

Table1. 2009년 간암검진대상자 간암 유무 비교

Characteristics (n = 514,095)		Male (n = 320,856)				Female (n = 193,239)				※ 현 추출 기준
		LVC = 0 n	302,731 col %	LVC=1 n	18,125 col %	LVC=0 n	188,301 col %	LVC=1 n	4,938 col %	
Age GRP	40-49	121482	40.1	4474	24.7	58208	30.9	591	12.0	자격 및 보험료 (BFC) 2009
	50-59	101463	33.5	7052	38.9	63898	33.9	1392	28.2	
	60-69	53824	17.8	4580	25.3	41102	21.8	1696	34.3	
	70-79	22410	7.4	1827	10.1	20808	11.1	1107	22.4	
	80+	3552	1.2	192	1.1	4285	2.3	152	3.1	
Cirrhosis	No	179392	59.3	7414	40.9	119718	63.6	1687	34.2	T20 2002-2009
	Yes	123339	40.7	10711	59.1	68583	36.4	3251	65.8	
HBV	No	202096	66.8	7260	40.1	169170	89.8	3759	76.1	
	Yes	100635	33.2	10865	59.9	19131	10.2	1179	23.9	
HCV	No	279452	92.3	15778	87.1	185611	98.6	4734	95.9	
	Yes	23279	7.7	2347	12.9	2690	1.4	204	4.1	
Coinfection	No	298637	98.6	17630	97.3	73442	39.0	2053	41.6	일반 1차 2006-2009 (최신 자료순)
	Yes	4094	1.4	495	2.7	114859	61.0	2885	58.4	
Others	No	148623	49.1	9456	52.2	140715	74.7	1844	37.3	
	Yes	154108	50.9	8669	47.8	47586	25.3	3094	62.7	
DM	No	180298	59.6	10109	55.8	111923	59.4	2486	50.3	
	Yes	122433	40.4	8016	44.2	76378	40.6	2452	49.7	
Obesity	<23	74559	24.6	4764	26.3	59080	31.4	1221	24.7	
	23-25	65570	21.7	3780	20.9	37630	20.0	849	17.2	
	≥25	102140	33.7	5385	29.7	51892	27.6	1528	30.9	
	Unknown	60462	20.0	4196	23.2	39699	21.1	1340	27.1	
Fatty Liver Index	<30	78695	26.0	4196	23.2	84846	45.1	1787	36.2	
	30-60	69450	22.9	4153	22.9	25235	13.4	771	15.6	
	≥60	54743	18.1	3113	17.2	9337	5.0	305	6.2	
	Unknown	99843	33.0	6663	36.8	65883	35.0	2075	42.0	
ALC	No	12079	4.0	891	4.9	15054	8.0	411	8.3	
	Yes	129559	42.8	6449	35.6	22078	11.7	323	6.5	
	Unknown	161093	53.2	10785	59.5	151169	80.3	4204	85.1	
SMK	No	80321	26.5	4533	25.0	137095	72.8	3330	67.4	
	Yes	156589	51.7	9155	50.5	6495	3.4	179	3.6	
	Unknown	65821	21.7	4437	24.5	44711	23.7	1429	28.9	
Family History	No	3327	1.1	181	1.0	1711	0.9	39	0.8	암문진 2007-2009
	Yes	23816	7.9	1531	8.4	23122	12.3	625	12.7	
	Unknown	275588	91.0	16413	90.6	163468	86.8	4274	86.6	

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Age GRP	40-49	121482	40.1	4474	24.7	58208	30.9	591	12.0	자격 및 보험료 (BFC) 2009
	50-59	101463	33.5	7052	38.9	63898	33.9	1392	28.2	
	60-69	53824	17.8	4580	25.3	41102	21.8	1696	34.3	
	70-79	22410	7.4	1827	10.1	20808	11.1	1107	22.4	
	80+	3552	1.2	192	1.1	4285	2.3	152	3.1	
Cirrhosis	No	179392	59.3	7414	40.9	119718	63.6	1687	34.2	T20 2002-2009
	Yes	123339	40.7	10711	59.1	68583	36.4	3251	65.8	
HBV	No	202096	66.8	7260	40.1	169170	89.8	3759	76.1	
	Yes	100635	33.2	10865	59.9	19131	10.2	1179	23.9	
HCV	No	279452	92.3	15778	87.1	185611	98.6	4734	95.9	
	Yes	23279	7.7	2347	12.9	2690	1.4	204	4.1	
Coinfection	No	298637	98.6	17630	97.3	73442	39.0	2053	41.6	일반 1차 2006-2012 (최신 자료순)
	Yes	4094	1.4	495	2.7	114859	61.0	2885	58.4	
Others	No	148623	49.1	9456	52.2	140715	74.7	1844	37.3	
	Yes	154108	50.9	8669	47.8	47586	25.3	3094	62.7	
DM	No	180298	59.6	10109	55.8	111923	59.4	2486	50.3	
	Yes	122433	40.4	8016	44.2	76378	40.6	2452	49.7	
Obesity	<23	74559	24.6	4764	26.3	59080	31.4	1221	24.7	일반 1차 2006-2012 (최신 자료순)
	23-25	65570	21.7	3780	20.9	37630	20.0	849	17.2	
	≥25	102140	33.7	5385	29.7	51892	27.6	1528	30.9	
	Unknown	60462	20.0	4196	23.2	39699	21.1	1340	27.1	
Fatty Liver Index	<30	100175	33.1	5402	29.8	112150	59.6	2296	46.5	
	30-60	84946	28.1	5130	28.3	32076	17.0	936	19.0	일반 1차 2006-2012 (최신 자료순)
	≥60	65642	21.7	3702	20.4	11094	5.9	369	7.5	
	Unknown	51968	17.2	3891	21.5	32171	17.1	1310	26.5	
ALC	No	90359	29.8	6963	38.4	127438	67.7	3235	65.5	
	Yes	160296	52.9	7257	40.0	28547	15.2	385	7.8	
	Unknown	52076	17.2	3905	21.5	32316	17.2	1318	26.7	
SMK	No	122028	40.3	7654	42.2	179117	95.1	4724	95.7	암문진 2002-2017
	Yes	178716	59.0	10370	57.2	7361	3.9	177	3.6	
	Unknown	1987	0.7	101	0.6	1823	1.0	37	0.7	
Family History(5 cancer)	No	3628	1.2	195	1.1	1778	0.9	40	0.8	
	Yes	37308	12.3	2392	13.2	28790	15.3	773	15.7	
	Unknown	261795	86.5	15538	85.7	157763	83.8	4125	83.5	
Family History(only liver cancer)	No	4492	1.5	439	2.4	2489	1.3	80	1.6	
	Yes	13688	4.5	1270	7.0	10702	5.7	410	8.3	
	Unknown	284551	94.0	16416	90.6	175110	93.0	4448	90.1	

Table2. 2009년 간암검진대상자 간암에 따른 사망률 유무 비교

Characteristics (n = 23,063)		Male with LVC (n = 18,125)				Female with LVC (n = 4,938)				※ 현 추출 기준
		Death = 0 n	8,568 col %	Death=1 n	9,557 col %	Death = 0 n	2,504 col %	Death=1 n	2,434 col %	
Age GRP	40-49	2416	28.2	2058	21.5	408	16.3	183	7.5	자격 및 보험료 (BFC) 2009
	50-59	3698	43.2	3354	35.1	934	37.3	458	18.8	
	60-69	1979	23.1	2601	27.2	862	34.4	834	34.3	
	70-79	455	5.3	1372	14.4	287	11.5	820	33.7	
	80+	20	0.2	172	1.8	13	0.5	139	5.7	
Cirrhosis	No	2769	32.3	4491	47.0	633	25.3	1054	43.3	T20 2002-2009
	Yes	5799	67.7	5066	53.0	1871	74.7	1380	56.7	
HBV	No	7542	88.0	8236	86.2	2023	80.8	1736	71.3	T20 2002-2009
	Yes	1026	12.0	1321	13.8	481	19.2	698	28.7	
HCV	No	8288	96.7	9342	97.8	2404	96.0	2330	95.7	T20 2002-2009
	Yes	280	3.3	215	2.2	100	4.0	104	4.3	
Coinfection	No	8288	96.7	5078	53.1	1125	44.9	928	38.1	T20 2002-2009
	Yes	280	3.3	4479	46.9	1379	55.1	1506	61.9	
Others	No	4378	51.1	3890	40.7	972	38.8	872	35.8	T20 2002-2009
	Yes	4190	48.9	5667	59.3	1532	61.2	1562	64.2	
DM	No	4965	57.9	5144	53.8	1412	56.4	1074	44.1	T20 2002-2009
	Yes	3603	42.1	4413	46.2	1092	43.6	1360	55.9	
Obesity	<23	74559	24.6	4764	26.3	59080	31.4	1221	24.7	일반 1차 2006-2009 (최신 자료순)
	23-25	65570	21.7	3780	20.9	37630	20.0	849	17.2	
	≥25	102140	33.7	5385	29.7	51892	27.6	1528	30.9	
	Unknown	60462	20.0	4196	23.2	39699	21.1	1340	27.1	
Fatty Liver Index	<30	78695	26.0	4196	23.2	84846	45.1	1787	36.2	일반 1차 2006-2009 (최신 자료순)
	30-60	69450	22.9	4153	22.9	25235	13.4	771	15.6	
	≥60	54743	18.1	3113	17.2	9337	5.0	305	6.2	
	Unknown	99843	33.0	6663	36.8	65883	35.0	2075	42.0	
ALC	No	12079	4.0	891	4.9	15054	8.0	411	8.3	암문진 2007-2009
	Yes	129559	42.8	6449	35.6	22078	11.7	323	6.5	
	Unknown	161093	53.2	10785	59.5	151169	80.3	4204	85.1	
SMK	No	80321	26.5	4533	25.0	137095	72.8	3330	67.4	암문진 2007-2009
	Yes	156589	51.7	9155	50.5	6495	3.4	179	3.6	
	Unknown	65821	21.7	4437	24.5	44711	23.7	1429	28.9	
Family History	No	3327	1.1	181	1.0	1711	0.9	39	0.8	암문진 2007-2009
	Yes	23816	7.9	1531	8.4	23122	12.3	625	12.7	
	Unknown	275588	91.0	16413	90.6	163468	86.8	4274	86.6	

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Age GRP	40-49	2416	28.2	2058	21.5	408	16.3	183	7.5	자각 및 보험료 (BFC) 2009
	50-59	3698	43.2	3354	35.1	934	37.3	458	18.8	
	60-69	1979	23.1	2601	27.2	862	34.4	834	34.3	
	70-79	455	5.3	1372	14.4	287	11.5	820	33.7	
	80+	20	0.2	172	1.8	13	0.5	139	5.7	
Cirrhosis	No	2769	32.3	4491	47.0	633	25.3	1054	43.3	
	Yes	5799	67.7	5066	53.0	1871	74.7	1380	56.7	
HBV	No	7542	88.0	8236	86.2	2023	80.8	1736	71.3	
	Yes	1026	12.0	1321	13.8	481	19.2	698	28.7	
HCV	No	8288	96.7	9342	97.8	2404	96.0	2330	95.7	T20 2002-2009
	Yes	280	3.3	215	2.2	100	4.0	104	4.3	
Coinfection	No	8288	96.7	5078	53.1	1125	44.9	928	38.1	
	Yes	280	3.3	4479	46.9	1379	55.1	1506	61.9	
Others	No	4378	51.1	3890	40.7	972	38.8	872	35.8	
	Yes	4190	48.9	5667	59.3	1532	61.2	1562	64.2	
DM	No	4965	57.9	5144	53.8	1412	56.4	1074	44.1	
	Yes	3603	42.1	4413	46.2	1092	43.6	1360	55.9	
Obesity	<23	74559	24.6	4764	26.3	59080	31.4	1221	24.7	일반 1차 2006-2009 (최신 자료순)
	23-25	65570	21.7	3780	20.9	37630	20.0	849	17.2	
	≥25	102140	33.7	5385	29.7	51892	27.6	1528	30.9	
	Unknown	60462	20.0	4196	23.2	39699	21.1	1340	27.1	
Fatty Liver Index	<30	2945	34.4	2457	25.7	1357	54.2	939	38.6	
	30-60	2513	29.3	2617	27.4	494	19.7	469	19.3	
	≥60	1648	19.2	2054	21.5	162	6.5	207	8.5	
	Unknown	1462	17.1	2429	25.4	491	19.6	819	33.6	
ALC	No	3552	41.5	6411	67.1	1789	71.4	1446	59.4	일반 1차 2006-2012 (최신 자료순)
	Yes	35540	414.8	3710	38.8	222	8.9	163	6.7	
	Unknown	1469	17.1	2436	25.5	493	19.7	825	33.9	
SMK	No	3441	40.2	4213	44.1	2402	95.9	2322	95.4	
	Yes	5089	59.4	5281	55.3	83	3.3	94	3.9	
	Unknown	38	0.4	63	0.7	19	0.8	18	0.7	
Family History(5 cancer)	No	106	1.2	89	0.9	21	0.8	19	0.8	
	Yes	1408	16.4	984	10.3	471	18.8	302	12.4	
	Unknown	7054	82.3	8484	88.8	2012	80.4	2113	86.8	
Family History(only liver cancer)	No	281	3.3	158	1.7	48	1.9	32	1.3	암문진 2002-2017
	Yes	770	9.0	500	5.2	277	11.1	133	5.5	
	Unknown	7517	87.7	8899	93.1	2179	87.0	2269	93.2	

Table 1-b Family History of Patients subject to liver cancer screening in 2009 (2007~2009), n=332,347

			Parents or Siblings		Parents		Brother		Sister	
			n	%	n	%	n	%	n	%
Family History	Gastric Cancer	No	7000	2.11	11081	3.33	17900	5.39	19635	5.91
		Yes	20834	6.27	16047	4.83	4297	1.29	1212	0.36
		Unknown	304513	91.63	305219	91.84	310150	93.32	311500	93.73
	Colon Cancer	No	6627	1.99	8059	2.42	9273	2.79	9816	2.95
		Yes	5453	1.64	3565	1.07	1468	0.44	503	0.15
		Unknown	320267	96.37	320723	96.5	321606	96.77	322028	96.9
	Liver Cancer	No	6780	2.16	10867	3.27	14283	4.3	17600	5.3
		Yes	18846	5.67	12431	3.74	6742	2.03	1056	0.32
		Unknown	306721	97.84	309049	92.99	311322	93.67	313691	94.39
	ETC	No	5806	1.00	5849	1.76	5890	1.77	5859	1.76
		Yes	8606	2.59	4661	1.4	1640	0.49	2626	0.79
		Unknown	317935	95.66	321837	96.84	324817	97.73	323862	97.45

※ 현 추출 기준

암문진
2007-2009

Table 1-b Family History of Patients subject to liver cancer screening in 2009 (2002~2017), n=463,040

			Male						Female					
			Parents or Siblings		Parents		Brother		Sister		Parents or Siblings		Parents	
			n	%	n	%	n	%	n	%	n	%	n	%
Family History	Gastric Cancer	No	5330	1.89	8245	2.92	14363	5.09	16192	5.74	2585	1.43	4937	2.73
		Yes	16909	5.99	13361	4.73	3552	1.26	538	0.19	11816	6.54	8893	4.92
		Unknown	260031	92.12	260664	92.35	264335	93.65	265540	94.07	166372	92.04	166940	92.35
	Colon Cancer	No	4862	1.72	5961	2.11	7316	2.59	8016	2.84	5470	3.03	3353	1.85
		Yes	4890	1.73	3432	1.22	1338	0.47	209	0.07	3218	1.78	1994	1.10
		Unknown	272518	96.55	272877	96.67	273616	96.93	274045	97.09	175082	96.85	175426	97.04
	Liver Cancer	No	4931	1.75	7924	2.81	11300	4.00	14257	5.05	2659	1.47	5170	2.86
		Yes	14958	5.30	10432	3.70	5165	1.83	362	0.13	1112	0.62	7040	3.89
		Unknown	262381	92.95	263914	93.50	265805	94.17	267651	94.82	167089	92.43	168560	93.25
	ETC	No	4198	1.49	4221	1.50	4237	1.50	4229	1.50	2045	1.13	2092	1.16
		Yes	6502	2.30	4054	1.44	1548	0.55	1165	0.41	6420	3.55	3196	1.77
		Unknown	271570	96.21	273995	97.07	276485	97.95	276876	98.09	172305	95.32	175485	97.08

※ 현 추출 기준

암문진
2002-2017

Table 3. Transition Probability of Model (with NA)

Model	Cirrhosis	DM	FLD	Male											
				1 Year			3 Year			5 Year			10 Year		
				High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death
Full	0	0	0	0.0016	0.0001	0.1512	0.0041	0.0011	0.3884	0.0059	0.0028	0.5594	0.0085	0.0089	0.8058
	0	0	1	0.0019	0.0002	0.1566	0.0048	0.0013	0.4001	0.0059	0.0028	0.5594	0.0097	0.0106	0.8180
	0	1	0	0.0018	0.0002	0.1782	0.0044	0.0015	0.4450	0.0061	0.0036	0.0252	0.0084	0.0107	0.8595
	0	1	1	0.0021	0.0002	0.1845	0.0051	0.0017	0.4577	0.0071	0.0043	0.6394	0.0096	0.0130	0.8700
	1	0	0	0.0033	0.0003	0.1542	0.0083	0.0023	0.3950	0.0119	0.0057	0.5672	0.0168	0.0180	0.8127
	1	0	1	0.0038	0.0003	0.1598	0.0096	0.0028	0.4068	0.0137	0.0069	0.5812	0.0192	0.0216	0.8246
	1	1	0	0.0035	0.0004	0.1818	0.0099	0.0029	0.4522	0.0122	0.0072	0.6332	0.0165	0.0221	0.8655
	1	1	1	0.0041	0.0005	0.1882	0.0102	0.0035	0.4650	0.0141	0.0087	0.6474	0.0187	0.0263	0.8757
HBV	0	0	0	0.0027	0.0001	0.0721	0.0076	0.0009	0.2010	0.0118	0.0024	0.3121	0.0198	0.0084	0.5267
	0	0	1	0.0032	0.0001	0.0748	0.0089	0.0011	0.2080	0.0118	0.0024	0.3121	0.0229	0.0101	0.5404
	0	1	0	0.0030	0.0001	0.0857	0.0083	0.0012	0.2357	0.0126	0.0031	0.3610	0.0205	0.0107	0.5917
	0	1	1	0.0035	0.0002	0.0889	0.0097	0.0014	0.2437	0.0147	0.0037	0.3722	0.0237	0.0128	0.6059
	1	0	0	0.0055	0.0002	0.0736	0.0153	0.0018	0.2050	0.0236	0.0048	0.3177	0.0391	0.0171	0.5344
	1	0	1	0.0065	0.0003	0.0764	0.0179	0.0022	0.2121	0.0275	0.0059	0.3279	0.0345	0.0205	0.5482
	1	1	0	0.0061	0.0003	0.0875	0.0166	0.0024	0.2402	0.0252	0.0063	0.3673	0.0404	0.2160	0.5997
	1	1	1	0.0071	0.0003	0.0908	0.0104	0.0029	0.2483	0.0293	0.0076	0.3786	0.0464	0.0260	0.0138
HCV	0	0	0	0.0020	0.0001	0.1135	0.0054	0.0011	0.3033	0.0081	0.0027	0.4524	0.0124	0.0091	0.7002
	0	0	1	0.0024	0.0002	0.1177	0.0063	0.0013	0.3131	0.0081	0.0027	0.4524	0.0142	0.0108	0.7140
	0	1	0	0.0022	0.0002	0.1343	0.0058	0.0014	0.3513	0.0085	0.0035	0.5138	0.0125	0.0113	0.7636
	0	1	1	0.0026	0.0002	0.1392	0.0067	0.0016	0.3622	0.0098	0.0042	0.5274	0.0143	0.0134	0.0767
	1	0	0	0.0041	0.0003	0.1158	0.0109	0.0022	0.3088	0.0161	0.0055	0.4596	0.0244	0.0183	0.7080
	1	0	1	0.0048	0.0003	0.1201	0.0127	0.0026	0.3187	0.0186	0.0066	0.4725	0.0280	0.0219	0.7218
	1	1	0	0.0045	0.0004	0.1371	0.0116	0.0028	0.3574	0.0169	0.0071	0.5215	0.0245	0.0228	0.7710
	1	1	1	0.0052	0.0004	0.1420	0.0135	0.0034	0.3685	0.0195	0.0085	0.5315	0.0280	0.0272	0.7839
Others	0	0	0	0.0015	0.0001	0.1530	0.0040	0.0011	0.3924	0.0057	0.0027	0.5641	0.0081	0.0087	0.8100
	0	0	1	0.0018	0.0002	0.1585	0.0046	0.0013	0.4042	0.0057	0.0027	0.5641	0.0093	0.0103	0.8220
	0	1	0	0.0017	0.0002	0.1803	0.0042	0.0014	0.4493	0.0059	0.0035	0.6300	0.0080	0.0106	0.8631
	0	1	1	0.0020	0.0002	0.1867	0.0049	0.0017	0.4621	0.0068	0.0041	0.6442	0.0091	0.0126	0.8734
	1	0	0	0.0031	0.0003	0.1561	0.0079	0.0022	0.3990	0.0113	0.0056	0.5720	0.0160	0.0175	0.8108
	1	0	1	0.0036	0.0003	0.1617	0.0092	0.0027	0.4109	0.0131	0.0067	0.5860	0.0182	0.0208	0.8286
	1	1	0	0.0034	0.0004	0.1839	0.0084	0.0029	0.4565	0.0112	0.0070	0.6380	0.0157	0.0214	0.8690
	1	1	1	0.0040	0.0004	0.1904	0.0047	0.0034	0.4694	0.0134	0.0084	0.6522	0.0178	0.0254	0.8790

Table 3. Transition Probability of Model (with NA)

Model	Cirrhosis	DM	FLD	Female											
				1 Year			3 Year			5 Year			10 Year		
				High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death
Full	0	0	0	0.0002	0.0012	0.0866	0.0006	0.0037	0.2381	0.0009	0.0063	0.3644	0.0015	0.0129	0.5960
	0	0	1	0.0003	0.0032	0.0943	0.0007	0.0095	0.2570	0.0009	0.0063	0.3644	0.0018	0.0321	0.6286
	0	1	0	0.0002	0.0019	0.1050	0.0006	0.0057	0.2831	0.0010	0.0096	0.4257	0.0015	0.0195	0.6702
	0	1	1	0.0003	0.0049	0.1142	0.0008	0.0146	0.3049	0.0012	0.0244	0.4545	0.0018	0.0488	0.7025
	1	0	0	0.0005	0.0022	0.0612	0.0014	0.0068	0.1726	0.0022	0.0115	0.2708	0.0038	0.0234	0.4682
	1	0	1	0.0006	0.0058	0.0667	0.0018	0.0174	0.1870	0.0027	0.0291	0.2918	0.0046	0.0580	0.4985
	1	1	0	0.0006	0.0035	0.0744	0.0015	0.0104	0.2070	0.0024	0.0175	0.2306	0.0040	0.0355	0.5283
	1	1	1	0.0007	0.0089	0.0810	0.0019	0.0267	0.2238	0.0029	0.0443	0.3445	0.0047	0.0875	0.5703
HBV	0	0	0	0.0004	0.0009	0.0429	0.0012	0.0028	0.1234	0.0018	0.0048	0.1970	0.0033	0.0099	0.3522
	0	0	1	0.0005	0.0024	0.0468	0.0014	0.0072	0.1340	0.0018	0.0048	0.1970	0.0040	0.0245	0.3810
	0	1	0	0.0004	0.0014	0.0523	0.0013	0.0043	0.1488	0.0020	0.0073	0.2355	0.0035	0.0150	0.4156
	0	1	1	0.0006	0.0037	0.0570	0.0016	0.0111	0.1615	0.0025	0.0183	0.2544	0.0042	0.0373	0.4440
	1	0	0	0.0009	0.0017	0.0301	0.0027	0.0052	0.0877	0.0043	0.0087	0.1418	0.0080	0.0179	0.2635
	1	0	1	0.0012	0.0044	0.0329	0.0033	0.0132	0.0954	0.0053	0.0220	0.1539	0.0097	0.0442	0.2841
	1	1	0	0.0010	0.0026	0.0367	0.0029	0.0079	0.1062	0.0047	0.0133	0.1707	0.0085	0.0271	0.3122
	1	1	1	0.0013	0.0067	0.0401	0.0036	0.0202	0.1155	0.0058	0.0336	0.1850	0.0102	0.0670	0.3357
HCV	0	0	0	0.0004	0.0017	0.0647	0.0010	0.0053	0.1818	0.0015	0.0089	0.2843	0.0026	0.0182	0.4877
	0	0	1	0.0004	0.0045	0.0705	0.0012	0.0136	0.1969	0.0015	0.0089	0.2843	0.0032	0.0453	0.5185
	0	1	0	0.0004	0.0027	0.0786	0.0011	0.0081	0.2178	0.0017	0.0136	0.3359	0.0027	0.0276	0.5590
	0	1	1	0.0005	0.0069	0.0856	0.0013	0.0208	0.2354	0.0020	0.0346	0.3607	0.0032	0.0686	0.5913
	1	0	0	0.0008	0.0032	0.0455	0.0023	0.0097	0.1305	0.0037	0.0162	0.2709	0.0065	0.0329	0.3725
	1	0	1	0.0010	0.0083	0.0497	0.0039	0.0247	0.1417	0.0045	0.0411	0.2248	0.0078	0.0813	0.3991
	1	1	0	0.0009	0.0049	0.0554	0.0025	0.0148	0.1573	0.0039	0.0248	0.2482	0.0068	0.0498	0.4347
	1	1	1	0.0011	0.0127	0.0604	0.0031	0.0378	0.1706	0.0048	0.0624	0.2678	0.0080	0.1219	0.4639
Others	0	0	0	0.0003	0.0011	0.0918	0.0007	0.0035	0.2508	0.0010	0.0059	0.3819	0.0017	0.0122	0.6180
	0	0	1	0.0003	0.0030	0.0998	0.0009	0.0089	0.2706	0.0010	0.0059	0.3819	0.0020	0.0303	0.6507
	0	1	0	0.0003	0.0018	0.1111	0.0007	0.0054	0.2977	0.0011	0.0091	0.4451	0.0017	0.0185	0.6921
	0	1	1	0.0006	0.0046	0.1208	0.0009	0.0137	0.3204	0.0013	0.0229	0.4746	0.0020	0.0459	0.7240
	1	0	0	0.0007	0.0021	0.0649	0.0016	0.0064	0.1822	0.0025	0.0108	0.2849	0.0043	0.0222	0.4886
	1	0	1	0.0006	0.0054	0.0707	0.0020	0.0163	0.1974	0.0031	0.0273	0.3068	0.0052	0.0547	0.5195
	1	1	0	0.0006	0.0032	0.0788	0.0018	0.0098	0.2183	0.0027	0.0165	0.3366	0.0045	0.0336	0.5599
	1	1	1	0.0008	0.0083	0.0858	0.0022	0.0250	0.2359	0.0033	0.0416	0.3614	0.0053	0.0825	0.5922

Table 3. Transition Probability of Model (without NA)

Model	Cirrhosis	DM	FLD	Male											
				1 Year			3 Year			5 Year			10 Year		
				High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death
Full	0	0	0	0.0014	0.0003	0.1402	0.0037	0.0016	0.3643	0.0054	0.0034	0.5300	0.0078	0.0097	0.7791
	0	0	1	0.0015	0.0004	0.1436	0.0038	0.0017	0.3719	0.0054	0.0034	0.5300	0.0081	0.0104	0.7877
	0	1	0	0.0016	0.0007	0.1618	0.0040	0.0027	0.4110	0.0057	0.0055	0.5862	0.0080	0.0142	0.8288
	0	1	1	0.0016	0.0007	0.1657	0.0042	0.0030	0.4192	0.0059	0.0060	0.5957	0.0082	0.0155	0.8366
	1	0	0	0.0026	0.0009	0.1342	0.0069	0.0036	0.3510	0.0100	0.0074	0.5135	0.0147	0.0198	0.7634
	1	0	1	0.0027	0.0010	0.1375	0.0071	0.0040	0.3584	0.0103	0.0081	0.5227	0.0151	0.0215	0.7722
	1	1	0	0.0029	0.0018	0.1550	0.0074	0.0066	0.3967	0.0106	0.0127	0.5692	0.0149	0.0312	0.8144
	1	1	1	0.0030	0.0020	0.1588	0.0077	0.0074	0.4047	0.0110	0.0140	0.5787	0.0153	0.0340	0.8225
HBV	0	0	0	0.0022	0.0002	0.0684	0.0062	0.0011	0.1916	0.0096	0.0024	0.2984	0.0162	0.0077	0.5078
	0	0	1	0.0023	0.0002	0.0702	0.0064	0.0011	0.1961	0.0096	0.0024	0.2984	0.0167	0.0082	0.5169
	0	1	0	0.0025	0.0004	0.0795	0.0068	0.0017	0.2200	0.0104	0.0037	0.3391	0.0172	0.0109	0.5633
	0	1	1	0.0026	0.0004	0.0815	0.0071	0.0019	0.2252	0.0108	0.0041	0.3463	0.0178	0.0118	0.5727
	1	0	0	0.0041	0.0005	0.0654	0.0114	0.0023	0.1837	0.0177	0.0050	0.2870	0.0299	0.0149	0.0916
	1	0	1	0.0042	0.0006	0.0671	0.0118	0.0025	0.1881	0.0184	0.0054	0.2934	0.0309	0.0161	0.5007
	1	1	0	0.0045	0.0010	0.0760	0.0125	0.0040	0.2112	0.0193	0.0082	0.3265	0.0317	0.0224	0.5465
	1	1	1	0.0047	0.0011	0.0780	0.0130	0.0045	0.2161	0.0200	0.0090	0.3336	0.0328	0.0244	0.5558
HCV	0	0	0	0.0018	0.0003	0.1017	0.0048	0.0015	0.2751	0.0072	0.0033	0.4151	0.0113	0.0096	0.6579
	0	0	1	0.0018	0.0004	0.1043	0.0050	0.0017	0.2813	0.0072	0.0033	0.4151	0.0117	0.0104	0.6675
	0	1	0	0.0020	0.0007	0.1178	0.0052	0.0027	0.3134	0.0077	0.0054	0.4657	0.0118	0.0144	0.7145
	0	1	1	0.0021	0.0008	0.1207	0.0054	0.0030	0.3202	0.0080	0.0060	0.4745	0.0121	0.0156	0.7238
	1	0	0	0.0033	0.0009	0.0973	0.0089	0.0036	0.2644	0.0133	0.0073	0.4006	0.0211	0.0197	0.6407
	1	0	1	0.0034	0.0010	0.0997	0.0092	0.0039	0.2704	0.0139	0.0080	0.4087	0.0217	0.0214	0.6503
	1	1	0	0.0036	0.0018	0.1128	0.0097	0.0067	0.3016	0.0144	0.0127	0.4502	0.0219	0.0316	0.6977
	1	1	1	0.0038	0.0021	0.1156	0.0101	0.0074	0.3082	0.0149	0.0141	0.4588	0.0225	0.0345	0.7071
Others	0	0	0	0.0014	0.0004	0.1370	0.0036	0.0017	0.3573	0.0053	0.0037	0.5214	0.0078	0.0100	0.7709
	0	0	1	0.0015	0.0004	0.1404	0.0038	0.0019	0.3648	0.0053	0.0037	0.5214	0.0080	0.0109	0.7797
	0	1	0	0.0015	0.0008	0.1582	0.0039	0.0031	0.4035	0.0056	0.0061	0.5773	0.0079	0.0154	0.8213
	0	1	1	0.0016	0.0009	0.1620	0.0041	0.0034	0.4116	0.0058	0.0067	0.5868	0.0081	0.0168	0.8293
	1	0	0	0.0026	0.0011	0.1312	0.0067	0.0041	0.3442	0.0098	0.0082	0.5050	0.0145	0.0212	0.7550
	1	0	1	0.0027	0.0012	0.1344	0.0070	0.0046	0.3515	0.0102	0.0090	0.5142	0.0149	0.0231	0.7640
	1	1	0	0.0029	0.0022	0.1516	0.0073	0.0078	0.3893	0.0104	0.0146	0.5604	0.0148	0.0348	0.8067
	1	1	1	0.0030	0.0025	0.1553	0.0076	0.0087	0.3972	0.0108	0.0162	0.5699	0.0151	0.0381	0.8150

Table 3. Transition Probability of Model (without NA)

Model	Cirrhosis	DM	FLD	Female											
				1 Year			3 Year			5 Year			10 Year		
				High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death	High to LVC	High to Death	LVC to Death
Full	0	0	0	0.0002	0.0005	0.0861	0.0005	0.0017	0.2366	0.0008	0.0028	0.3623	0.0013	0.0060	0.5934
	0	0	1	0.0002	0.0006	0.0894	0.0006	0.0018	0.2450	0.0008	0.0028	0.3623	0.0014	0.0065	0.6081
	0	1	0	0.0002	0.0008	0.1050	0.0006	0.0024	0.2831	0.0009	0.0041	0.4258	0.0014	0.0085	0.6703
	0	1	1	0.0002	0.0009	0.1091	0.0006	0.0026	0.2928	0.0009	0.0045	0.4387	0.0014	0.0093	0.6849
	1	0	0	0.0004	0.0009	0.0647	0.0013	0.0029	0.1817	0.0020	0.0049	0.2841	0.0033	0.0103	0.4875
	1	0	1	0.0005	0.0010	0.0672	0.0013	0.0031	0.1884	0.0021	0.0053	0.2939	0.0035	0.0112	0.5014
	1	1	0	0.0005	0.0013	0.0791	0.0014	0.0041	0.2191	0.0022	0.0070	0.3378	0.0036	0.0147	0.5614
	1	1	1	0.0006	0.0015	0.0822	0.0015	0.0045	0.2270	0.0023	0.0077	0.3489	0.0038	0.0161	0.5760
HBV	0	0	0	0.0003	0.0004	0.0441	0.0009	0.0013	0.1266	0.0015	0.0023	0.2019	0.0027	0.0049	0.3631
	0	0	1	0.0003	0.0005	0.0459	0.0010	0.0015	0.1314	0.0015	0.0023	0.2019	0.0028	0.0053	0.3748
	0	1	0	0.0004	0.0006	0.0541	0.0011	0.0019	0.1537	0.0017	0.0033	0.2428	0.0029	0.0070	0.4266
	0	1	1	0.0004	0.0007	0.0563	0.0022	0.0021	0.1595	0.0018	0.0036	0.2514	0.0031	0.0076	0.4396
	1	0	0	0.0008	0.0007	0.0330	0.0023	0.0023	0.0987	0.0035	0.0039	0.1543	0.0065	0.0084	0.2848
	1	0	1	0.0008	0.0008	0.0343	0.0025	0.0025	0.0994	0.0038	0.0043	0.1601	0.0069	0.0091	0.2945
	1	1	0	0.0009	0.0011	0.0405	0.0026	0.0033	0.1166	0.0040	0.0057	0.1807	0.0071	0.0120	0.3385
	1	1	1	0.0009	0.0012	0.0421	0.0028	0.0036	0.1211	0.0042	0.0062	0.1935	0.0076	0.0131	0.3496
HCV	0	0	0	0.0003	0.0006	0.0595	0.0008	0.0020	0.1682	0.0013	0.0033	0.2642	0.0022	0.0070	0.4586
	0	0	1	0.0003	0.0007	0.0619	0.0009	0.0021	0.1744	0.0013	0.0033	0.2642	0.0024	0.0077	0.4721
	0	1	0	0.0003	0.0009	0.0729	0.0009	0.0028	0.2031	0.0014	0.0048	0.3150	0.0024	0.0101	0.5308
	0	1	1	0.0004	0.0010	0.0757	0.0010	0.0031	0.2105	0.0015	0.0053	0.3255	0.0025	0.0110	0.5451
	1	0	0	0.0007	0.0011	0.0496	0.0020	0.0034	0.1278	0.0031	0.0057	0.2038	0.0055	0.0121	0.3661
	1	0	1	0.0007	0.0012	0.0464	0.0021	0.0034	0.1327	0.0033	0.0063	0.2113	0.0059	0.0132	0.3779
	1	1	0	0.0008	0.0016	0.0547	0.0022	0.0037	0.1552	0.0035	0.0083	0.2450	0.0060	0.0173	0.4300
	1	1	1	0.0008	0.0017	0.0568	0.0023	0.0053	0.1610	0.0037	0.0091	0.2537	0.0064	0.0184	0.4430
Others	0	0	0	0.0002	0.0005	0.0836	0.0006	0.0017	0.2303	0.0009	0.0029	0.3536	0.0015	0.0061	0.5822
	0	0	1	0.0002	0.0006	0.0868	0.0006	0.0018	0.2386	0.0009	0.0029	0.3536	0.0015	0.0067	0.5969
	0	1	0	0.0002	0.0008	0.1020	0.0006	0.0024	0.2759	0.0010	0.0042	0.4161	0.0015	0.0087	0.6591
	0	1	1	0.0003	0.0009	0.1060	0.0007	0.0027	0.2854	0.0010	0.0046	0.4288	0.0016	0.0095	0.5738
	1	0	0	0.0005	0.0009	0.0628	0.0014	0.0029	0.1768	0.0022	0.0050	0.2769	0.0037	0.0105	0.4771
	1	0	1	0.0005	0.0010	0.0653	0.0015	0.0032	0.1833	0.0023	0.0054	0.2864	0.0040	0.0115	0.4908
	1	1	0	0.0006	0.0014	0.0768	0.0016	0.0042	0.2132	0.0024	0.0072	0.3295	0.0040	0.0151	0.5504
	1	1	1	0.0006	0.0015	0.0799	0.0017	0.0046	0.2209	0.0026	0.0078	0.3404	0.0042	0.0165	0.5649