

APPENDIX I
RISK FACTORS OF LIVER CANCER PREDICTION

	Identifier	Risk Factor	Options
Basic Information	A01	Gender	Fill in the blank
	A02	Age	Fill in the blank
	A03	Height (cm)	Fill in the blank
	A04	Weight (kg)	Fill in the blank
	A05	Waistline (cm)	Fill in the blank
	A06	Marriage	• Unmarried • First marriage • Remarriage • Divorce • Widowhood • Non-marital cohabitation
	A07	Occupation	• Professional and technical • Leader of government, enterprises or institutions • Staff • Merchant • Peasant • Workman • Service Staff • Housework • Others
	A08	Asbestos Contact	• Yes • No
	A09	Rubber Contact	• Yes • No
	A10	Dust Contact	• Yes • No
	A11	Pesticides Contact	• Yes • No
	A12	Radiation Contact	• Yes • No
	A13	Beryllium, Uranium, Radon Contact	• Yes • No
	A14	Other Harmful Substance Contact	• Yes • No
Diet Habits	B01	Fresh Vegetable	• Never • < 2.5 kg/week • ≥ 2.5 kg/week
	B02	Fresh Fruit	• Never • < 1.25 kg/week • ≥ 1.25 kg/week
	B03	Meat	• Never • ≤ 350 g/week • > 350 g/week
	B04	Coarse Grain	• Never • < 500 g/week • ≥ 500 g/week
	B05	Diet Temperature	• Hot • Moderate • Cool
	B06	Diet Dryness	• Dry • Moderate • Liquid
	B07	Salt Intake	• High • Moderate • Low
	B08	Oil Intake	• High • Moderate • Low
	B09	Pickled Food	• Never • Occasionally • Often
Living Conditions	C01	Air Pollution	• Yes • No
	C02	Heating Mode	• No heating • Central heating • Electricity • Solar energy • Natural gas • Coal • Others
	C03	Cooking Fuel	• Natural gas or liquid gas • Electricity • Coal • Others
	C04	Lampblack	• No lampblack • Light • Relatively heavy • Heavy
	C05	Smoking	• Non-smoker • Current smoker • Once smoked but now quit
	C06	Cigarette per Day	Fill in the blank (non-smoker: 0)
	C07	Total Smoking Years	Fill in the blank (non-smoker: 0)
	C08	Quit-Smoking Years	Fill in the blank (non-smoker: 0)
	C09	Regular Inhalation of Secondhand Smoke	• Yes • No
	C10	Regular Wine Drinking ¹	• Yes • No • Used to but now quit
	C11	Quit Regular Wine Drinking Years	Fill in the blank ((non-drinker: 0))
	C12	Regular Tea Drinking ²	• Yes • No • Used to but now quit
	C13	Regular Physical Exercise ³	• Yes • No
Psychology and Emotion	D01	Recent Mental Trauma ⁴	• Yes • No
	D02	Long-Term Mental Depression ⁵	• Yes • No

APPENDIX I CONTINUED

	Identifier	Risk Factor	Options	Identifier	Risk Factor	Options
Medical History	E01	Hepatitis B Surface Antigen (HBsAg) Test	<ul style="list-style-type: none"> • Not tested • Negative • Positive • Unclear 	E18	Gastrointestinal Metaplasia	• Yes • No
	E02	Fecal Occult Blood Test (FOBT)	<ul style="list-style-type: none"> • Not tested • Negative • Positive • Unclear 	E19	Hepatobiliary Disease	• Yes • No
	E03	Chronic Respiratory Disease	• Yes • No	E20	Chronic Hepatitis B	• Yes • No
	E04	Tuberculosis	• Yes • No	E21	Chronic Hepatitis C	• Yes • No
	E05	Chronic Bronchitis	• Yes • No	E22	Cirrhosis	• Yes • No
	E06	Emphysema	• Yes • No	E23	Schistosomiasis Infection	• Yes • No
	E07	Asthma Bronchodilation	• Yes • No	E24	Fatty Liver	<ul style="list-style-type: none"> • No • Mild • Moderate • Severe • Unknown
	E08	Silicosis or Pneumoconiosis	• Yes • No	E25	Other Liver Diseases	• Yes • No
	E09	Other Lung Diseases	• Yes • No	E26	Gallstone	<ul style="list-style-type: none"> • No • Intrahepatic bile duct stones • Extrahepatic bile duct stones • Gallstone • Unknown
	E10	Upper Digestive System Disease	• Yes • No	E27	Lower Digestive System Disease	• Yes • No
	E11	Reflux Esophagitis	• Yes • No	E28	Intestinal Polyps	• Yes • No
	E12	Superficial Gastritis	• Yes • No	E29	Chronic Colorectal Inflammation	• Yes • No
	E13	Atrophic Gastritis	• Yes • No	E30	Other Lower Digestive System Disease	• Yes • No
	E14	Stomach Ulcer	• Yes • No	E31	Hypertension	• Yes • No
	E15	Duodenal Ulcer	• Yes • No	E32	Hyperlipidemia	• Yes • No
	E16	Residual Stomach	• Yes • No	E33	Diabetes	• Yes • No
	E17	Gastric Mucosal Intraepithelial Neoplasia	• Yes • No	E34	Other Diseases	• Yes • No
Family Cancer History ⁶	F01	Cancer History of Blood Relatives	• Yes • No	F07	Grandparents-in-law	• Yes • No
	F02	Mother	• Yes • No	F08	Father's Brother or Sister	• Yes • No
	F03	Father	• Yes • No	F09	Mother's Brother or Sister	• Yes • No
	F04	Sisters	• Yes • No	F10	Cousins on Father's Side	• Yes • No
	F05	Brothers	• Yes • No	F11	Cousins on Mother's Side	• Yes • No
	F06	Grandparents	• Yes • No	F12	Other Blood Relatives	• Yes • No

¹Regular Drinking means at least three times a week for more than six consecutive months.²Regular Tea Drinking means at least three times a week for more than six consecutive months.³Regular Physical Exercise means more than three times a week, and more than 30 minutes each time.⁴Serious illness or death of relatives, family breakdown, heavy property losses, unexpected unemployment, violent intimidation, etc.⁵More than six months in a row.⁶F01 refers to blood relatives with any kind of cancer, and the rest questions are for liver cancer only.

APPENDIX II
LIVER CANCER SPECIES IN ICD-10

ICD	Disease	ICD	Disease
C22.000	Hepatocellular Carcinoma	C24.000x006	Hepatobiliary Malignant Tumor
C22.001	Malignant Cell Tumor Of Live	C24.000x007	Malignant Tumor of Hilar Bile Duct
C22.100	Intrahepatic Cholangiocarcinoma	C24.001	Malignant Tumor of Hepatic Duct
C22.101M81600/3	Cholangiocarcinoma	C24.002	Malignant Tumor of Bile Duct
C22.200	Hepatoblastoma	C24.003	Malignant Tumors of Common Bile Duct
C22.300	Angiosarcoma of Liver	C24.004	Malignant Tumor of Cystic Duct
C22.300x001	Hepatic Macrophage Sarcoma	C24.100	Malignant Tumor of Vater Ampulla
C22.301	Hepatic Macrophage Sarcoma	C24.100x001	Malignant Tumor around Vater
C22.400	Other Sarcoma of The Liver	C24.101	Malignant Tumor around Ampulla Of Vater
C22.700	Other Specific Hepatoma	C24.800	The Damage of Bile Duct Crossing Malignant Tumor
C22.900	Malignant Tumor of Liver	C24.800x001	Malignant Tumor of Intrahepatic and Extrahepatic Bile Duct
C23.x00	Malignant Tumor of Gallbladder	C24.900	Biliary Tract Cancer
C24.000	Malignant Tumor of Extrahepatic Bile Duct	-	-