Theodore S. Hong	
<b>Part VI Liver Metastases</b>	
<b>17 Liver Metastases: Basic Principles of Treatment and Clinical Data . . . . .</b>	<b>235</b>
Matthew R. Porembka and Michael A. Choti	
<b>18 Radiation Therapy for Liver Metastases: Clinical Data . . .</b>	<b>245</b>
Morten Høyer	
<b>Part VII Perspectives on Multidisciplinary Management</b>	
<b>19 Multidisciplinary Model for Liver Tumors. . . . .</b>	<b>259</b>
Cheryl Meguid and Tracey E. Schefter	
<b>Part VIII Future Directions</b>	
<b>20 Radiation Therapy for Liver Tumors: Future Directions . . .</b>	<b>269</b>
Eric A. Mellon, Gilbert Murimwa and Sarah E. Hoffe	
<b>Index . . . . .</b>	<b>283</b>

Radiation Therapy for Liver Tumors

Fundamentals and Clinical Practice

Meyer, J.; Schefter, T. (Eds.)

2017, XVIII, 288 p. 62 illus., 46 illus. in color., Softcover

ISBN: 978-3-319-54530-1