

Table of Contents

Preface to the 2017 Version	17
Preface to the 2013 Version	20
Preface to the 2009 Version	22
Preface to the 2005 Version	25
Clinical Practice Guidelines for Liver Cancer, List of Clinical Questions and Recommendations	28
Background to the Guidelines	38
General statement	39
Steps in the revision process	41
Chapter 1 ■ Surveillance and Diagnosis	45
Introduction	46
Explanation of the surveillance and diagnostic algorithm for hepatocellular carcinoma (HCC)	48
Clinical Questions	
CQ1. Is surveillance recommended?	53
CQ2. What patient groups are targeted and what methods are used in surveillance?	55
CQ3. What tumor markers are useful for diagnosing HCC?	58
CQ4. Is measuring the levels of 2 or more tumor markers useful for diagnosing HCC?	62
CQ5. Are tumor markers effective indicators of treatment response in patients with HCC?	65
CQ6. What imaging modalities help to accurately diagnose typical HCC in high-risk patients?	67
CQ7. What size (cm) of liver nodules showing an atypical HCC enhancement pattern on dynamic CT or dynamic MRI warrants further examination?	74
CQ8. What imaging modalities help to accurately diagnose early-stage HCC in patients with cirrhosis?	78
CQ9. What imaging modalities effectively detect liver cancer in patients with decreased kidney or liver function?	83
CQ10. Are head MRI, thoracic CT, bone scintigraphy, and FDG-PET required for staging HCC?	87
Chapter 2 ■ Treatment Algorithm	92
Introduction	93
Explanation of the treatment algorithm for HCC	94

Clinical Questions	
CQ11. What treatment modalities are recommended for solitary HCC?	96
CQ12. What treatment modalities are recommended for 2 or 3 HCCs?	98
CQ13. What treatment modalities are recommended for 4 or more HCCs?	100
CQ14. What treatment modalities are recommended for HCC in patients with liver damage grade C (Child-Pugh C liver function)?	102
CQ15-1. Is radiation therapy effective against bone and brain metastasis from HCC?	105
CQ15-2. What treatment modalities are effective against extrahepatic metastasis (e.g., lung, adrenal, and lymph node metastasis and dissemination) from HCC?	108
CQ16. What treatment modalities are effective against HCC accompanied by vascular invasion?	111
Chapter 3 ■ Prevention	116
Introduction	117
CQ17. What treatment modalities are recommended as preventive measures against liver cancer associated with chronic hepatitis B liver disease?	117
CQ18. What treatment modalities are recommended as preventive measures against liver cancer associated with chronic hepatitis C liver disease?	121
CQ19. What preventive measures are recommended for liver cancer associated with viral or nonviral chronic liver disease?	125
Chapter 4 ■ Surgery	129
Introduction	130
CQ20. Which patients are eligible for hepatectomy?	131
CQ21. What tests effectively evaluate liver function prior to hepatectomy?	134
CQ22. What procedures are considered safe and reasonable for liver resection?	138
CQ23. What are the indications for laparoscopic hepatectomy?	143
CQ24. What factors effectively predict prognosis after hepatectomy?	145
CQ25. Do resection margins affect prognosis?	148
CQ26. Does hepatic vascular occlusion or lowering of central venous pressure reduce blood loss during hepatectomy?	150
CQ27. Is routine abdominal drainage necessary after hepatectomy?	153
CQ28. Is neoadjuvant therapy necessary in hepatectomy?	155
CQ29. What are the eligibility criteria for liver transplantation in patients with HCC?	157
CQ30. Does downstaging of HCC prior to liver transplantation improve prognosis after transplantation?	161

Chapter 5 ■ Percutaneous Ablation	163
Introduction	164
CQ31. Which patients are eligible for percutaneous ablation?	165
CQ32. How should suitable ablation therapy be chosen?	169
CQ33. Can the combination of percutaneous ablation and TACE improve the survival of HCC patients?	172
CQ34. Is contrast-enhanced US or fusion imaging useful for image-guided percutaneous ablation?	175
CQ35. What imaging modalities are useful for assessing treatment response to percutaneous ablation?	178
CQ36. What factors predict treatment response to percutaneous ablation?	181
Chapter 6 ■ Transcatheter Arterial Chemoembolization and Transcatheter Arterial Embolization	184
Introduction	185
CQ37. Which patients are eligible for TACE or TAE?	186
CQ38. What is the most appropriate method for selecting embolic agents and anticancer drugs for TACE or TAE?	190
CQ39. What factors determine the timing of re-embolization?	197
CQ40. What imaging modalities are useful for assessing treatment response to TACE?	200
CQ41. Is it appropriate to combine embolization and molecular-targeted therapy?	204
CQ42. What are the clinical features of TACE failure?	207
Chapter 7 ■ Drug Therapy	211
Introduction	212
CQ43. Is molecular-targeted therapy recommended for unresectable advanced HCC?	213
CQ44. Is HAIC recommended for unresectable advanced HCC?	217
CQ45. What factors predict treatment response to drug therapy?	219
CQ46. How should treatment response to drug therapy be assessed?	221
CQ47. How should the side effects of drug therapy be managed?	223
Supplemental Table	227
Chapter 8 ■ Radiation Therapy	231
Introduction	232
CQ48. Is stereotactic body radiotherapy recommended for HCC?	233

CQ49. Does particle therapy (proton therapy and heavy particle [carbon-ion] therapy) effectively treat HCC?	237
CQ50. When is 3D conformal radiotherapy recommended for HCC?	242
Chapter 9 ■ Post-treatment Surveillance and Prevention and Treatment of Recurrent HCC	247
Introduction	248
CQ51. How should patients be followed up after hepatectomy and percutaneous ablation?	249
CQ52. What methods are effective for preventing recurrence after hepatectomy and percutaneous ablation?	252
CQ53. What measures are effective for preventing recurrence after liver transplantation?	257
CQ54. What treatment modalities are effective against recurrence after hepatectomy and percutaneous ablation?	261
CQ55. What treatment modalities are effective against recurrence after liver transplantation?	266
External Review Panel for the Clinical Practice Guidelines for Liver Cancer 2017	269
Resources ■ List of abbreviations	278