

## Supplementary

**Table S1** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles ( $\geq 50$  years)

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
$\leq 9.5$	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.05	0.75, 1.45	0.7873	0.95	0.67, 1.34	0.7634	1.07	0.75, 1.54	0.7061
$\geq 13.7$	0.98	0.70, 1.38	0.9007	0.87	0.61, 1.26	0.4661	1.05	0.72, 1.54	0.7873
P for trend	0.99	0.84, 1.17	0.9128	0.94	0.78, 1.12	0.4677	1.03	0.85, 1.24	0.7784
<b>DBIL (μmol/L)</b>									
$\leq 2.2$	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.83	0.60, 1.14	0.2566	0.82	0.58, 1.15	0.2525	0.91	0.64, 1.29	0.5952
$\geq 3.3$	0.79	0.56, 1.11	0.1724	0.71	0.49, 1.02	0.0647	0.91	0.62, 1.35	0.6484
P for trend	0.88	0.74, 1.05	0.1556	0.84	0.70, 1.01	0.0605	0.95	0.78, 1.16	0.6199
<b>IBIL (μmol/L)</b>									
$\leq 7.3$	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	0.98	0.70, 1.37	0.9129	0.91	0.64, 1.30	0.6186	0.99	0.69, 1.42	0.9501
$\geq 10.6$	1.01	0.72, 1.41	0.9455	0.92	0.65, 1.31	0.6478	1.03	0.71, 1.49	0.8846
P for trend	1.01	0.85, 1.19	0.9501	0.96	0.80, 1.15	0.6396	1.01	0.84, 1.22	0.8894

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S2** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles (<50 years)

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.29	0.90, 1.85	0.1721	1.29	0.89, 1.88	0.1805	1.21	0.82, 1.79	0.3399
≥13.7	0.94	0.64, 1.38	0.7384	0.85	0.57, 1.28	0.4379	0.87	0.57, 1.33	0.508
P for trend	0.97	0.81, 1.17	0.7468	0.93	0.76, 1.12	0.4393	0.93	0.76, 1.15	0.5051
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	1.08	0.76, 1.53	0.6665	1.07	0.74, 1.53	0.7268	1.19	0.81, 1.74	0.3734
≥3.3	0.66	0.44, 0.97	0.0366	0.63	0.42, 0.96	0.0307	0.86	0.55, 1.33	0.4899
P for trend	0.83	0.68, 1.00	0.0442	0.81	0.67, 0.99	0.0367	0.94	0.76, 1.16	0.5738
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.54	1.06, 2.23	0.0229	1.52	1.03, 2.23	0.0347	1.42	0.95, 2.12	0.0909
≥10.6	1.18	0.80, 1.75	0.4054	1.08	0.72, 1.64	0.7024	1	0.65, 1.54	0.9988
P for trend	1.08	0.90, 1.30	0.4292	1.03	0.85, 1.25	0.7515	0.99	0.81, 1.22	0.9272

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S3** Odds ratios (95% confidence intervals) for NAFLD according to serum bilirubin levels quartiles in males

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5)	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.11	0.77, 1.59	0.5798	1.01	0.69, 1.47	0.9786	1.02	0.68, 1.52	0.9322
≥13.7	0.93	0.65, 1.33	0.6891	0.83	0.57, 1.21	0.3403	0.94	0.63, 1.40	0.7538
P for trend	0.96	0.80, 1.14	0.6446	0.91	0.75, 1.10	0.3159	0.97	0.79, 1.18	0.7367
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.87	0.62, 1.24	0.4518	0.84	0.58, 1.21	0.3362	0.95	0.65, 1.40	0.7973
≥3.3	0.73	0.51, 1.05	0.0899	0.66	0.45, 0.96	0.0306	0.93	0.62, 1.41	0.741
P for trend	0.86	0.72, 1.02	0.0891	0.81	0.67, 0.98	0.0301	0.97	0.79, 1.19	0.7405
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.17	0.81, 1.68	0.4107	1.09	0.74, 1.59	0.6753	1.03	0.69, 1.53	0.8965
≥10.6	1.02	0.71, 1.46	0.9123	0.92	0.63, 1.34	0.6742	0.93	0.63, 1.38	0.7158
P for trend	1	0.84, 1.20	0.963	0.96	0.79, 1.15	0.6298	0.96	0.79, 1.17	0.6925

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S4** Odds ratios (95% confidence intervals) for NAFLD according to serum bilirubin levels quartiles in females

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.16	0.83, 1.61	0.3788	1.17	0.83, 1.64	0.3806	1.28	0.90, 1.83	0.1661
≥13.7	0.9	0.62, 1.31	0.5955	0.88	0.60, 1.30	0.5292	0.96	0.64, 1.44	0.8579
P for trend	0.97	0.81, 1.15	0.7006	0.96	0.79, 1.15	0.6387	1	0.83, 1.22	0.9829
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.96	0.70, 1.32	0.8126	1.02	0.73, 1.42	0.9254	1.12	0.79, 1.59	0.5146
≥3.3	0.61	0.41, 0.91	0.0148	0.65	0.43, 0.98	0.0402	0.83	0.54, 1.27	0.3903
P for trend	0.81	0.67, 0.97	0.0228	0.83	0.69, 1.01	0.0642	0.94	0.77, 1.15	0.5344
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.2	0.86, 1.67	0.2936	1.19	0.84, 1.69	0.3189	1.28	0.89, 1.83	0.1775
≥10.6	1.05	0.73, 1.52	0.7765	1.05	0.72, 1.54	0.8053	1.07	0.72, 1.59	0.7295
P for trend	1.04	0.87, 1.24	0.7041	1.03	0.86, 1.25	0.7351	1.05	0.86, 1.27	0.6431

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S5** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles among individuals with medical histories of hypertension

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1	0.57, 1.76	0.9907	0.9	0.49, 1.66	0.746	1.09	0.58, 2.07	0.7833
≥13.7	1.32	0.75, 2.32	0.3391	1.12	0.60, 2.07	0.7292	1.47	0.76, 2.81	0.2502
P for trend	1.15	0.86, 1.53	0.3446	1.06	0.77, 1.45	0.7313	1.21	0.87, 1.68	0.2503
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.96	0.55, 1.67	0.8756	0.9	0.49, 1.67	0.7453	1.04	0.55, 1.98	0.9049
≥3.3	1.24	0.71, 2.17	0.4395	1.11	0.60, 2.03	0.7417	1.46	0.77, 2.80	0.2498
P for trend	1.11	0.84, 1.47	0.467	1.05	0.77, 1.42	0.7672	1.2	0.87, 1.67	0.2664
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.3	0.73, 2.30	0.3723	1.22	0.66, 2.25	0.5212	1.49	0.78, 2.84	0.2269
≥10.6	1.48	0.83, 2.64	0.1785	1.3	0.70, 2.43	0.4082	1.61	0.83, 3.11	0.1577
P for trend	1.22	0.91, 1.62	0.1785	1.14	0.84, 1.55	0.4102	1.26	0.91, 1.74	0.1615

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S6** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles among individuals without medical histories of hypertension

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.17	0.89, 1.54	0.2485	1.16	0.88, 1.53	0.2937	1.22	0.91, 1.63	0.1801
≥13.7	0.88	0.66, 1.18	0.3944	0.84	0.63, 1.14	0.2671	0.94	0.69, 1.28	0.6934
P for trend	0.94	0.82, 1.09	0.4236	0.92	0.80, 1.07	0.2911	0.97	0.84, 1.13	0.7362
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.95	0.73, 1.23	0.7019	0.93	0.71, 1.22	0.608	1.07	0.80, 1.41	0.6583
≥3.3	0.63	0.47, 0.84	0.0021	0.62	0.46, 0.84	0.0024	0.84	0.60, 1.16	0.2935
P for trend	0.8	0.70, 0.93	0.0028	0.8	0.69, 0.93	0.0031	0.93	0.79, 1.09	0.3568
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.16	0.88, 1.53	0.2788	1.16	0.87, 1.53	0.316	1.17	0.87, 1.56	0.3048
≥10.6	0.99	0.74, 1.31	0.9299	0.96	0.72, 1.30	0.8126	0.98	0.72, 1.33	0.8751
P for trend	1	0.87, 1.14	0.9487	0.98	0.85, 1.14	0.8306	0.99	0.85, 1.15	0.888

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S7** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles among individuals with medical histories of diabetes mellitus

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.54	0.57, 4.18	0.3927	1.15	0.30, 4.48	0.8384	1.43	0.28, 7.33	0.6677
≥13.7	0.86	0.33, 2.23	0.7607	0.55	0.15, 1.98	0.3565	0.57	0.13, 2.57	0.4653
P for trend	0.93	0.59, 1.48	0.7629	0.74	0.39, 1.40	0.351	0.74	0.35, 1.54	0.4162
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	1.41	0.52, 3.85	0.5025	0.8	0.21, 3.12	0.7511	0.72	0.14, 3.74	0.6935
≥3.3	0.82	0.32, 2.09	0.6798	0.62	0.17, 2.25	0.4698	0.74	0.16, 3.43	0.7045
P for trend	0.91	0.58, 1.44	0.6909	0.79	0.41, 1.50	0.4698	0.87	0.40, 1.86	0.7133
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.23	0.45, 3.36	0.6864	1.18	0.30, 4.71	0.8111	1.4	0.28, 7.05	0.6868
≥10.6	0.94	0.37, 2.40	0.8961	0.55	0.15, 1.97	0.3563	0.5	0.11, 2.23	0.3672
P for trend	0.97	0.61, 1.54	0.8927	0.74	0.39, 1.40	0.3558	0.7	0.34, 1.47	0.3465

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.

**Table S8** Odds ratios (95% confidence intervals) for NAFLD by serum bilirubin levels quartiles among individuals without medical histories of diabetes mellitus

Variables	Model 1 <sup>a</sup>			Model 2 <sup>b</sup>			Model 3 <sup>c</sup>		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
<b>TBIL (μmol/L)</b>									
≤9.5	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
9.6-13.6	1.15	0.90, 1.49	0.2677	1.09	0.84, 1.42	0.5067	1.16	0.89, 1.52	0.2754
≥13.7	0.94	0.72, 1.23	0.6761	0.91	0.69, 1.20	0.4972	1.03	0.77, 1.37	0.8416
P for trend	0.98	0.86, 1.11	0.7032	0.96	0.83, 1.09	0.516	1.02	0.88, 1.17	0.8163
<b>DBIL (μmol/L)</b>									
≤2.2	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
2.2-3.2	0.94	0.74, 1.20	0.6083	0.92	0.72, 1.19	0.5391	1.05	0.81, 1.36	0.7333
≥3.3	0.69	0.52, 0.90	0.0071	0.69	0.52, 0.91	0.0095	0.93	0.69, 1.25	0.6251
P for trend	0.84	0.73, 0.96	0.0086	0.84	0.73, 0.96	0.0111	0.97	0.84, 1.12	0.6787
<b>IBIL (μmol/L)</b>									
≤7.3	1	1.00, 1.00		1	1.00, 1.00		1	1.00, 1.00	
7.4-10.5	1.21	0.94, 1.57	0.1385	1.18	0.90, 1.53	0.2279	1.2	0.92, 1.58	0.1869
≥10.6	1.06	0.82, 1.39	0.6451	1.04	0.79, 1.37	0.7862	1.08	0.81, 1.44	0.6035
P for trend	1.03	0.91, 1.18	0.633	1.02	0.89, 1.17	0.7749	1.04	0.90, 1.20	0.5967

<sup>a</sup>, Model 1 was constructed without adjusting. <sup>b</sup>, Model 2 was created after adjusting age, sex, education, income, occupation, smoking, medical histories of hypertension and diabetes mellitus, BMI, and waist circumference. <sup>c</sup>, Model 3 was constructed after additionally adjusting for ALT, AST, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and blood glucose. The OR for the control group was taken as 1, and each group was compared with the control group. NAFLD, nonalcoholic fatty liver disease; TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin.