

Supplementary Table 1. Pre-defined variables collected for the Korean Primary Liver Cancer Registry**Case Record Form (v2.1)**

* Applied for patients diagnosed with HCC since 2020

Prerequisite

Name	
Unique Personal Identification Number	
Hospital Name	
Hospital ID	

Body Mass Index

Height (cm)	
Body weight (kg)	
Blood pressure (mmHg)	/

Past Medical History

Smoking	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes (_pack/day * _yrs)
Diabetes Mellitus	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes
Hypertension	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes

Etiology of HCC (Select one or more)

HBsAg	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Anti-HCV	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Alcohol	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
<input type="checkbox"/> Others (Specify causes)	
<input type="checkbox"/> Unknown	

Liver Cirrhosis

Liver cirrhosis	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
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Viral Hepatitis**<Hepatitis B>**

Date of Test	YYYY-MM-DD
HBV DNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HBV DNA titer	() <input type="checkbox"/> 1. IU/mL <input type="checkbox"/> 2. copies/mL

<Hepatitis C>

Date of Test	YYYY-MM-DD
HCV RNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HCV RNA titer	() IU/mL
HCV genotype	<input type="checkbox"/> 1. GT 1b <input type="checkbox"/> 2. GT 2 <input type="checkbox"/> 3. GT 1 (other than 1b) <input type="checkbox"/> 4. Others <input type="checkbox"/> 9. No results

<Viral Hepatitis Treatment> (at the time of diagnosis)

Hepatitis B	<input type="checkbox"/> 0. None
	<input type="checkbox"/> 1. Received <input type="checkbox"/> 1. Entecavir <input type="checkbox"/> 2. Tenofovir <input type="checkbox"/> 3. Lamivudine <input type="checkbox"/> 4. Adefovir <input type="checkbox"/> 5. Telbivudine <input type="checkbox"/> 6. Clevudine <input type="checkbox"/> 7. Interferons <input type="checkbox"/> 8. Others
	<input type="checkbox"/> 9. Unknown
Hepatitis C	<input type="checkbox"/> 0. None
	<input type="checkbox"/> 1. Received <input type="checkbox"/> 1. Interferons <input type="checkbox"/> 2. Direct acting antivirals
	<input type="checkbox"/> 9. Unknown

Encephalopathy

Encephalopathy	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Confusion) <input type="checkbox"/> 2. Presence (Stupor or coma)
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Performance Status

<input type="checkbox"/> 0	Asymptomatic (Fully active, able to carry on all pre-disease activities without restriction)
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Supplementary Table 1. Continued

<input type="checkbox"/> 1	Symptomatic but completely ambulatory (Restricted from physically strenuous activity but ambulatory and able to perform work of a light or sedentary nature)
<input type="checkbox"/> 2	Symptomatic, <50% time in bed during the day (ambulatory and capable of all self-care but unable to carry out any work activities; up and about >50% waking hours)
<input type="checkbox"/> 3	Symptomatic, >50% time in bed, but not bedbound (capable of only limited self-care, confined to bed or chair ≥50% of waking hours)
<input type="checkbox"/> 4	Bedbound (completely disabled; cannot perform any self-care; totally confined to bed or chair)
<input type="checkbox"/> 9	Unknown

Pre-Treatment Test Results

1. Essential Blood Tests

Albumin (g/dL)	
Bilirubin (mg/dL)	
Prothrombin time	Time (sec) :
	Index (%) :
	INR (ratio) :
Creatinine (mg/dL)	
Sodium (mmol/L)	
AST (IU/L)	
ALT (IU/L)	
Platelets (*10 ³ /uL)	

2. Tumor Markers

AFP	
PIVKA-II (mAU/mL)	

3. Other Blood Tests

ICG R15 (%)	
Fasting glucose (mg/dL)	
Total cholesterol (mg/dL)	
HDL cholesterol (mg/dL)	
LDL cholesterol (mg/dL)	
Triglycerides (mg/dL)	

TNM Stage (Modification of UICC, 2000, 4th)

1. Imaging Findings (CT or MR-based at the time of initial diagnosis)

Date of CT diagnosis	YYYY-MM-DD
Date of MR diagnosis	YYYY-MM-DD
Method of imaging diagnosis	<input type="checkbox"/> 1. CT <input type="checkbox"/> 2. MR
T stage	
Number	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
Max size (cm)	: (<input type="checkbox"/> ≥ 10 cm)
Portal vein invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
N stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Portal hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs) <input type="checkbox"/> 9. Unknown	
M stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others) <input type="checkbox"/> 9. Unknown	
Ascites (based on CT/MR)	
<input type="checkbox"/> 0. None <input type="checkbox"/> 1. Mild <input type="checkbox"/> 2. Moderate to severe	

2. Histological Findings (Biopsy or Surgery)

Date of histological diagnosis	YYYY-MM-DD
Method of histological	<input type="checkbox"/> 1. Biopsy <input type="checkbox"/> 2. Surgery

Supplementary Table 1. Continued

diagnosis	
Histological diagnosis	<input type="checkbox"/> 1. HCC <input type="checkbox"/> 2. Combined HCC and CCC <input type="checkbox"/> 3. Other ()
T stage	
Number	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
Max size (cm)	: (<input type="checkbox"/> ≥ 10 cm)
Microscopic vascular invasion	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence
Portal vein Invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
N stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Porta hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs) <input type="checkbox"/> 9. Unknown	
M stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others) <input type="checkbox"/> 9. Unknown	
Ascites (based on CT/MR)	
<input type="checkbox"/> 0. None <input type="checkbox"/> 1. Mild <input type="checkbox"/> 2. Moderate to severe	

Treatment**1. Initial treatment**

Date of Treatment	YYYY-MM-DD
Treatment modality code	

2. Second treatment

Date of Treatment	YYYY-MM-DD
Treatment modality code	

Treatment modality codes**1. Surgical resection****2. Liver transplantation****3. Local ablation therapy**

- 3a. Radiofrequency ablation (RFA)
 3b. Alcohol injection
 3c. Other local ablation

4. Transarterial therapy

- 4a. Transcatheter arterial chemoembolization (TACE) with gelatin sponge
 4b. TACE with beads (DCB or Hepasphere)
 4c. Transarterial chemolipiodolization (no gelatin sponge)
 4d. Transarterial chemoinfusion (via catheter or chemoport; no gelatin sponge, no lipiodol)
 4e. Radioembolization (Y-90)

5. Chemotherapy

- 5a. Sorafenib
 5b. Other systemic chemotherapy (not specified in the list)
 5c. Lenvatinib
 5d. Atezolizumab + bevacizumab
 5e. Tremelimumab + durvalumab
 5f. Regorafenib
 5g. Cabozantinib
 5h. Ramucirumab
 5i. Nivolumab
 5j. Nivolumab + ipilimumab
 5k. Pembrolizumab

6. Radiotherapy**7. No treatment**

Supplementary Table 1. Continued

Case Record Form (v2.0)

* Applied for patients diagnosed with HCC since 2014

Prerequisite

Name	
Unique Personal Identification Number	
Hospital Name	
Hospital ID	

Body Mass Index

Height (cm)	
Body weight (kg)	
Blood pressure (mmHg)	/

Past Medical History

Smoking	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes (_pack/day * _yrs)
Diabetes Mellitus	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes
Hypertension	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes

Etiology of HCC (Select one or more)

HBsAg	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Anti-HCV	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Alcohol	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
<input type="checkbox"/> Others (Specify causes)	
<input type="checkbox"/> Unknown	

Liver Cirrhosis

Liver cirrhosis	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
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Viral Hepatitis

<Hepatitis B>

Date of Test	YYYY-MM-DD
HBV DNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HBV DNA titer	() <input type="checkbox"/> 1. IU/mL <input type="checkbox"/> 2. copies/mL

<Hepatitis C>

Date of Test	YYYY-MM-DD
HCV RNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HCV RNA titer	() IU/mL
HCV genotype	<input type="checkbox"/> 1. GT 1b <input type="checkbox"/> 2. GT 2 <input type="checkbox"/> 3. GT 1 (other than 1b) <input type="checkbox"/> 4. Others <input type="checkbox"/> 9. No results

<Viral Hepatitis Treatment> (at the time of diagnosis)

Hepatitis B	<input type="checkbox"/> 0. None
	<input type="checkbox"/> 1. Received <input type="checkbox"/> 1. Entecavir <input type="checkbox"/> 2. Tenofovir <input type="checkbox"/> 3. Lamivudine <input type="checkbox"/> 4. Adefovir <input type="checkbox"/> 5. Telbivudine <input type="checkbox"/> 6. Clevudine <input type="checkbox"/> 7. Interferons <input type="checkbox"/> 8. Others
	<input type="checkbox"/> 9. Unknown
Hepatitis C	<input type="checkbox"/> 0. None
	<input type="checkbox"/> 1. Received <input type="checkbox"/> 1. Interferons <input type="checkbox"/> 2. Direct acting antivirals
	<input type="checkbox"/> 9. Unknown

Encephalopathy

Encephalopathy	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Confusion) <input type="checkbox"/> 2. Presence (Stupor or coma)
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Performance Status

<input type="checkbox"/> 0	Asymptomatic (Fully active, able to carry on all pre-disease activities without restriction)
----------------------------	--

Supplementary Table 1. Continued

<input type="checkbox"/> 1	Symptomatic but completely ambulatory (Restricted from physically strenuous activity but ambulatory and able to perform work of a light or sedentary nature)
<input type="checkbox"/> 2	Symptomatic, <50% time in bed during the day (ambulatory and capable of all self-care but unable to carry out any work activities; up and about >50% waking hours)
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<input type="checkbox"/> 4	Bedbound (completely disabled; cannot perform any self-care; totally confined to bed or chair)
<input type="checkbox"/> 9	Unknown

Pre-Treatment Test Results**1. Essential Blood Tests**

Albumin (g/dL)	
Bilirubin (mg/dL)	
Prothrombin time	Time (sec) :
	Index (%) :
	INR (ratio) :
Creatinine (mg/dL)	
Sodium (mmol/L)	
AST (IU/L)	
ALT (IU/L)	
Platelets (*10 ³ /uL)	

2. Tumor Markers

AFP	
PIVKA-II (mAU/mL)	

3. Other Blood Tests

ICG R15 (%)	
Fasting glucose (mg/dL)	
Total cholesterol (mg/dL)	
HDL cholesterol (mg/dL)	
LDL cholesterol (mg/dL)	
Triglycerides (mg/dL)	

TNM Stage (Modification of UICC, 2000, 4th)**1. Imaging Findings (CT or MR-based at the time of initial diagnosis)**

Date of CT diagnosis	YYYY-MM-DD
Date of MR diagnosis	YYYY-MM-DD
Method of imaging diagnosis	<input type="checkbox"/> 1. CT <input type="checkbox"/> 2. MR
T stage	
Number	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
Max size (cm)	: (<input type="checkbox"/> ≥ 10 cm)
Portal vein invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
N stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Portal hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs) <input type="checkbox"/> 9. Unknown	
M stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others) <input type="checkbox"/> 9. Unknown	
Ascites (based on CT/MR)	
<input type="checkbox"/> 0. None <input type="checkbox"/> 1. Mild <input type="checkbox"/> 2. Moderate to severe	

2. Histological Findings (Biopsy or Surgery)

Date of histological diagnosis	YYYY-MM-DD
Method of histological	<input type="checkbox"/> 1. Biopsy <input type="checkbox"/> 2. Surgery

Supplementary Table 1. Continued

diagnosis	
Histological diagnosis	<input type="checkbox"/> 1. HCC <input type="checkbox"/> 2. Combined HCC and CCC <input type="checkbox"/> 3. Other ()
T stage	
Number	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
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Microscopic vascular invasion	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence
Portal vein Invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
N stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Porta hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs) <input type="checkbox"/> 9. Unknown	
M stage	
<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others) <input type="checkbox"/> 9. Unknown	
Ascites (based on CT/MR)	
<input type="checkbox"/> 0. None <input type="checkbox"/> 1. Mild <input type="checkbox"/> 2. Moderate to severe	

Treatment

1. Initial treatment

Date of Treatment	YYYY-MM-DD
Treatment modality code	

2. Second treatment

Date of Treatment	YYYY-MM-DD
Treatment modality code	

Treatment modality codes

1. Surgical resection

2. Liver transplantation

3. Local ablation therapy

- 3a. Radiofrequency ablation (RFA)
- 3b. Alcohol injection
- 3c. Other local ablation

4. Transarterial therapy

- 4a. Transcatheter arterial chemoembolization (TACE) with gelatin sponge
- 4b. TACE with beads (DCB or Hepasphere)
- 4c. Transarterial chemolipiodolization (no gelatin sponge)
- 4d. Transarterial chemoinfusion (via catheter or chemoport; no gelatin sponge, no lipiodol)
- 4e. Radioembolization (Y-90)

5. Chemotherapy

- 5a. Sorafenib
- 5b. Other systemic chemotherapy (not specified in the list)

6. Radiotherapy

7. No treatment

Supplementary Table 1. Continued

Case Record Form (v1.0)

Prerequisite

Name	
Unique Personal Identification Number	
Hospital Name	
Hospital ID	

Body Mass Index

Height (cm)	
Body weight (kg)	
Blood pressure (mmHg)	/

Past Medical History

Smoking	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes (_pack/day * _yrs)
Diabetes Mellitus	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes
Hypertension	<input type="checkbox"/> 0. No <input type="checkbox"/> 1. Yes

Etiology of HCC (Select one or more)

HBsAg	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Anti-HCV	<input type="checkbox"/> 0. Negative <input type="checkbox"/> 1. Positive <input type="checkbox"/> 2. No results
Alcohol	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
<input type="checkbox"/> Others (Specify causes)	
<input type="checkbox"/> Unknown	

Liver Cirrhosis

Liver cirrhosis	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
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Viral Hepatitis**<Hepatitis B>**

Date of Test	YYYY-MM-DD
HBV DNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HBV DNA titer	() <input type="checkbox"/> 1. IU/mL <input type="checkbox"/> 2. copies/mL

<Hepatitis C>

Date of Test	YYYY-MM-DD
HCV RNA	<input type="checkbox"/> 0. Negative (< lower limit) <input type="checkbox"/> 1. Positive <input type="checkbox"/> 9. No results
HCV RNA titer	() IU/mL
HCV genotype	<input type="checkbox"/> 1. GT 1b <input type="checkbox"/> 2. GT 2 <input type="checkbox"/> 3. GT 1 (other than 1b) <input type="checkbox"/> 4. Others <input type="checkbox"/> 9. No results

Encephalopathy

Encephalopathy	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Confusion) <input type="checkbox"/> 2. Presence (Stupor or coma)
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Performance Status

<input type="checkbox"/> 0	Asymptomatic (Fully active, able to carry on all pre-disease activities without restriction)
<input type="checkbox"/> 1	Symptomatic but completely ambulatory (Restricted from physically strenuous activity but ambulatory and able to perform work of a light or sedentary nature)
<input type="checkbox"/> 2	Symptomatic, <50% time in bed during the day (ambulatory and capable of all self-care but unable to carry out any work activities; up and about >50% waking hours)
<input type="checkbox"/> 3	Symptomatic, >50% time in bed, but not bedbound (capable of only limited self-care, confined to bed or chair ≥50% of waking hours)
<input type="checkbox"/> 4	Bedbound (completely disabled; cannot perform any self-care; totally confined to bed or chair)
<input type="checkbox"/> 9	Unknown

Pre-Treatment Test Results**1. Essential Blood Tests**

Albumin (g/dL)	
Bilirubin (mg/dL)	

Supplementary Table 1. Continued

Prothrombin time	Time (sec) :
	Index (%) :
	INR (ratio) :
Creatinine (mg/dL)	
Sodium (mmol/L)	
AST (IU/L)	
ALT (IU/L)	
Platelets (*10 ³ /uL)	

2. Tumor Markers

AFP	
PIVKA-II (mAU/mL)	

3. Other Blood Tests

ICG R15 (%)	
Fasting glucose (mg/dL)	
Total cholesterol (mg/dL)	
HDL cholesterol (mg/dL)	
LDL cholesterol (mg/dL)	
Triglycerides (mg/dL)	

TNM Stage (Modification of UICC, 2000, 4th)

1. Imaging Findings (CT or MR-based at the time of initial diagnosis)

Date of CT diagnosis	YYYY-MM-DD
Date of MR diagnosis	YYYY-MM-DD
Method of imaging diagnosis	<input type="checkbox"/> 1. CT <input type="checkbox"/> 2. MR

T stage

Number	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
Max size (cm) :	(<input type="checkbox"/> ≥ 10 cm)
Portal vein invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown

N stage	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Portal hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs) <input type="checkbox"/> 9. Unknown
M stage	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others) <input type="checkbox"/> 9. Unknown
Ascites (based on CT/MR)	<input type="checkbox"/> 0. None <input type="checkbox"/> 1. Mild <input type="checkbox"/> 2. Moderate to severe

2. Histological Findings (Biopsy or Surgery)

Date of histological diagnosis	of YYYY-MM-DD
Method of histological diagnosis	<input type="checkbox"/> 1. Biopsy <input type="checkbox"/> 2. Surgery
Histological diagnosis	<input type="checkbox"/> 1. HCC <input type="checkbox"/> 2. Combined HCC and CCC <input type="checkbox"/> 3. Other ()
T stage	<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Three <input type="checkbox"/> 4. Four <input type="checkbox"/> 5. ≥ 5
Max size (cm) :	(<input type="checkbox"/> ≥ 10 cm)
Microscopic vascular invasion	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence
Portal vein Invasion (Vp)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic vein invasion (Vv)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Bile duct invasion (B)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown
Hepatic artery invasion (Va)	<input type="checkbox"/> 0. Absence <input type="checkbox"/> 1. Presence <input type="checkbox"/> 9. Unknown

Supplementary Table 1. Continued

<p><u>N stage</u></p> <p><input type="checkbox"/> 0. Absence</p> <p><input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Porta hepatis <input type="checkbox"/> 2. Other intra-abdominal LNs)</p> <p><input type="checkbox"/> 9. Unknown</p>
<p><u>M stage</u></p> <p><input type="checkbox"/> 0. Absence</p> <p><input type="checkbox"/> 1. Presence (Site: <input type="checkbox"/> 1. Lung <input type="checkbox"/> 2. Bone <input type="checkbox"/> 3. Distant LNs <input type="checkbox"/> 4. Others)</p> <p><input type="checkbox"/> 9. Unknown</p>
<p><u>Ascites</u> (based on CT/MR)</p> <p><input type="checkbox"/> 0. None</p> <p><input type="checkbox"/> 1. Mild</p> <p><input type="checkbox"/> 2. Moderate to severe</p>

Treatment**1. Initial treatment**

Date of Treatment	YYYY-MM-DD
Treatment modality code	

2. Second treatment

Date of Treatment	YYYY-MM-DD
Treatment modality code	

Treatment modality codes**1. Surgical resection****2. Liver transplantation****3. Local ablation therapy**

- 3a. Radiofrequency ablation (RFA)
3b. Alcohol injection
3c. Other local ablation

4. Transarterial therapy

- 4a. Transcatheter arterial chemoembolization (TACE) with gelatin sponge
4b. TACE with beads (DCB or Hepasphere)
4c. Transarterial chemolipiodolization (no gelatin sponge)
4d. Transarterial chemoinfusion (via catheter or chemoport; no gelatin sponge, no lipiodol)
4e. Radioembolization (Y-90)

5. Chemotherapy

- 5a. Sorafenib
5b. Other systemic chemotherapy (not specified in the list)

6. Radiotherapy**7. No treatment**