

胃癌学会全国登録解析結果報告 —2010年EMR/ESD症例—

1. 登録施設 計125施設

北海道・東北

市立函館病院 日鋼記念病院 国家公務員共済組合連合会 斗南病院 北海道大学病院 KKR札幌医療センター 釧路労災病院 青森県立中央病院
三沢市立三沢病院 弘前大学大学院医学研究科 岩手医科大学 岩手県立中央病院 大館市立総合病院 宮城県立がんセンター 東北労災病院
独立行政法人国立病院機構・仙台医療センター 坂総合病院 石巻赤十字病院 仙台厚生病院 福島県立医科大学 寿泉堂総合病院

北陸・関東・甲信越

済生会新潟第二病院 市立砺波総合病院 石川県立中央病院 金沢大学附属病院 坂井市立三国病院 福井県立病院
国立病院機構・敦賀医療センター 福井赤十字病院 前橋赤十字病院 群馬県済生会前橋病院 群馬大学大学院
しらかわ診療所・群馬消化器内視鏡医療センター 川口市立医療センター 社会医療法人財団石心会 埼玉石心会病院 上尾中央総合病院
獨協医科大学越谷病院 栃木県立がんセンター 国立病院機構 宇都宮病院 友愛記念病院 独立行政法人国立病院機構・千葉医療センター
千葉大学医学部附属病院 国立がん研究センター東病院 柏厚生総合病院 日本医科大学武蔵小杉病院 北里大学
横浜市立大学附属市民総合医療センター 横浜市立市民病院がんセンター 独立行政法人国立病院機構 横浜医療センター 日本大学病院 三井記念病院
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社会医療法人財団慈泉会 相澤病院 長野市民病院 JA長野厚生連佐久総合病院・佐久医療センター

東海・近畿

沼津市立病院 静岡県立静岡がんセンター 浜松医科大学 静岡県立総合病院 愛知県がんセンター中央病院 名古屋市立大学 愛知医科大学病院 滋賀医科大学 市立長浜病院 田附興風会医学研究所北野病院 大阪市立総合医療センター 大阪府済生会野江病院 大阪国際がんセンター 箕面市立病院 市立吹田市民病院 大阪医科大学 松下記念病院 大阪中央病院 市立貝塚病院 京都府立医科大学附属病院 京都大学医学部附属病院 社会福祉法人恩賜財団 済生会中和病院 和歌山県立医科大学 神戸百年記念病院 兵庫医科大学病院 市立伊丹病院 社会医療法人財団聖フランシスコ会・姫路聖マリア病院 姫路中央病院 加古川中央市民病院 神戸大学医学部附属病院

中国・四国

島根県立中央病院 松江市立病院 岡山大学病院 津山中央病院 水島協同病院 国立病院機構・福山医療センター 広島大学病院 広島記念病院 広島市立広島市民病院 一般財団法人防府消化器病センター 防府胃腸病院 三豊総合病院 徳島赤十字病院 高知県・高知市病院企業団立 高知医療センター

九州・沖縄

国立病院機構九州がんセンター 福岡大学筑紫病院 社会医療法人財団池友会福岡和白病院 佐賀大学医学部附属病院 長崎大学病院 佐世保市総合医療センター 熊本地域医療センター 熊本大学 独立行政法人地域医療機能推進機構・人吉医療センター 大分赤十字病院 大分医療センター 大分大学 古賀総合病院 鹿児島大学病院 鹿児島共済会南風病院 琉球大学医学部附属病院 社会医療法人敬愛会中頭病院

2. 症例数 7,242 例

3. 対象症例

登録対象は2010年1月から12月末までの胃がんEMR/ESD症例

4. 解析方法

5年生存率は、Kaplan-Meier法により推定した。解析ソフトウェアはSPSS Ver. 20.0を用いた。

5. 表中の略語の説明

direct death	: direct death within 30 postoperative days
primary disease	: cause of death primary disease
local rec.	: local recurrence
lymph node.	: lymph node recurrence
peritoneal	: peritoneal recurrence
liver rec.	: liver recurrence
R	: recurrence of unknown site
unknown	: cause of death unknown

All Patients			
Age	mean±SD	71.1	±8.967
	-39	10	(0.1%)
	40-59	691	(9.5%)
	60-79	5,236	(72.3%)
	80-	1,305	(18.0%)
Sex	Male	5,564	(76.8%)
	Female	1,678	(23.2%)
Prior endoscopic treatment	-	7,084	(97.8%)
	+	151	(2.1%)
	Unknown	7	(0.1%)
Stomach condition	Normal stomach	6,975	(96.3%)
	Remnant stomach	223	(3.1%)
	Gastric tube	44	(0.6%)
Tumor location	U	1,264	(17.5%)
	M	2,880	(39.8%)
	L	3,081	(42.5%)
	Unknown	14	(0.2%)
	Data unavailable	3	(0.0%)
Cross-sectional parts	Less	3,007	(41.5%)
	Gre	1,381	(19.1%)
	Ant	1,299	(17.9%)
	Post	1,515	(20.9%)
	Unknown	40	(0.6%)
Macroscopic type	Depressed type	3,967	(54.8%)
	Elevated type	2,632	(36.3%)
	Mixed type	608	(8.4%)
	Others	14	(0.2%)
	Unknown	21	(0.3%)
Method of endoscopic resection	ESD	7,067	(97.6%)
	EMR	168	(2.3%)
	Others	6	(0.1%)
	Unknown	1	(0.0%)
En-bloc or piecemeal resection	En-bloc resection	7,092	(97.9%)
	Piecemeal resection	145	(2.0%)
	Others	2	(0.0%)
	Unknown	3	(0.0%)
Bleeding requiring emergency surgery	Presence	52	(0.7%)
	Absence	7,189	(99.3%)
	Unknown	1	(0.0%)
Perforation requiring emergency surgery	Presence	27	(0.4%)
	Absence	7,206	(99.5%)
	Unknown	9	(0.1%)
Histological type	pap	161	(2.2%)
	tub1	5,638	(77.9%)
	tub2	1,114	(15.4%)
	por	147	(2.0%)
	sig	134	(1.9%)
	muc	4	(0.1%)
	Others	24	(0.3%)
	Inconclusive	4	(0.1%)
	Unknown	14	(0.2%)
	Data unavailable	2	(0.0%)

Depth of tumor invasion	M	6,031	(88.3%)
	SM1	570	(7.9%)
	SM2 or deeper than SM2	584	(8.1%)
	Others	17	(0.2%)
	Inconclusive	13	(0.2%)
	Unknown	24	(0.3%)
Lymphatic invasion(ly)	Data unavailable	3	(0.0%)
	-	6,795	(93.8%)
	+	394	(5.4%)
	Inconclusive	20	(0.3%)
Venous invasion(v)	Unknown	32	(0.4%)
	Data unavailable	1	(0.0%)
	-	6,969	(96.2%)
	+	219	(3.0%)
UL	Inconclusive	24	(0.3%)
	Unknown	29	(0.4%)
	Data unavailable	1	(0.0%)
	-	6,211	(85.8%)
	+	852	(11.8%)
Horizontal margin	Inconclusive	31	(0.4%)
	Unknown	147	(2.0%)
	Data unavailable	1	(0.0%)
	HMO	6,725	(92.9%)
Vertical margin	HM1	182	(2.5%)
	HMX	333	(4.6%)
	Data unavailable	2	(0.0%)
	VM0	6,828	(94.3%)
En-bloc resection with tumor-free margins	VM1	213	(2.9%)
	VMX	200	(2.8%)
	Data unavailable	1	(0.0%)
	En-bloc resection with tumor-free margins	6,478	(89.5%)
Curability	Positive or inconclusive resected margins	764	(10.5%)
	Curative resection	3,707	(51.2%)
	Curative resection for expanded indication	1,936	(26.7%)
Subsequent treatment for non-curative resection for non-curative resection	Non-curative resection	1,599	(22.1%)
	No additional treatment	945	(59.1%)
	Surgery	582	(36.4%)
	Endoscopic resection	16	(1.0%)
	Endoscopic ablation	32	(2.0%)
<i>H. pylori</i> infection	Others	6	(0.4%)
	Unknown	14	(0.9%)
	Data unavailable	4	(0.3%)
	-	1,366	(18.9%)
Eradication therapy in <i>H. pylori</i> - positive cases	+	2,781	(38.4%)
	Unknown	3,095	(42.7%)
	Not performed	578	(20.8%)
Total	Performed	1,954	(70.3%)
	Unknown	249	(9.0%)
Total		7,242	(100.0%)

Methods of endoscopic resection		ESD	EMR
Age	mean±SD	71.1 ±8.923	71.7 ±10.579
	-39	8 (0.1%)	2 (1.2%)
	40-59	677 (9.6%)	13 (7.7%)
	60-79	5,118 (72.4%)	115 (68.5%)
	80-	1,264 (17.9%)	38 (22.6%)
Sex	Male	5,438 (76.9%)	120 (71.4%)
	Female	1,629 (23.1%)	48 (28.6%)
Prior endoscopic treatment	-	6,919 (97.9%)	159 (94.6%)
	+	141 (2.0%)	9 (5.4%)
	Unknown	7 (0.1%)	0 (0.0%)
Stomach condition	Normal stomach	6,820 (96.5%)	149 (88.7%)
	Remnant stomach	205 (2.9%)	17 (10.1%)
	Gastric tube	42 (0.6%)	2 (1.2%)
Tumor location	U	1,224 (17.3%)	38 (22.6%)
	M	2,815 (39.8%)	64 (38.1%)
	L	3,013 (42.6%)	64 (38.1%)
	Unknown	13 (0.2%)	1 (0.6%)
	Data unavailable	2 (0.0%)	1 (0.6%)
Cross-sectional parts	Less	2,945 (41.7%)	58 (34.5%)
	Gre	1,329 (18.8%)	51 (30.4%)
	Ant	1,269 (18.0%)	29 (17.3%)
	Post	1,491 (21.1%)	23 (13.7%)
	Unknown	33 (0.5%)	7 (4.2%)
Macroscopic type	Depressed type	3,924 (55.5%)	41 (24.4%)
	Elevated type	2,515 (35.6%)	112 (66.7%)
	Mixed type	601 (8.5%)	7 (4.2%)
	Others	13 (0.2%)	1 (0.6%)
	Unknown	14 (0.2%)	7 (4.2%)
En-bloc or piecemeal resection	En-bloc resection	6,959 (98.5%)	127 (75.6%)
	Piecemeal resection	105 (1.5%)	40 (23.8%)
	Others	2 (0.0%)	0 (0.0%)
	Unknown	1 (0.0%)	1 (0.6%)
Bleeding requiring emergency surgery	Presence	50 (0.7%)	2 (1.2%)
	Absence	7,016 (99.3%)	166 (98.8%)
	Unknown	1 (0.0%)	0 (0.0%)
Perforation requiring emergency surgery	Presence	27 (0.4%)	0 (0.0%)
	Absence	7,031 (99.5%)	168 (100.0%)
	Unknown	9 (0.1%)	0 (0.0%)
Histological type	pap	149 (2.1%)	12 (7.1%)
	tub1	5,498 (77.8%)	136 (81.0%)
	tub2	1,098 (15.5%)	14 (8.3%)
	por	146 (2.1%)	0 (0.0%)
	sig	134 (1.9%)	0 (0.0%)
	muc	4 (0.1%)	0 (0.0%)
	Others	22 (0.3%)	2 (1.2%)
	Inconclusive	4 (0.1%)	0 (0.0%)
	Unknown	10 (0.1%)	4 (2.4%)
	Data unavailable	2 (0.0%)	0 (0.0%)

		ESD	EMR
Depth of tumor invasion	M	5,880 (83.2%)	145 (86.3%)
	SM1	566 (8.0%)	4 (2.4%)
	SM2 or deeper than SM2	573 (8.1%)	11 (6.5%)
	Others	16 (0.2%)	1 (0.6%)
	Inconclusive	10 (0.1%)	3 (1.8%)
	Unknown	19 (0.3%)	4 (2.4%)
	Data unavailable	3 (0.0%)	0 (0.0%)
Lymphatic invasion(ly)	-	6,633 (93.8%)	157 (93.5%)
	+	388 (5.5%)	6 (3.6%)
	Inconclusive	16 (0.2%)	4 (2.4%)
	Unknown	29 (0.4%)	1 (0.6%)
	Data unavailable	1 (0.0%)	0 (0.0%)
Venous invasion(v)	-	6,804 (96.3%)	160 (95.2%)
	+	219 (3.1%)	0 (0.0%)
	Inconclusive	17 (0.2%)	7 (4.2%)
	Unknown	26 (0.4%)	1 (0.6%)
	Data unavailable	1 (0.0%)	0 (0.0%)
UL	-	6,068 (85.9%)	139 (82.7%)
	+	848 (12.0%)	4 (2.4%)
	Inconclusive	23 (0.3%)	8 (4.8%)
	Unknown	127 (1.8%)	17 (10.1%)
	Data unavailable	1 (0.0%)	0 (0.0%)
Horizontal margin	HM0	6,625 (93.7%)	96 (57.1%)
	HM1	165 (2.3%)	16 (9.5%)
	HMX	275 (3.9%)	56 (33.3%)
	Data unavailable	2 (0.0%)	0 (0.0%)
Vertical margin	VM0	6,686 (94.6%)	138 (82.1%)
	VM1	208 (2.9%)	4 (2.4%)
	VMX	172 (2.4%)	26 (15.5%)
	Data unavailable	1 (0.0%)	0 (0.0%)
En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	6,381 (90.3%)	93 (55.4%)
	Positive or inconclusive resected margins	686 (9.7%)	75 (44.6%)
Curability	Curative resection	3,635 (51.4%)	69 (41.4%)
	Curative resection for expanded indication	1,927 (27.3%)	9 (5.4%)
	Non-curative resection	1,505 (21.3%)	90 (53.6%)
Subsequent treatment for non-curative resection	No additional treatment	867 (57.6%)	75 (83.3%)
	Surgery	572 (38.0%)	10 (11.1%)
	Endoscopic resection	16 (1.1%)	0 (0.0%)
	Endoscopic ablation	28 (1.9%)	3 (3.3%)
	Others	5 (0.3%)	1 (1.1%)
	Unknown	14 (0.9%)	0 (0.0%)
	Data unavailable	3 (0.2%)	1 (1.1%)
<i>H. pylori</i> infection	-	1,331 (18.8%)	34 (20.2%)
	+	2,741 (38.8%)	37 (22.0%)
	Unknown	2,995 (42.4%)	97 (57.7%)
Eradication therapy in <i>H. pylori</i> -positive cases	Not performed	573 (20.9%)	5 (13.5%)
	Performed	1,924 (70.2%)	27 (73.0%)
	Unknown	244 (8.9%)	5 (13.5%)
Total		7,067 (100.0%)	168 (100.0%)

Survival curve of patients

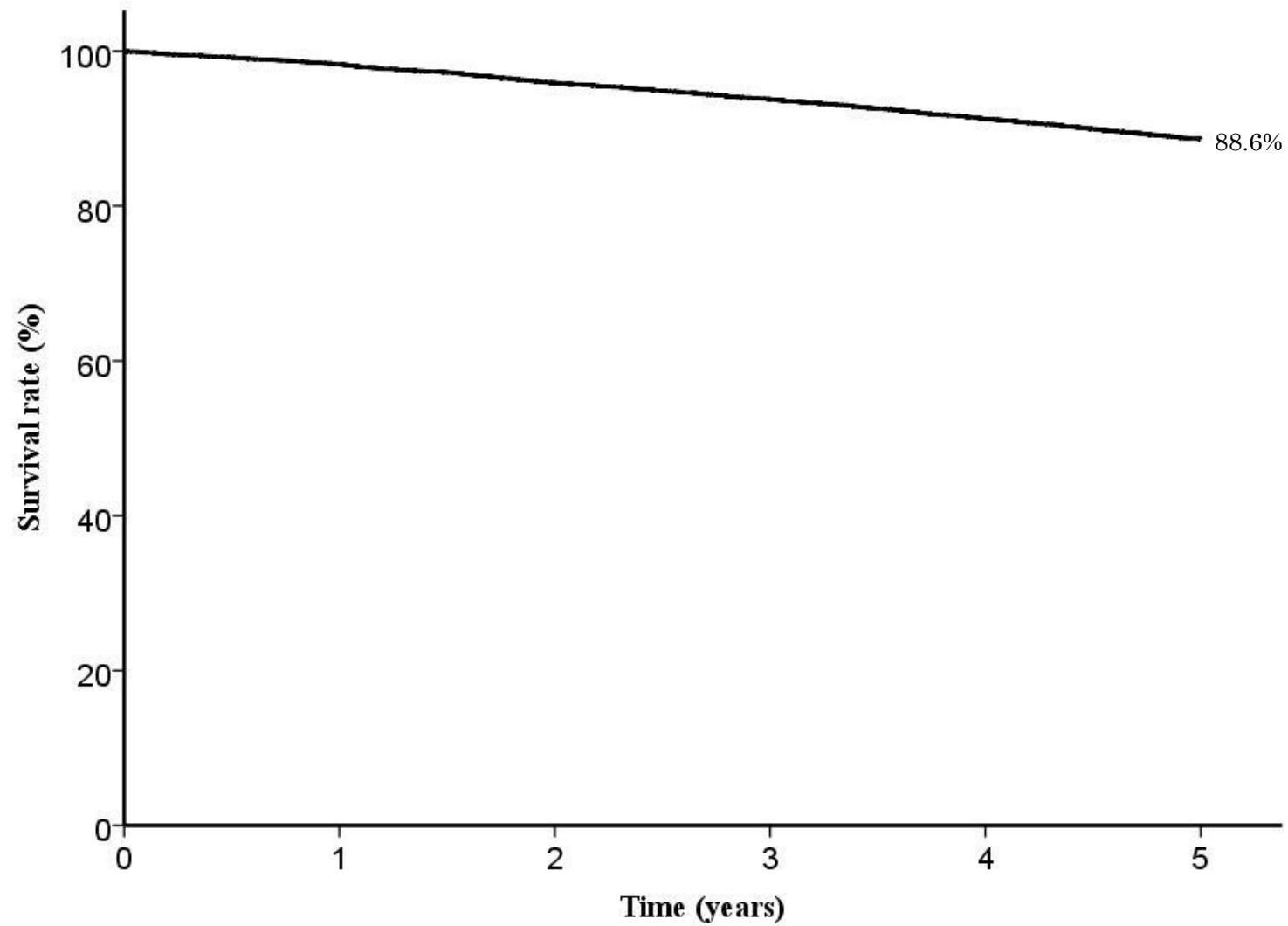


Fig. 1. Five year survival rates for all patients

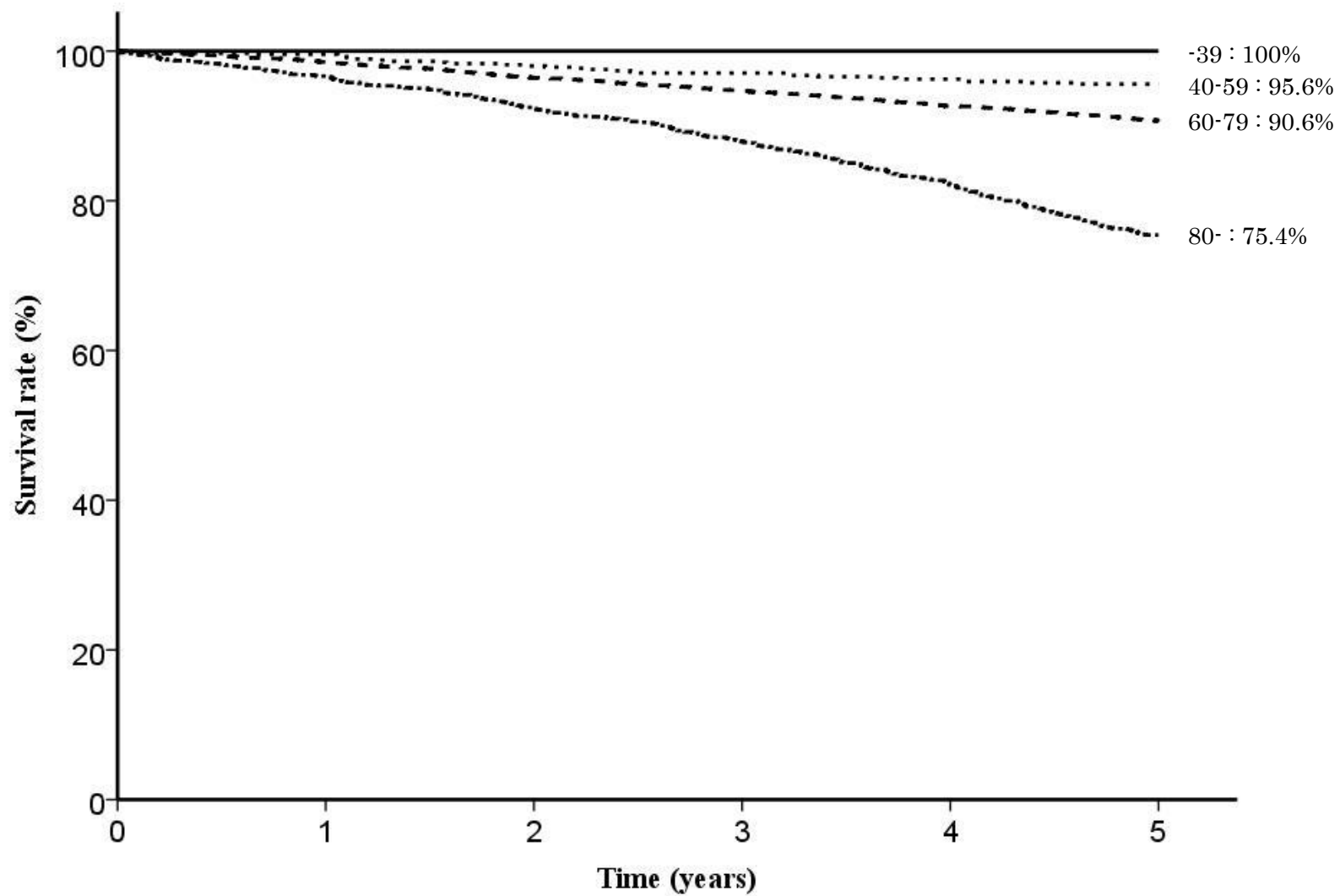


Fig. 2. Five year survival rates stratified by age

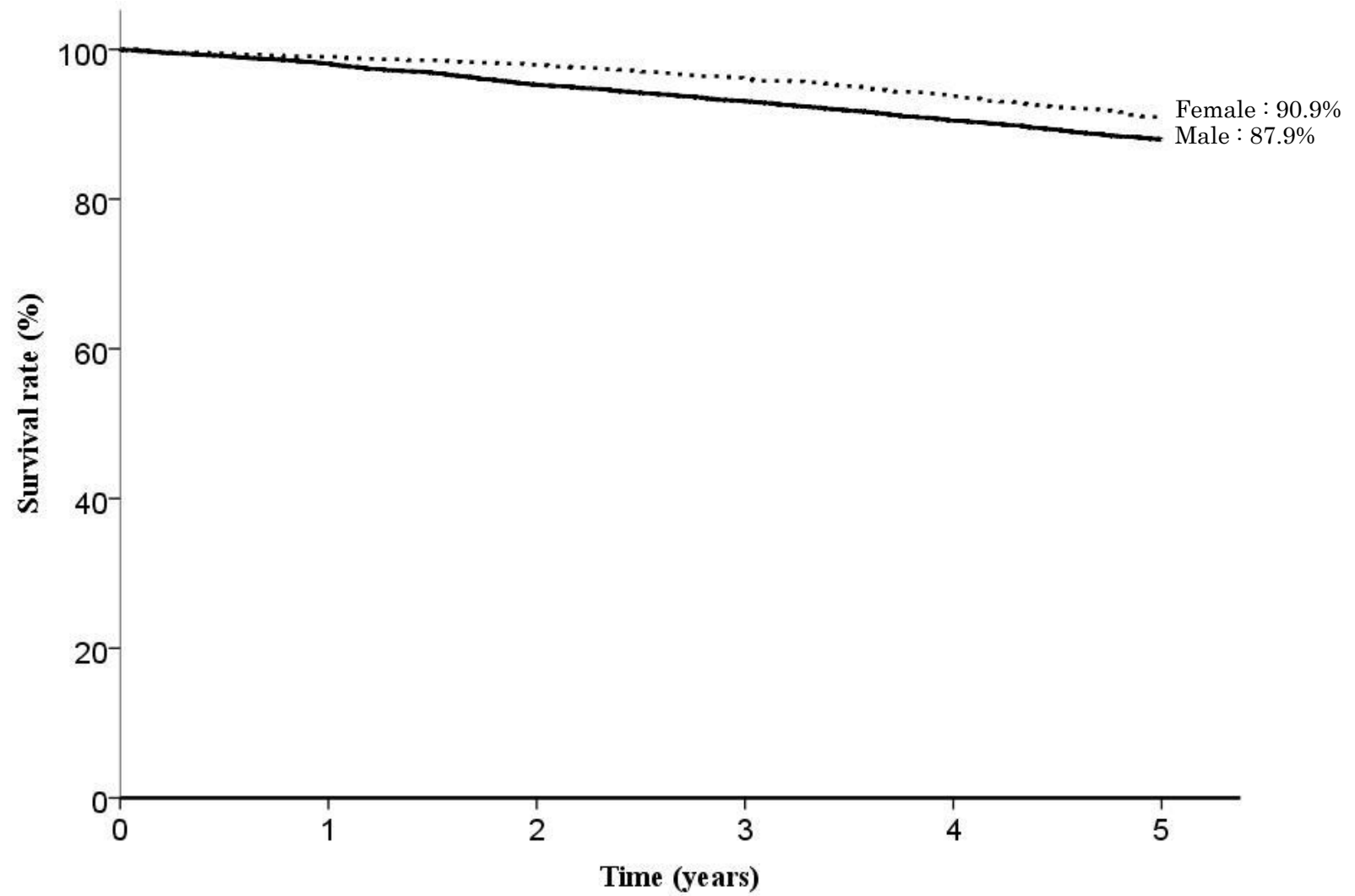


Fig. 3. Five year survival rates stratified by sex

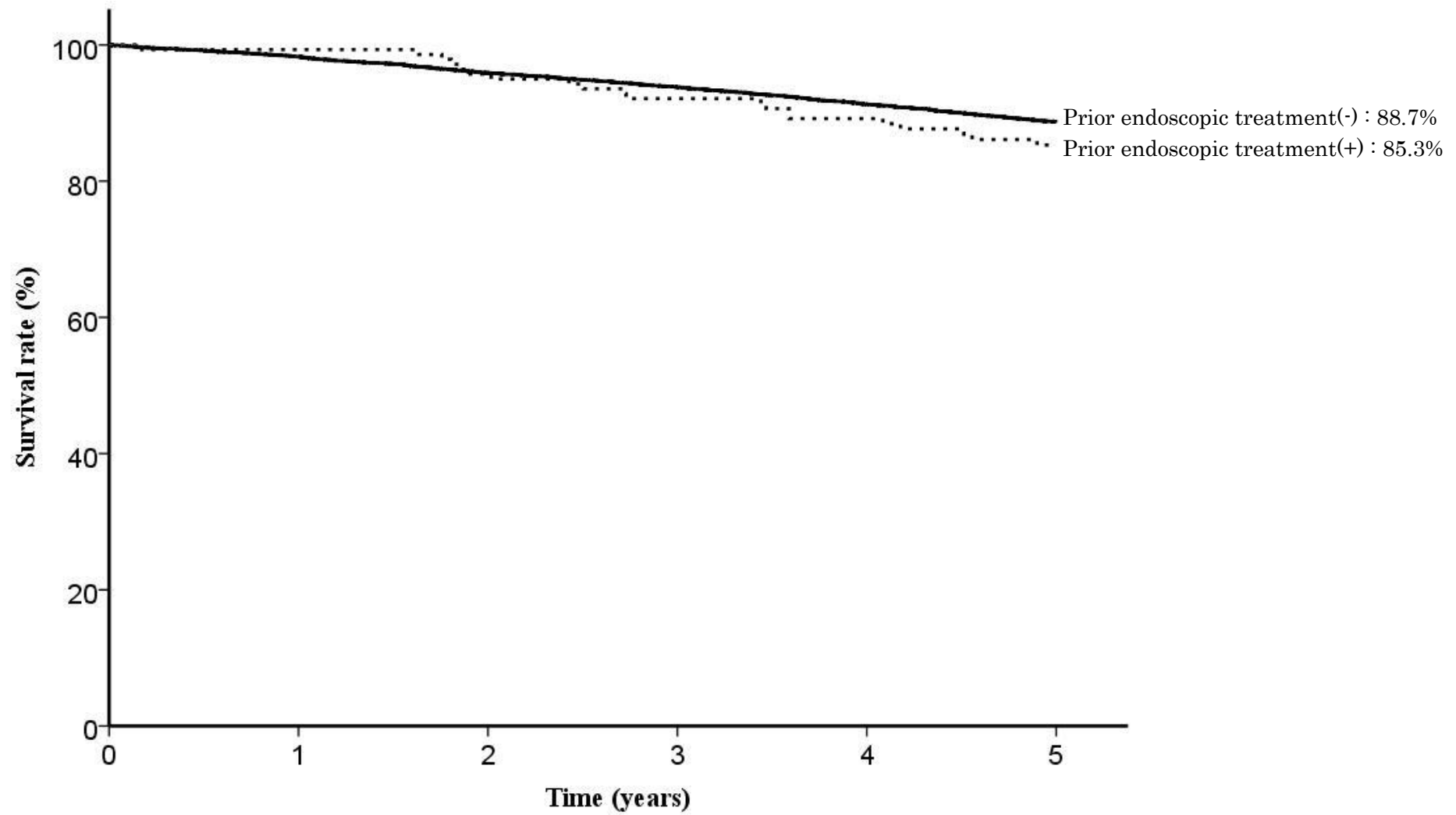


Fig. 4. Five year survival rates stratified by prior endoscopic treatment

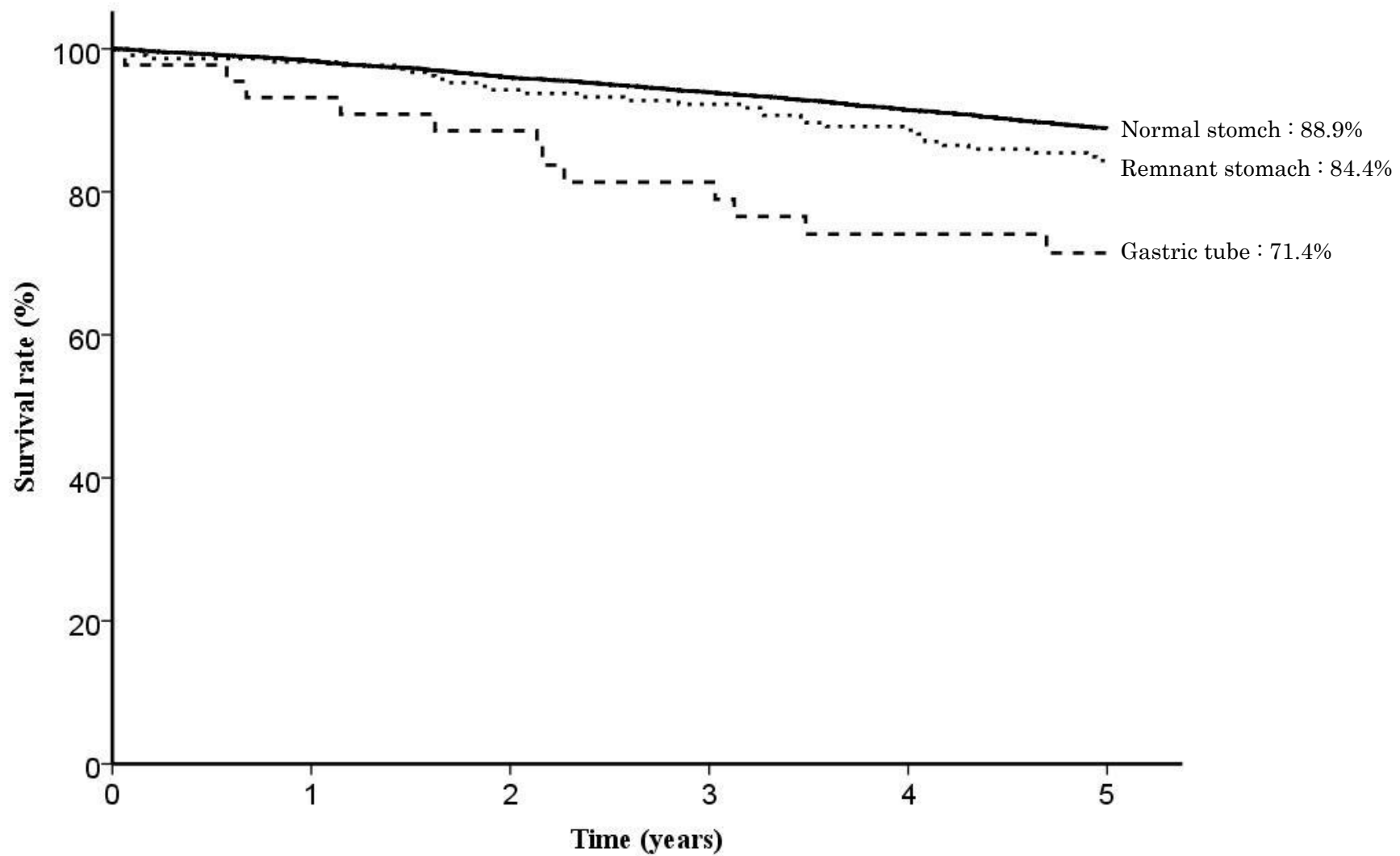


Fig. 5. Five year survival rates stratified by stomach condition

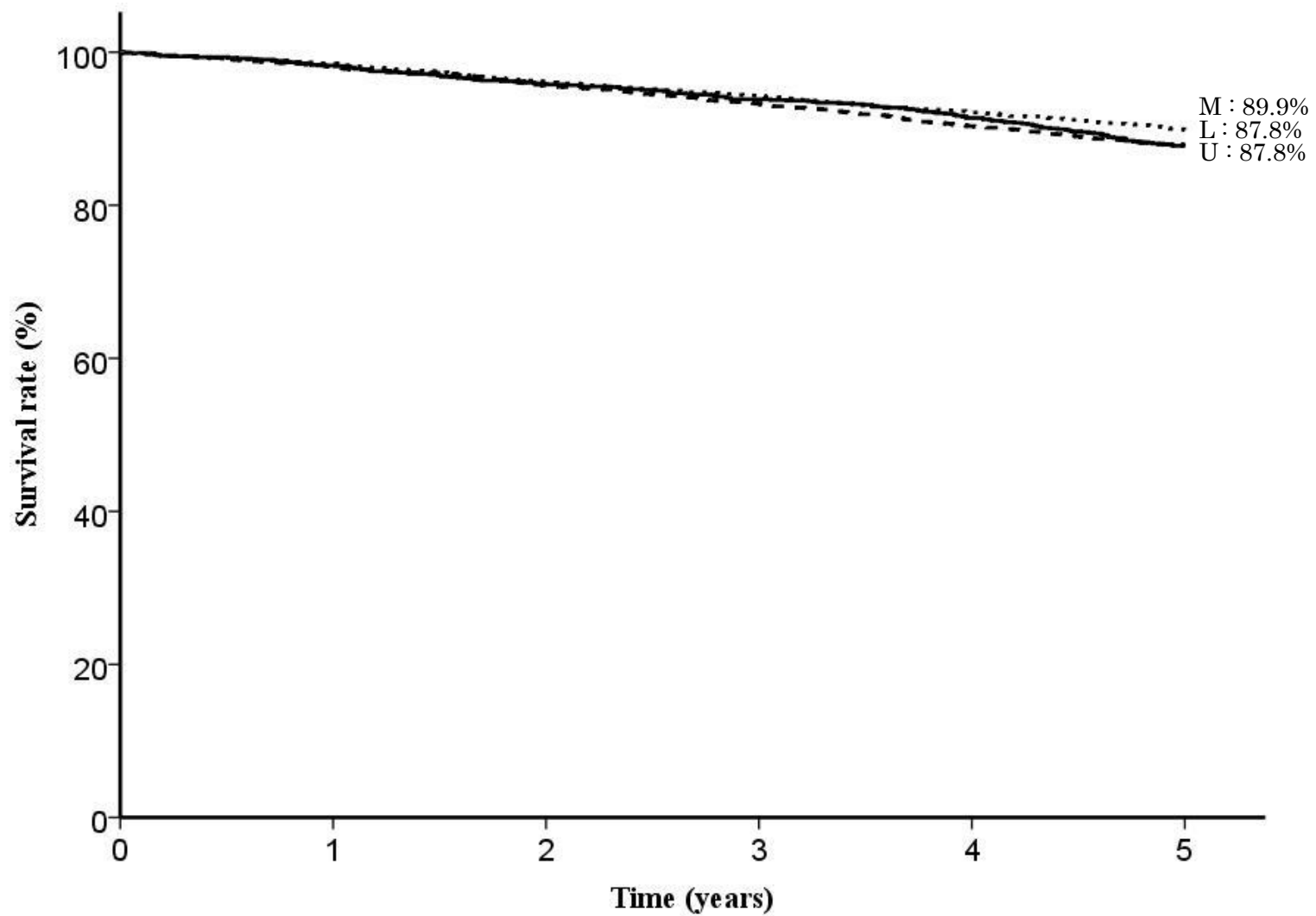


Fig. 6. Five year survival rates stratified by tumor location

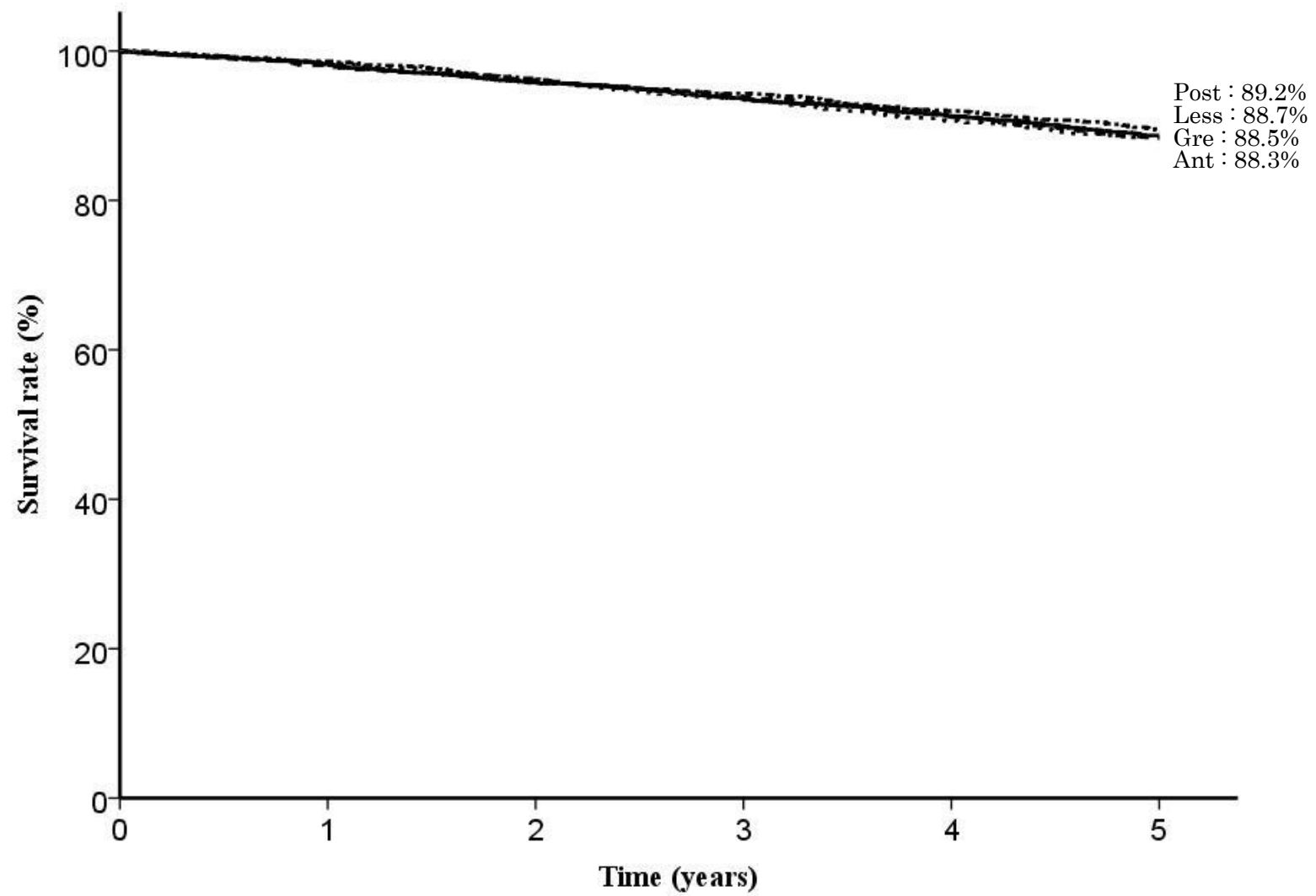


Fig. 7. Five year survival rates stratified by cross-sectional parts

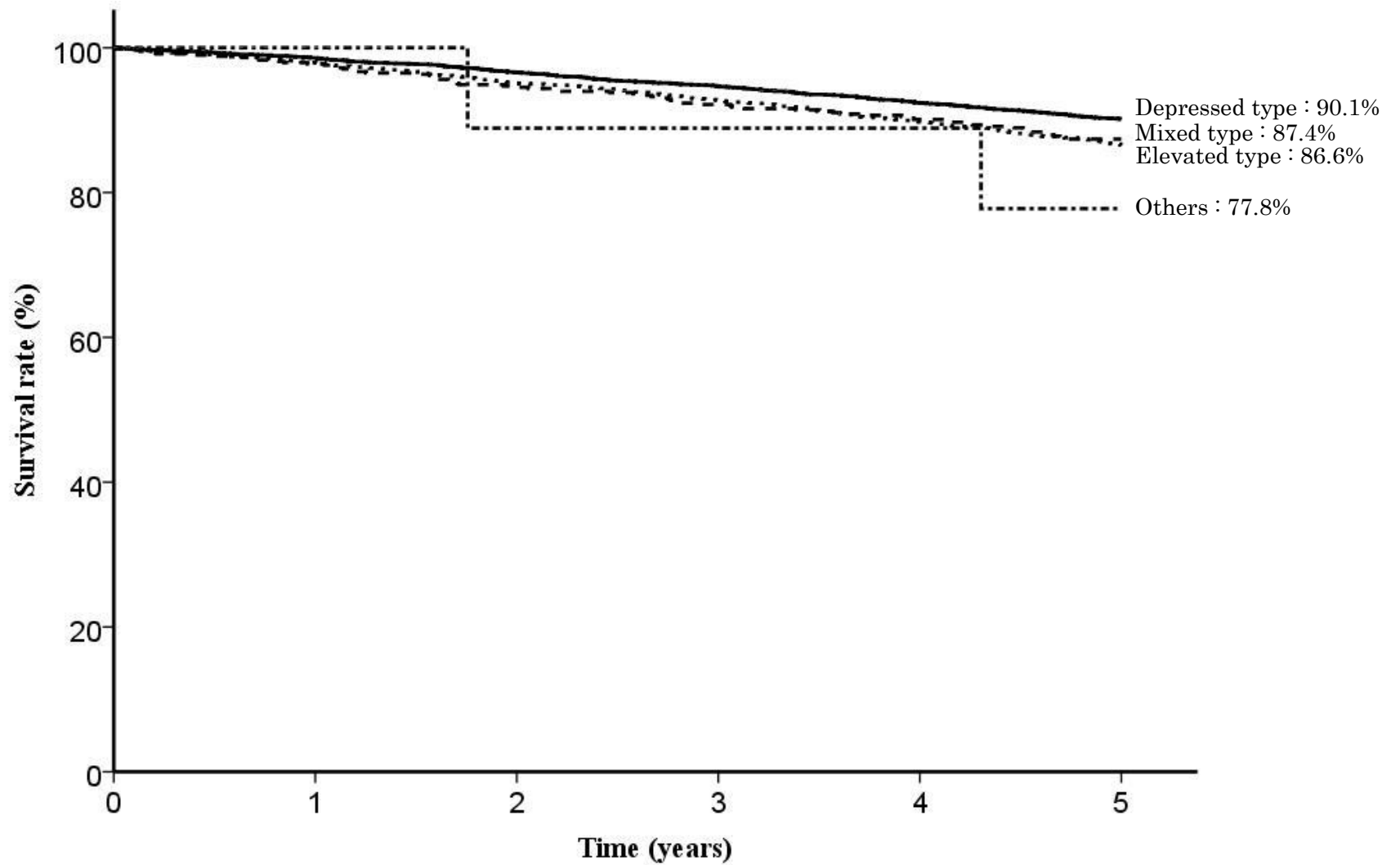


Fig. 8. Five year survival rates stratified by macroscopic type

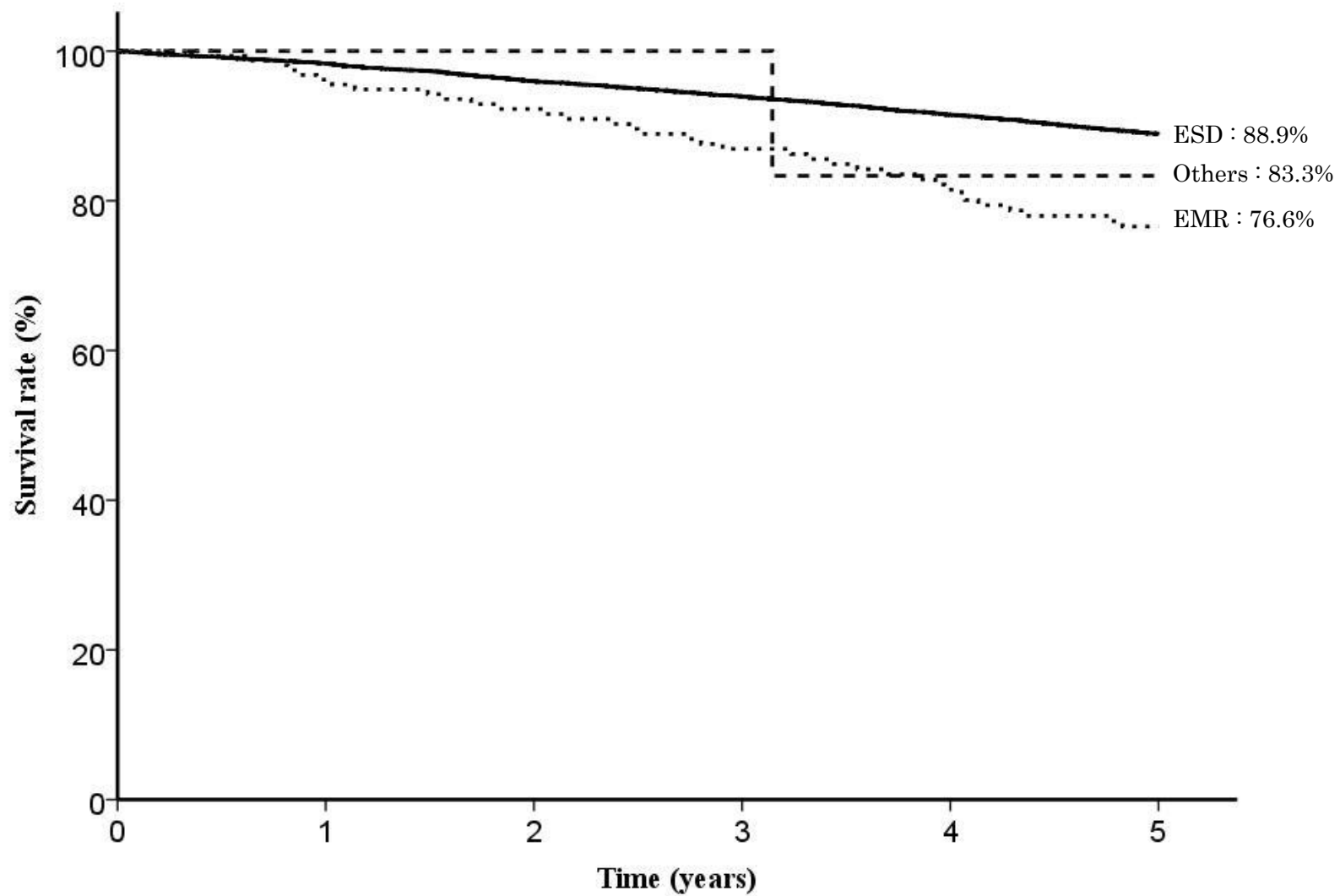


Fig. 9. Five year survival rates stratified by method of endoscopic resection

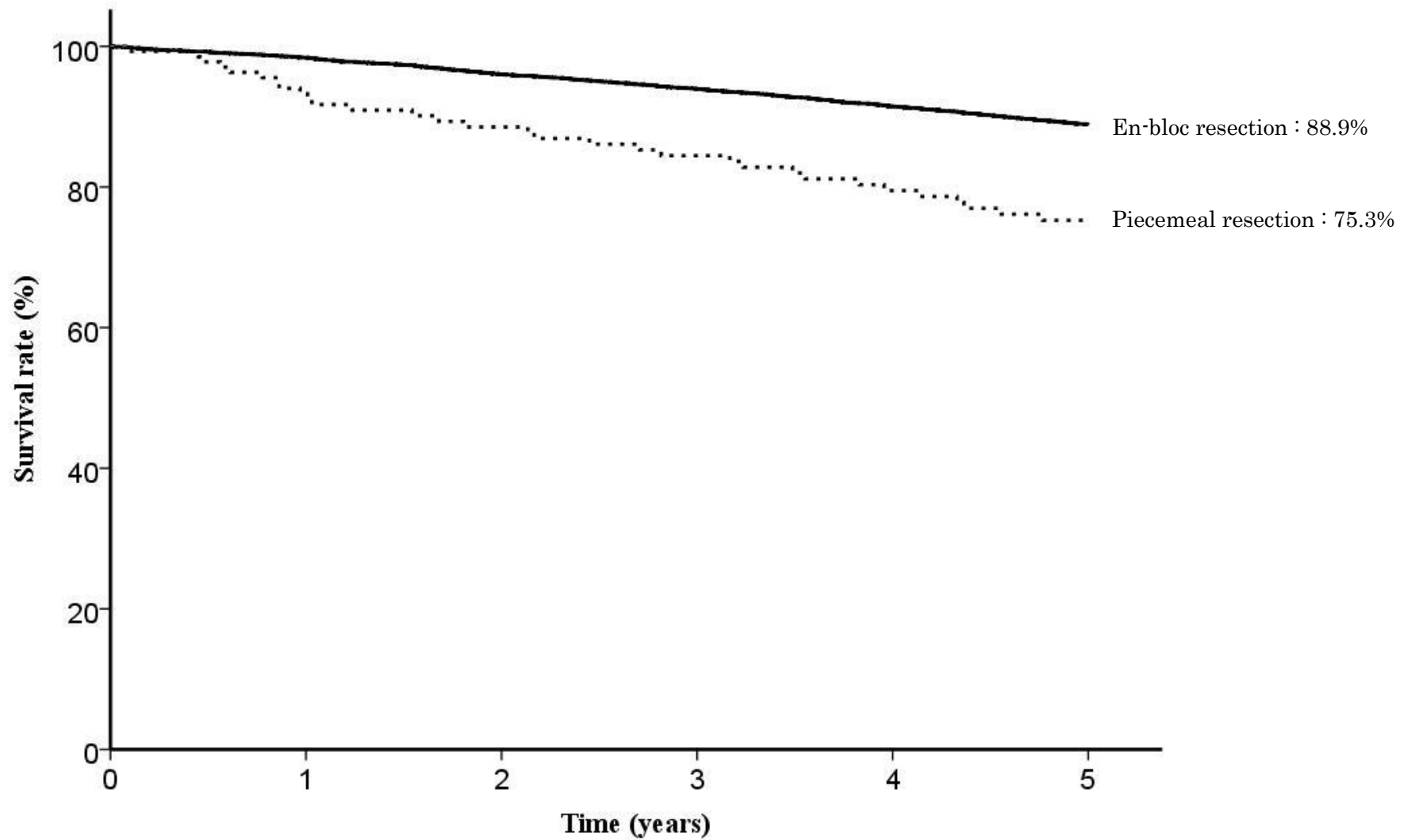


Fig. 10. Five year survival rates stratified by en-bloc or piecemeal resection

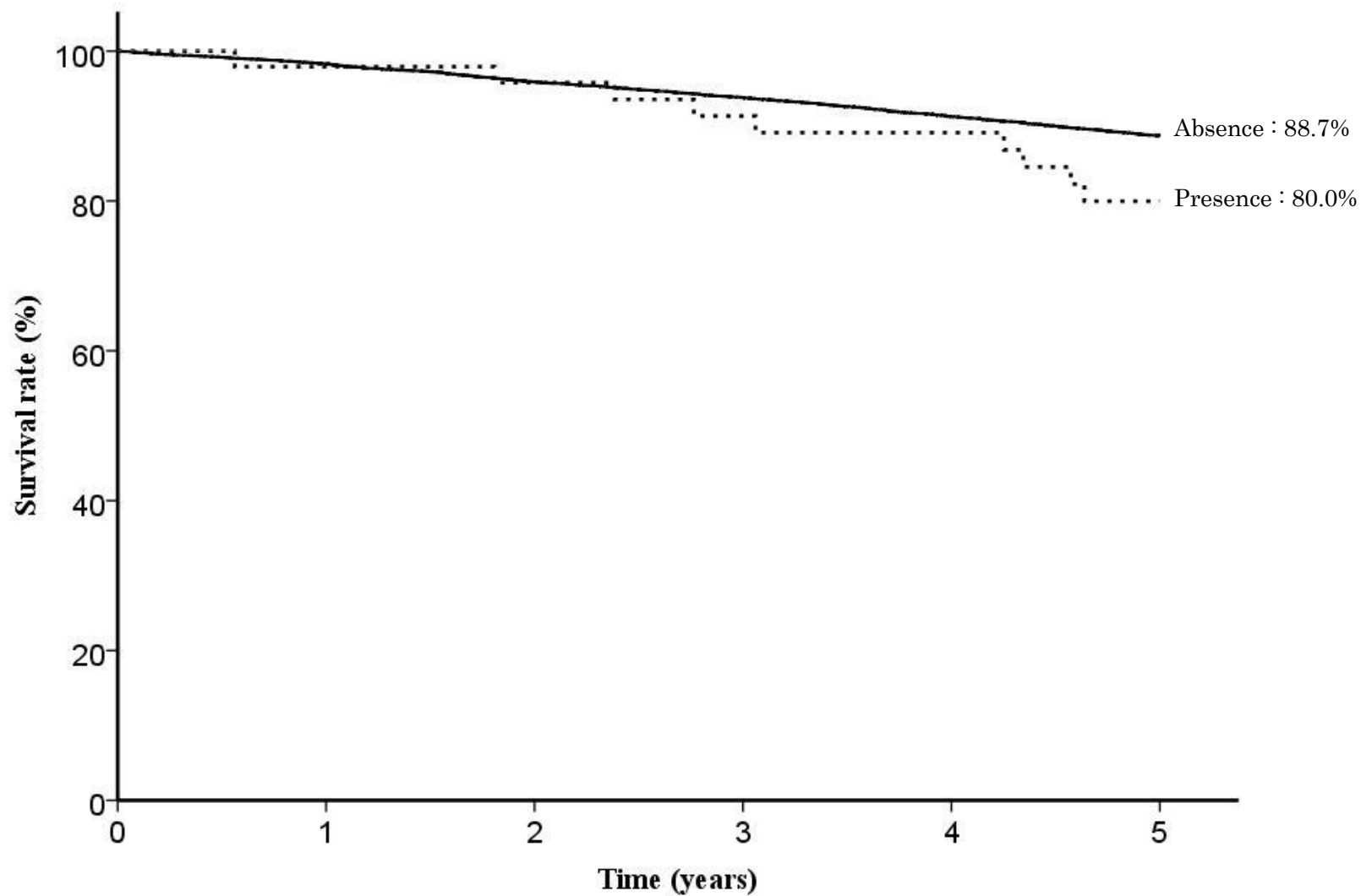


Fig. 11. Five year survival rates stratified by bleeding requiring emergency surgery

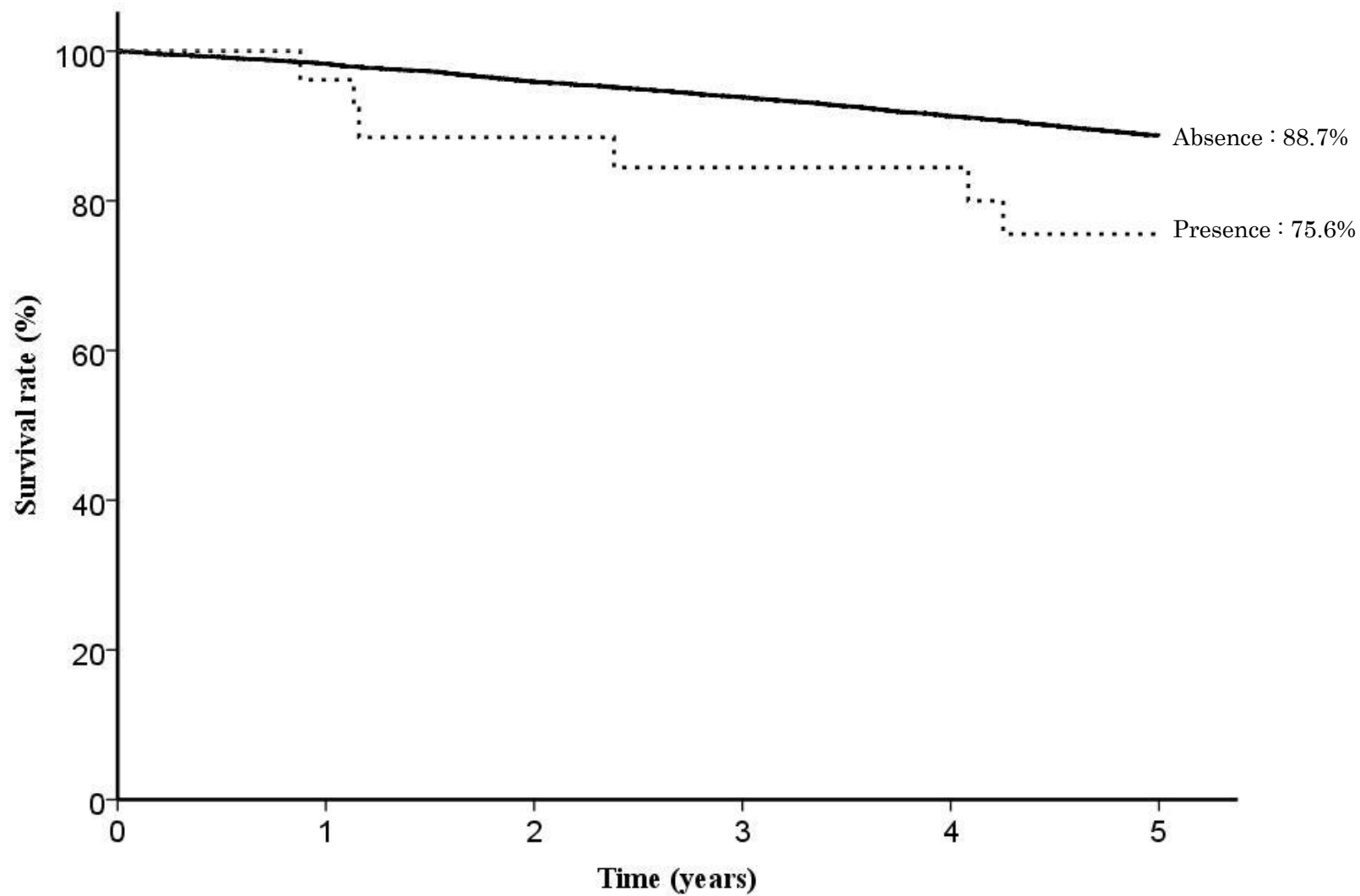


Fig. 12. Five year survival rates stratified by perforation requiring emergency surgery

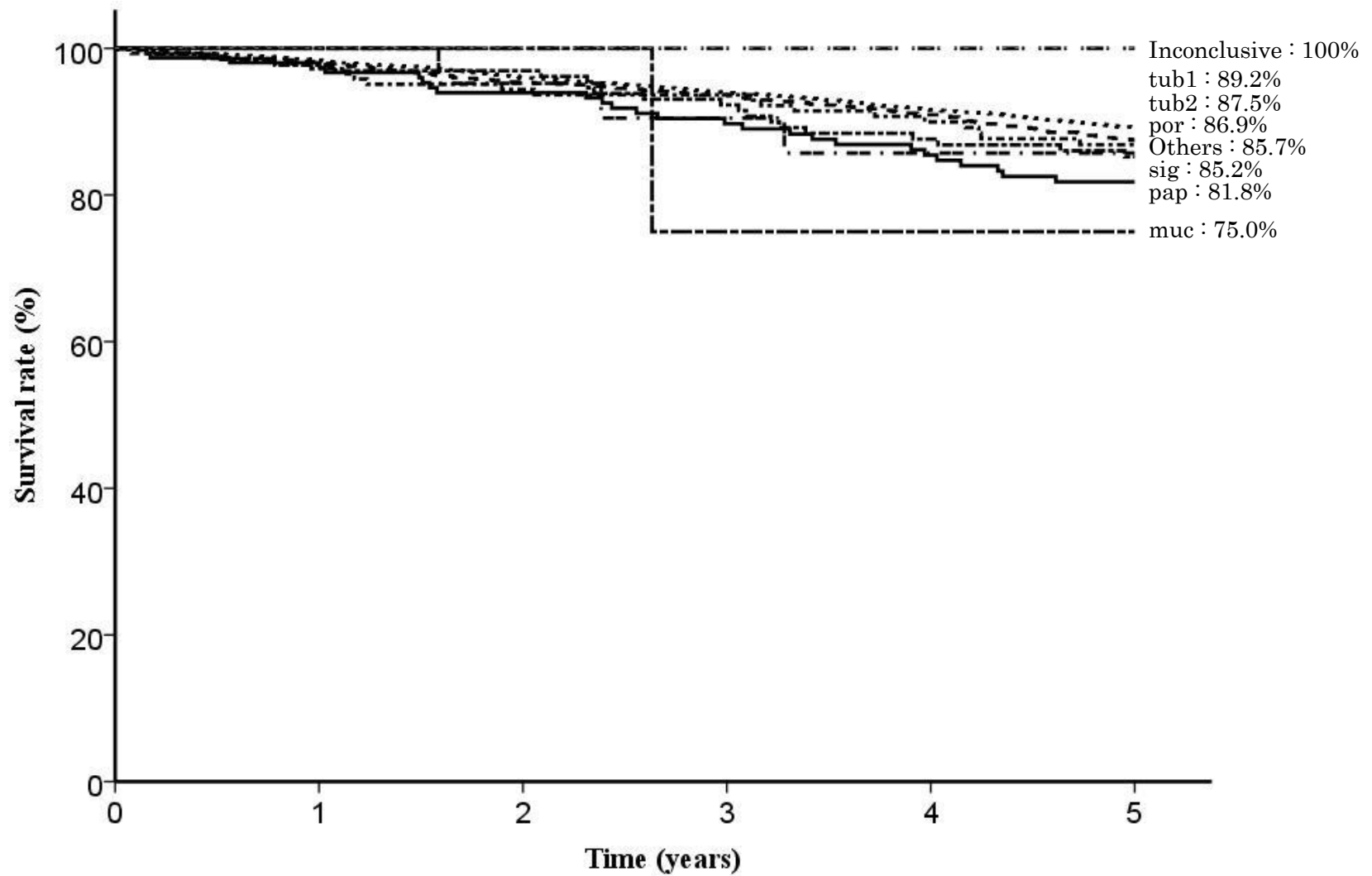


Fig. 13. Five year survival rates stratified by histological type

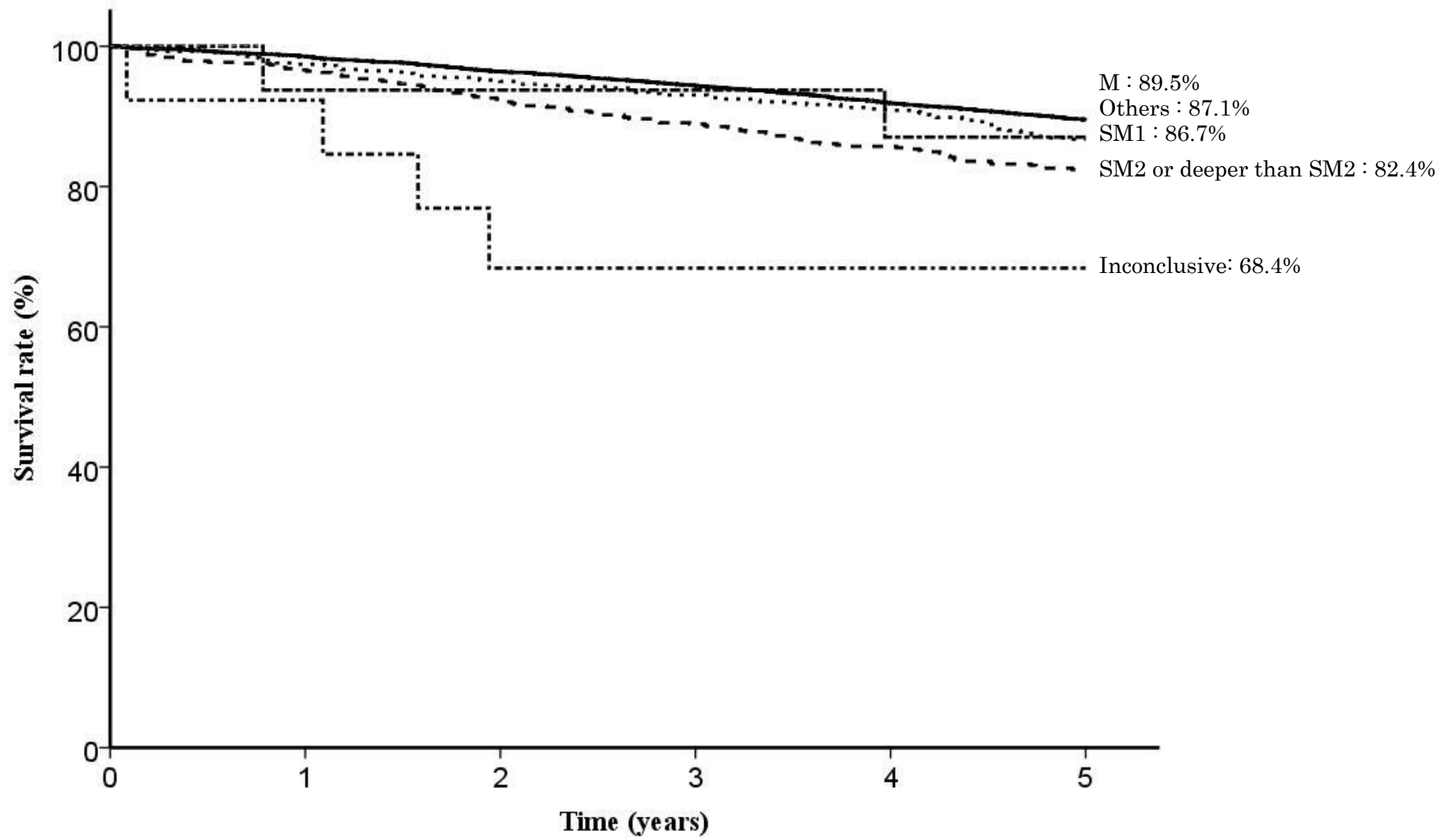


Fig. 14. Five year survival rates stratified by depth of tumor invasion

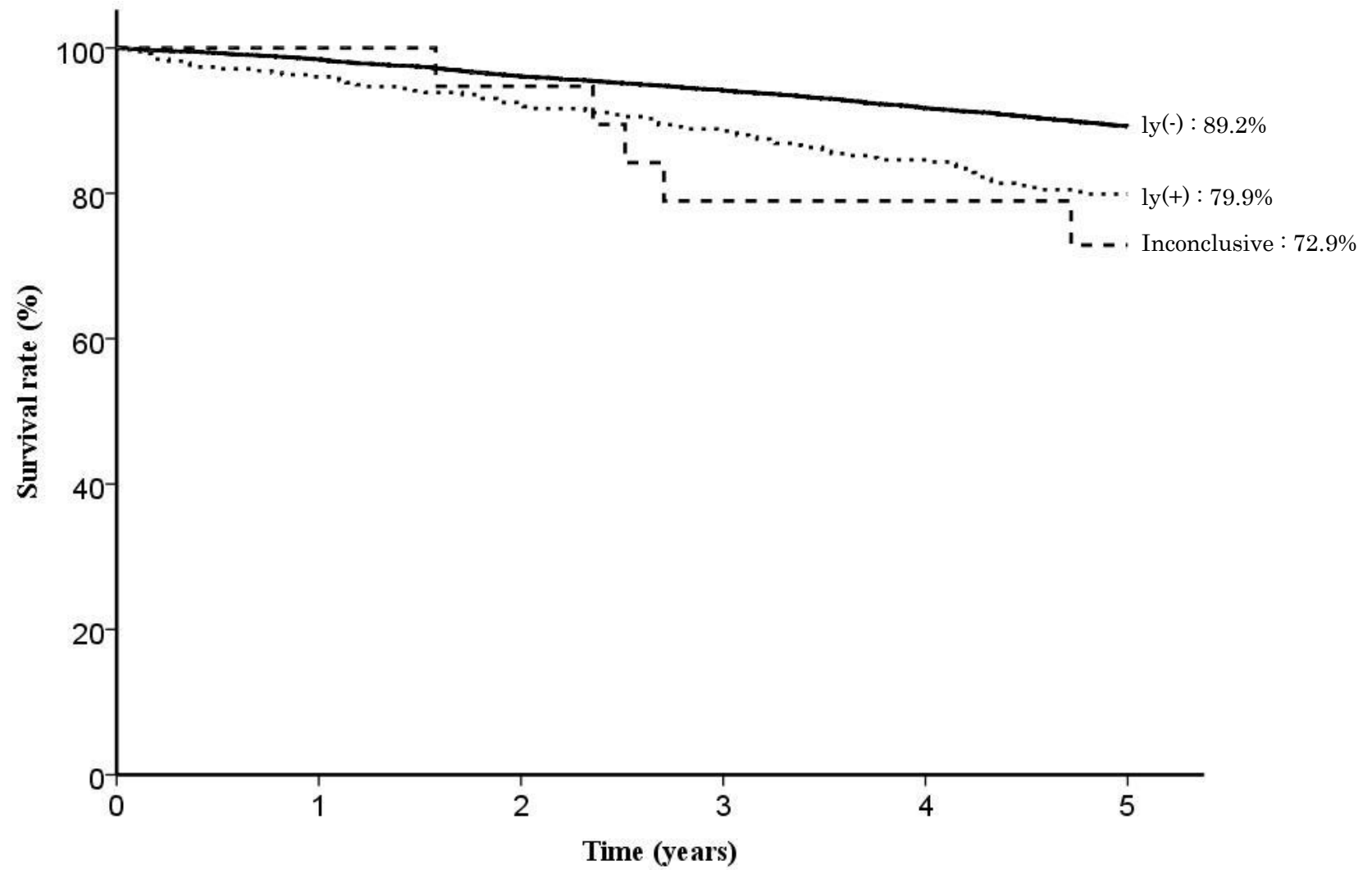


Fig. 15. Five year survival rates stratified by lymphatic invasion

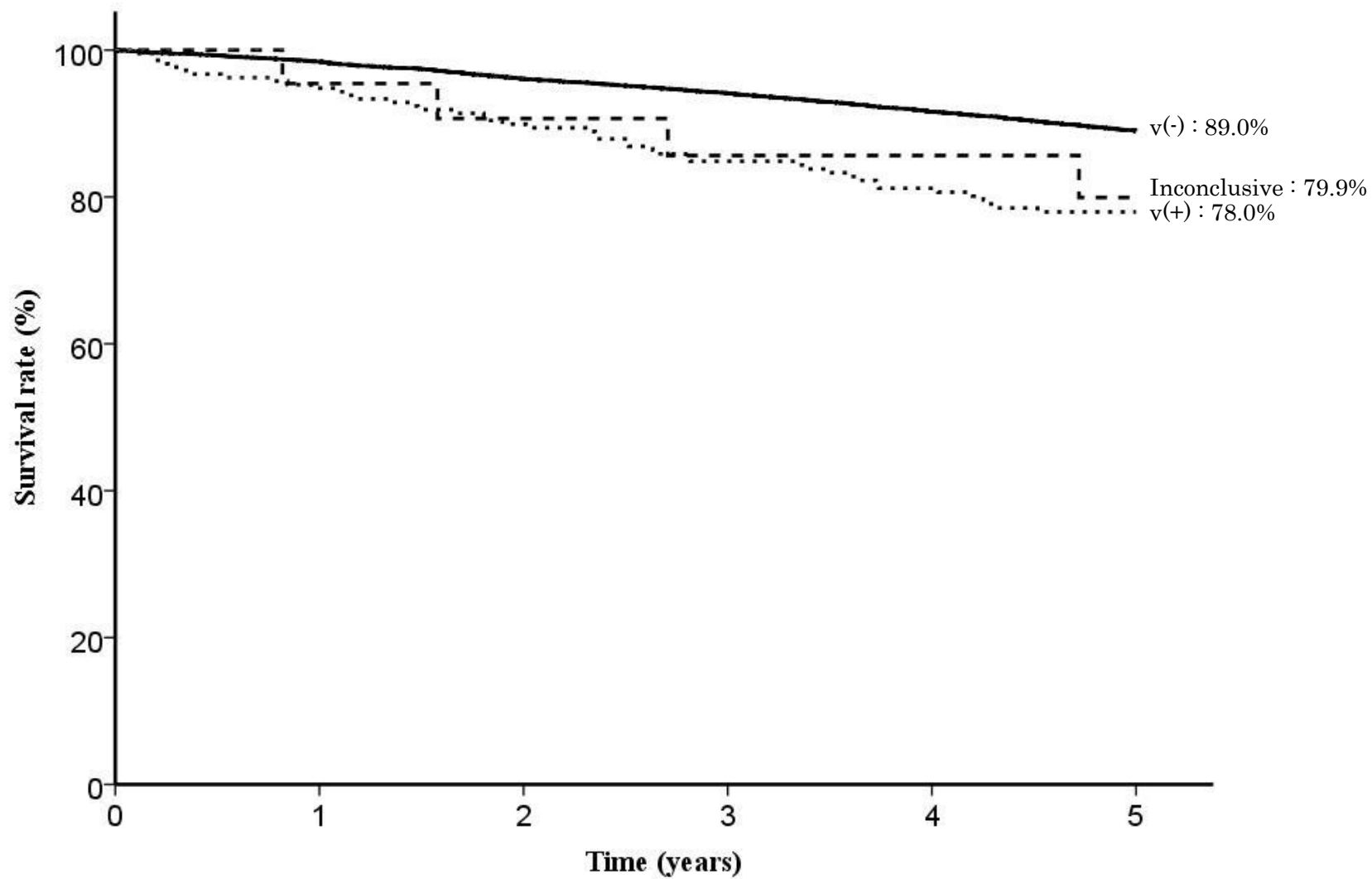


Fig. 16. Five year survival rates stratified by venous invasion

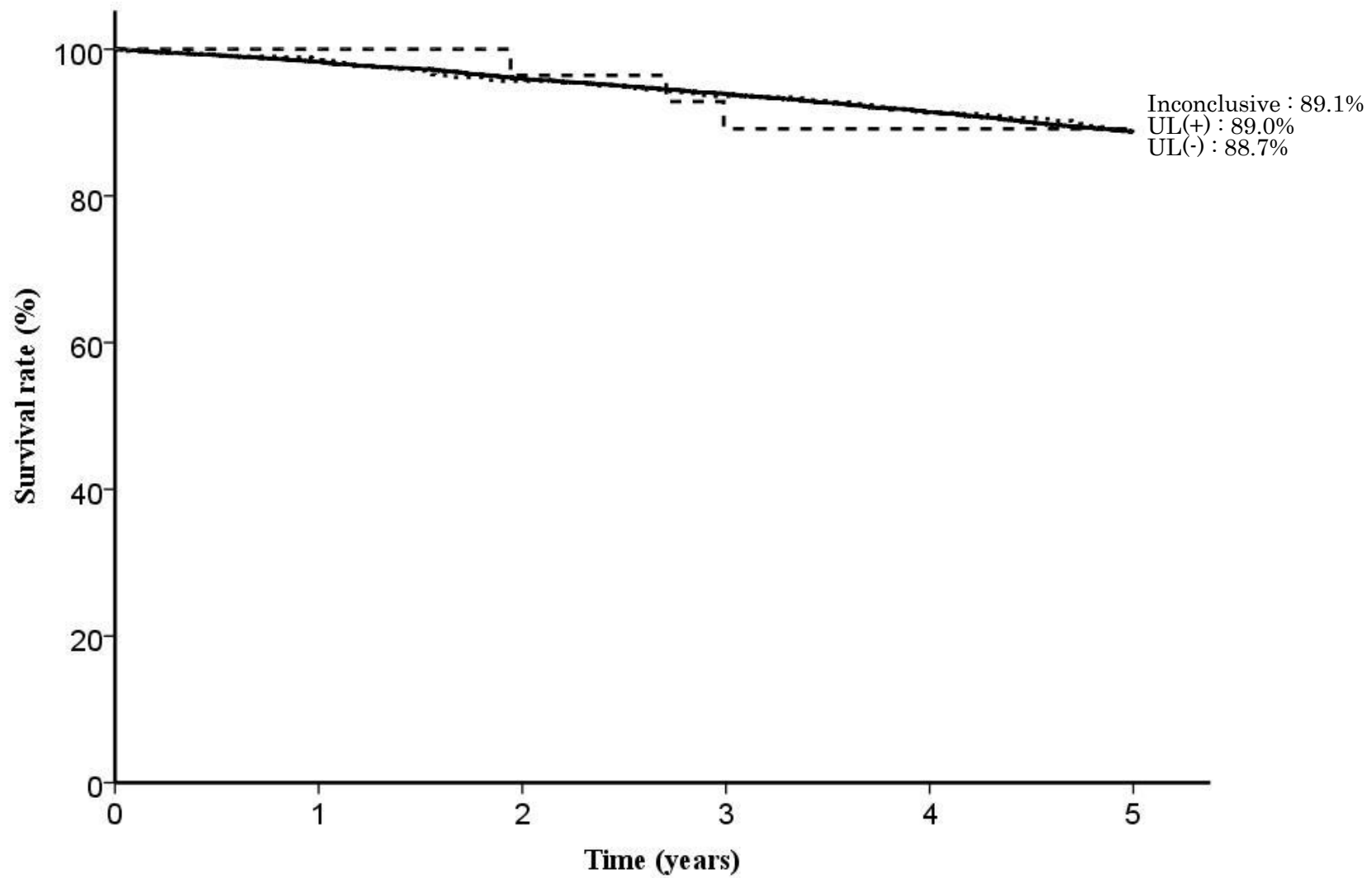


Fig. 17. Five year survival rates stratified by UL

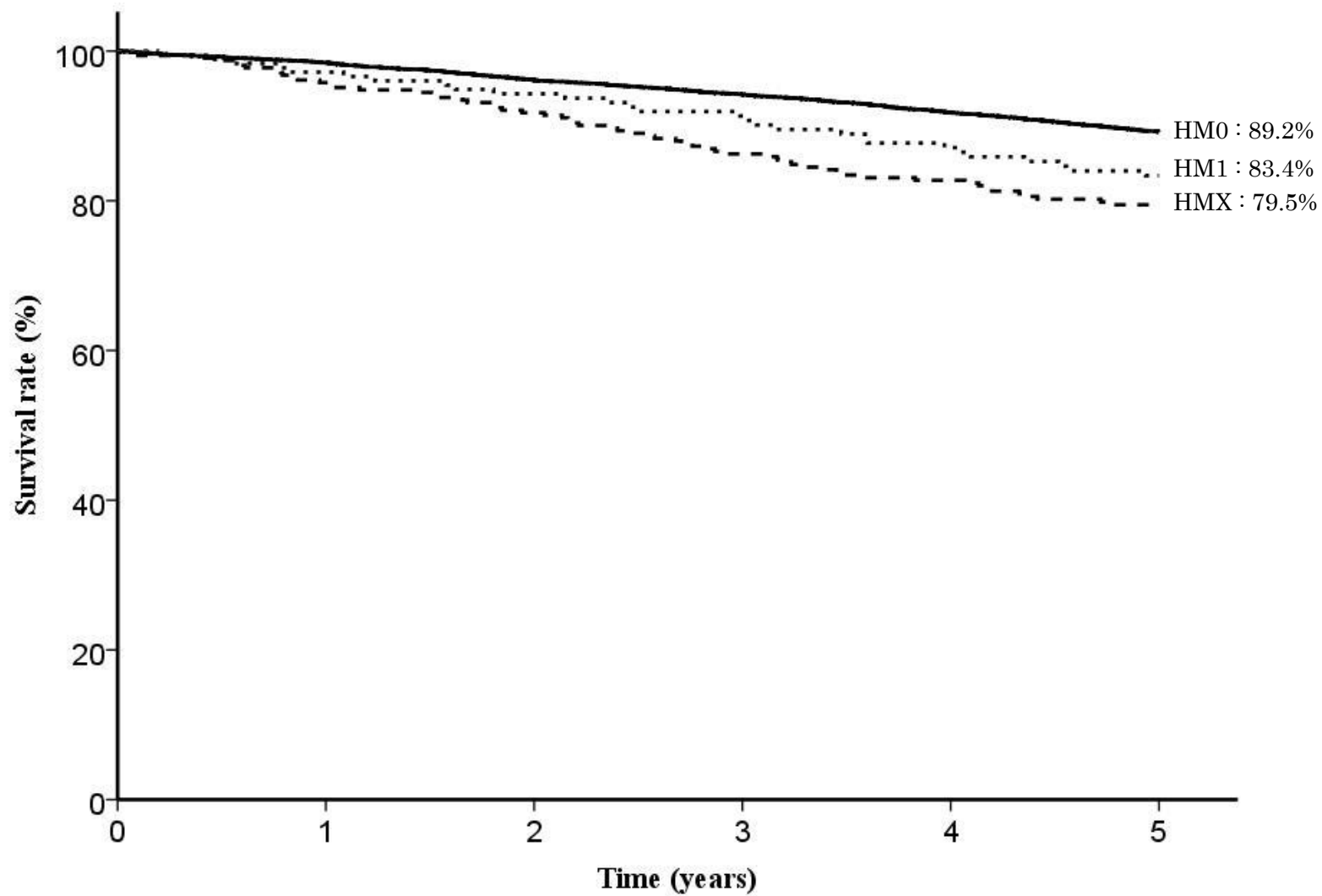


Fig. 18. Five year survival rates stratified by horizontal margin

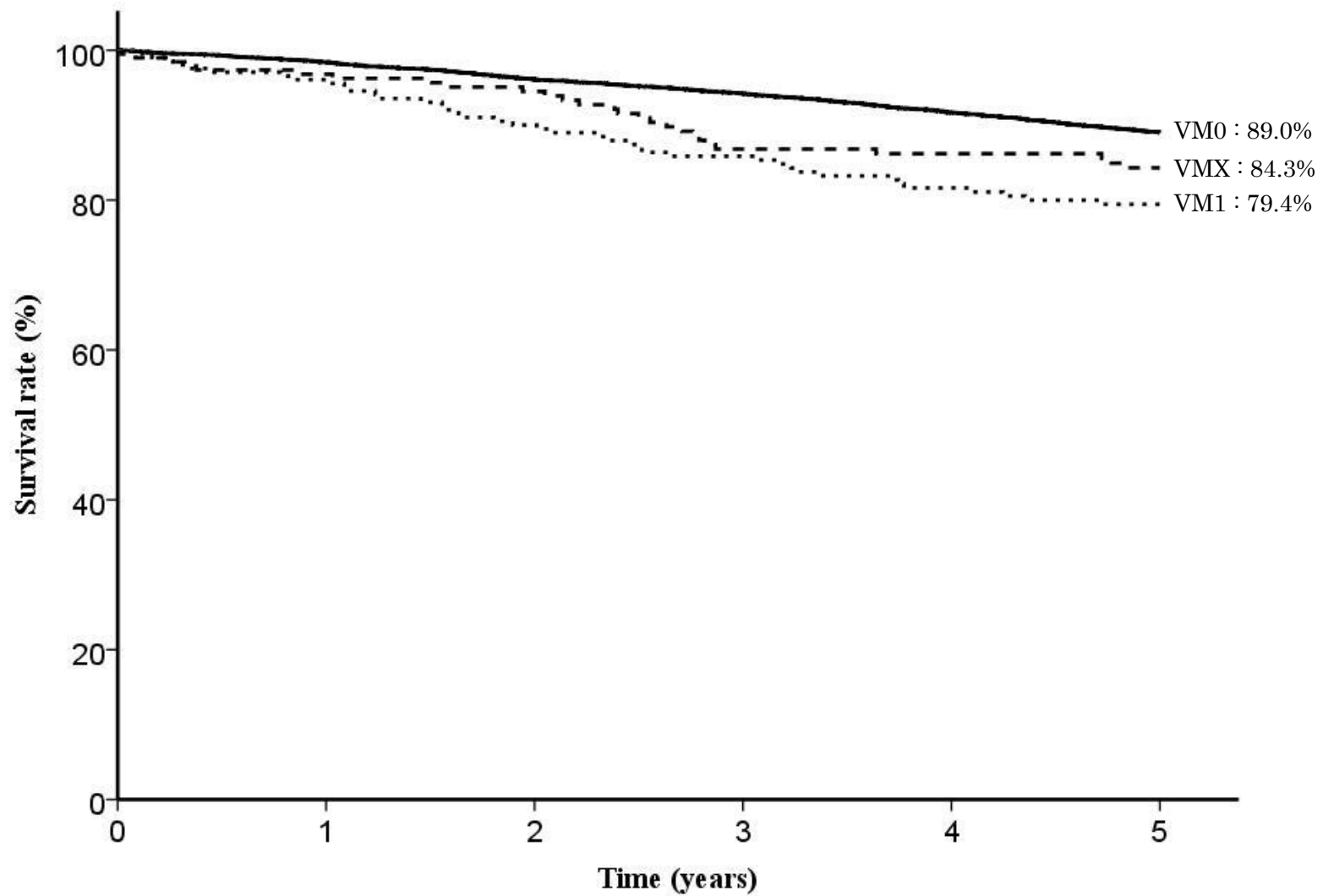


Fig. 19. Five year survival rates stratified by vertical margin

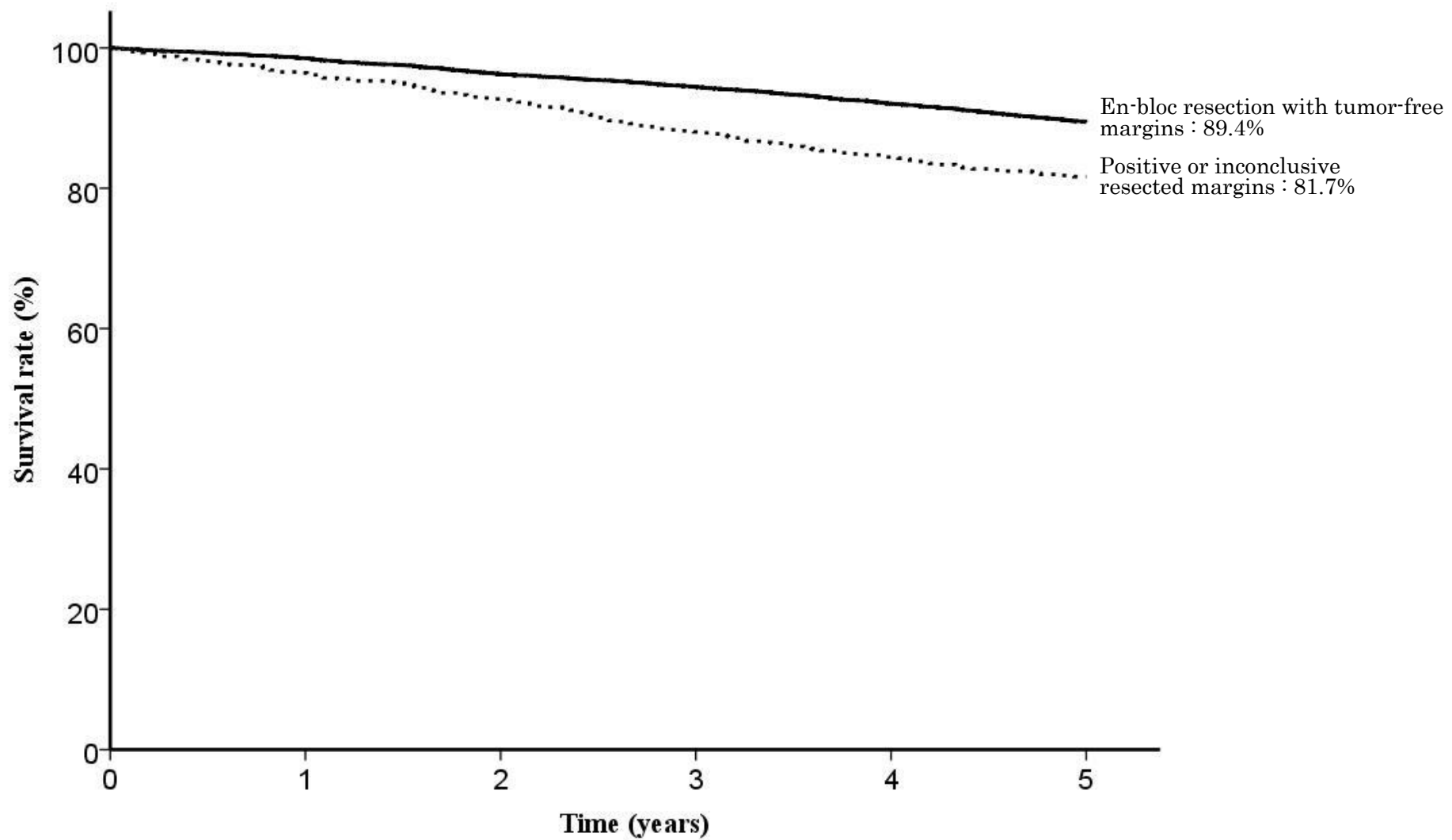


Fig. 20. Five year survival rates stratified by en-bloc resection with tumor-free margins

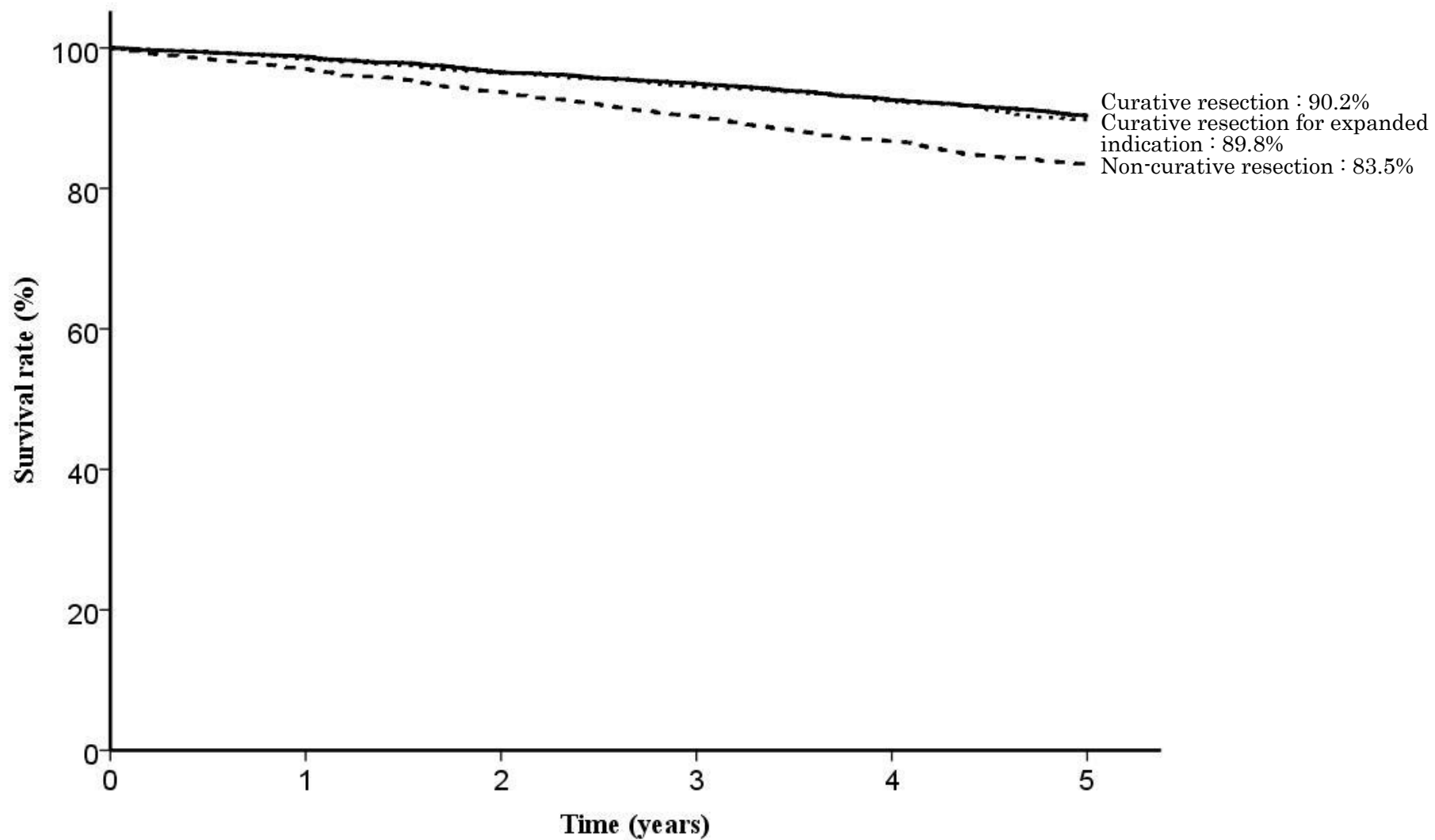


Fig. 21. Five year survival rates stratified by curability

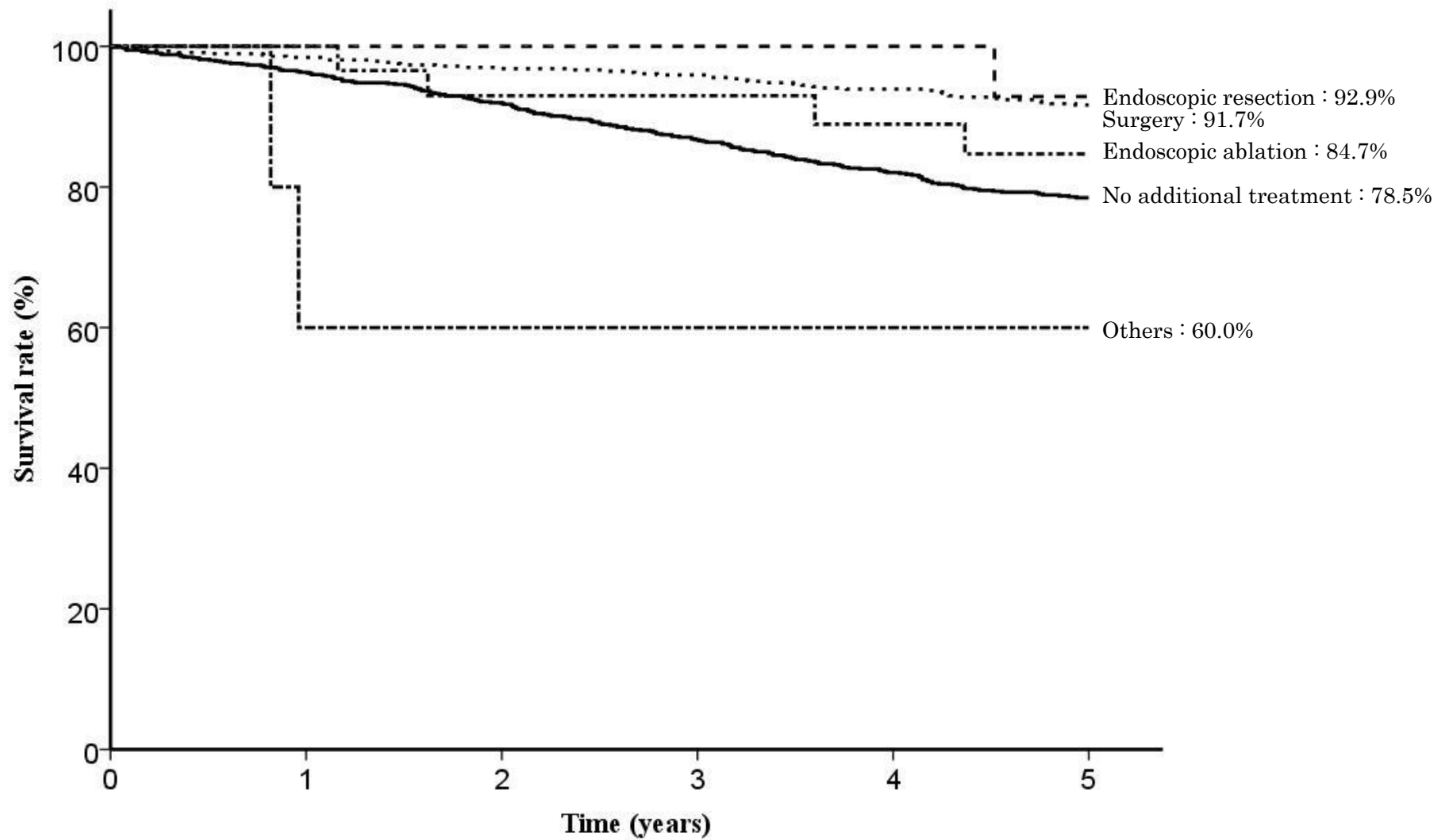


Fig. 22. Five year survival rates stratified by subsequent treatment for non-curative resection

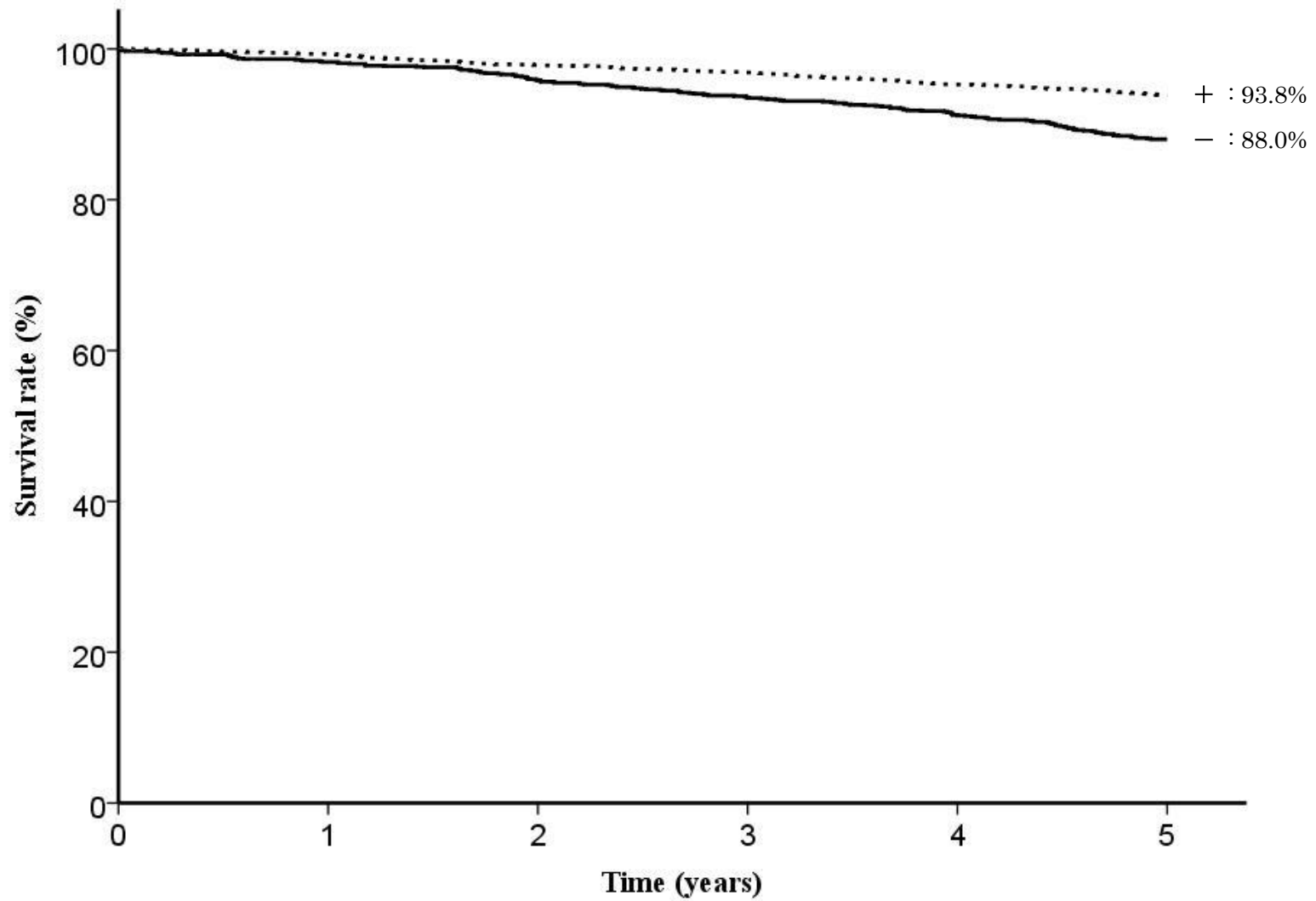


Fig. 23. Five year survival rates stratified by *H. pylori* infection

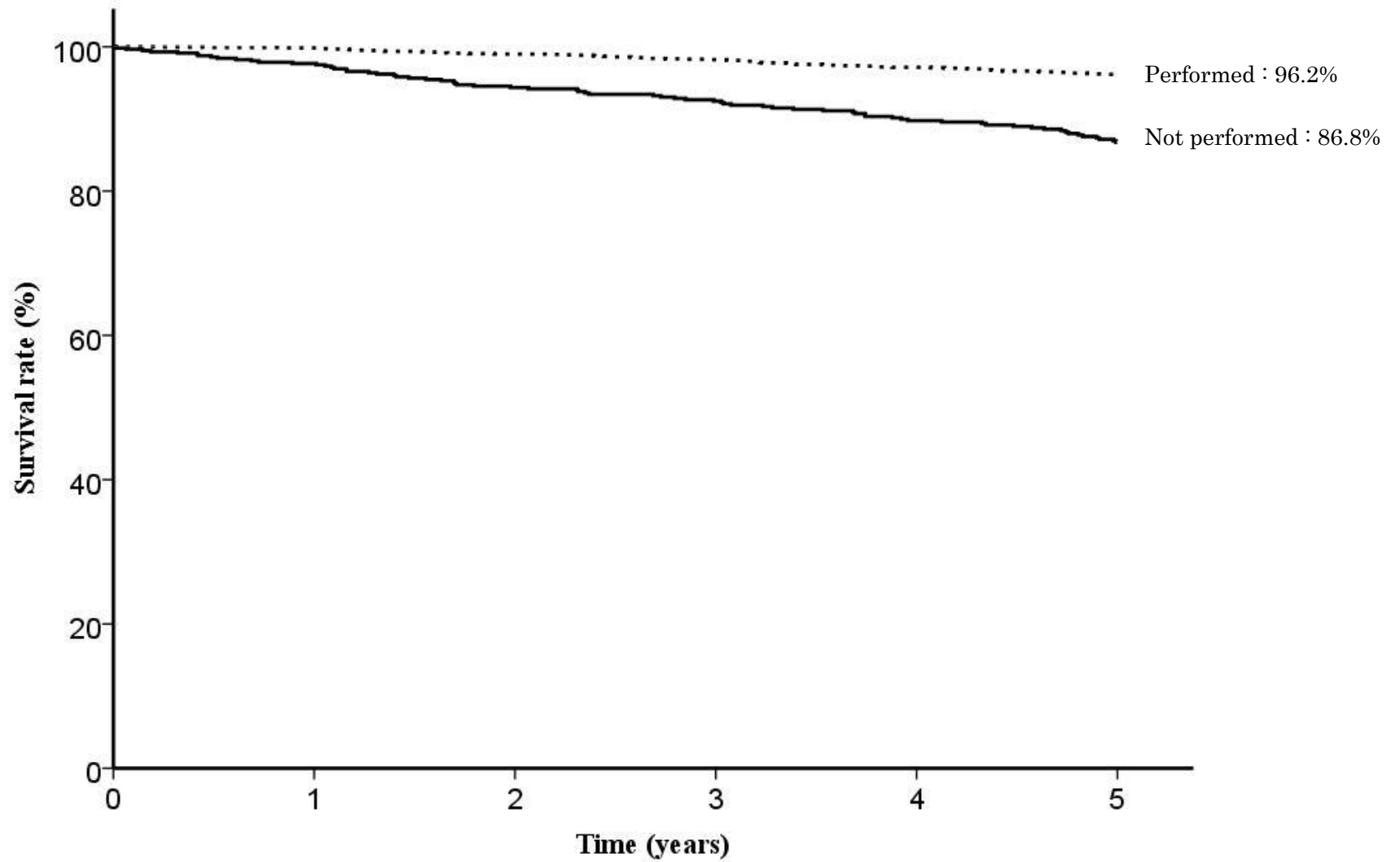


Fig. 24. Five year survival rates stratified by Eradication therapy
in H. pylori - positive cases

Table1. EMR/ESD

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
EMR/ESD	7,242	11	1,268	98.3	95.9	93.8	91.2	88.6	0.4	5,238	12	2	1	1	9	0	230	300	181

Table2. Age

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
-39	10	0	2	100.0	100.0	100.0	100.0	100.0		8	0	0	0	0	0	0	0	0	0
40-59	691	1	100	99.6	98.0	97.1	96.2	95.6	0.8	563	1	0	0	1	0	0	14	9	3
60-79	5,236	4	828	98.5	96.4	94.7	92.6	90.6	0.4	3,964	8	1	1	0	6	0	161	166	101
80-	1,305	6	338	96.6	92.3	87.9	82.1	75.4	1.3	703	3	1	0	0	3	0	55	125	77

Table3. Sex

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Male	5,564	9	927	98.1	95.2	93.1	90.5	87.9	0.5	4,033	10	1	1	1	6	0	198	236	151
Female	1,678	2	341	99.0	98.0	96.1	93.7	90.9	0.8	1,205	2	1	0	0	3	0	32	64	30

Table4. Prior endoscopic treatment

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Prior endoscopic treatment (-)	7,084	11	1,236	98.3	95.9	93.8	91.3	88.7	0.4	5,132	11	2	1	1	7	0	225	292	177
Prior endoscopic treatment (+)	151	0	29	99.3	95.7	92.1	89.2	85.3	3.0	102	1	0	0	0	2	0	5	8	4

Table5. Stomach condition

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Normal stomach	6,975	9	1,225	98.3	96.0	93.9	91.4	88.9	0.4	5,057	8	1	1	1	8	0	218	284	172
Remnant stomach	223	1	37	98.2	94.3	92.2	88.6	84.4	2.6	155	3	0	0	0	1	0	9	11	7
Gastric tube	44	1	6	93.2	88.5	81.3	74.1	71.4	7.0	26	1	1	0	0	0	0	3	5	2

Table6. Tumor location

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peri-toneal	liver rec	R	other cancer	other disease	un-known
Upper third	1,264	1	212	98.3	95.8	93.8	91.4	87.8	1.0	914	2	0	0	0	4	0	44	51	37
Middle third	2,880	6	530	98.5	96.1	94.2	92.1	89.9	0.6	2,091	5	2	1	0	4	0	75	115	57
Lower third	3,081	4	522	98.1	95.6	93.3	90.3	87.8	0.6	2,221	5	0	0	1	1	0	111	133	87

Table7. Cross-sectional parts

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peri-toneal	liver rec	R	other cancer	other disease	un-known
Less	3,007	6	551	98.2	95.8	93.6	91.3	88.7	0.6	2,154	5	2	0	1	3	0	96	119	76
Gre	1,381	3	216	98.4	95.7	93.5	90.7	88.5	0.9	1,021	2	0	1	0	1	0	36	68	36
Ant	1,299	1	220	98.1	96.0	93.9	91.2	88.3	0.9	943	3	0	0	0	2	0	60	44	27
Post	1,515	1	270	98.6	96.2	94.3	92.0	89.2	0.8	1,099	1	0	0	0	2	0	37	66	40

Table8. Macroscopic type

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peri-toneal	liver rec	R	other cancer	other disease	un-known
Depressed type	3,967	6	658	98.6	96.6	94.6	92.4	90.1	0.5	2,957	3	1	1	1	5	0	118	127	96
Elevated type	2,632	3	495	98.0	95.1	92.8	89.8	86.6	0.7	1,826	6	1	0	0	3	0	91	140	70
Mixed type	608	2	102	97.8	94.5	92.2	90.1	87.4	1.4	437	3	0	0	0	1	0	18	33	14
Others	14	0	6	100.0	88.9	88.9	88.9	77.8	13.9	6	0	0	0	0	0	0	1	0	1

Table9. Method of endoscopic resection

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peri-toneal	liver rec	R	other cancer	other disease	un-known
ESD	7,067	11	1,239	98.4	95.9	93.9	91.5	88.9	0.4	5,128	11	2	1	1	9	0	226	279	171
EMR	168	0	28	96.2	92.3	86.9	81.5	76.6	3.5	105	1	0	0	0	0	0	4	20	10
Others	6	0	1	100.0	100.0	100.0	83.3	83.3	15.2	4	0	0	0	0	0	0	0	1	0

Table10. En-bloc or piecemeal resection

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peri-toneal	liver rec	R	other cancer	other disease	un-known
En-bloc resection	7,092	10	1,237	98.4	96.0	93.9	91.5	88.9	0.4	5,150	11	2	1	1	7	0	225	286	172
Piecemeal resection	145	1	29	93.3	88.5	84.5	79.5	75.3	3.9	85	1	0	0	0	2	0	5	14	9

Table11. Bleeding requiring emergency surgery

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Presence	52	0	9	97.9	95.8	91.3	89.1	80.0	6.0	34	0	0	0	0	0	0	6	2	1
Absence	7,189	11	1,259	98.3	95.9	93.8	91.2	88.7	0.4	5,203	12	2	1	1	9	0	224	298	180

Table12. Perforation requiring emergency surgery

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Presence	27	0	5	96.2	88.5	84.4	84.4	75.6	8.7	16	0	0	0	0	0	0	2	2	2
Absence	7,206	11	1,262	98.3	95.9	93.8	91.3	88.7	0.4	5,216	12	2	1	1	9	0	226	298	179

Table13. Histological type

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
pap	161	0	28	98.0	94.0	89.7	85.4	81.8	3.2	107	0	0	0	0	1	0	11	11	3
tub1	5,638	10	1,025	98.4	96.0	93.9	91.6	89.2	0.4	4,071	7	1	0	1	3	0	165	230	135
tub2	1,114	0	173	98.1	95.4	93.6	90.9	87.5	1.0	815	3	0	1	0	1	0	43	44	34
por	147	1	24	97.2	94.4	93.7	90.0	86.9	2.9	105	1	0	0	0	3	0	3	6	5
sig	134	0	11	97.7	96.9	92.3	87.6	85.2	3.1	104	1	1	0	0	1	0	7	7	2
muc	4	0	0	100.0	100.0	75.0	75.0	75.0	21.7	3	0	0	0	0	0	0	0	0	1
Others	24	0	4	100.0	95.2	90.5	85.7	85.7	7.6	17	0	0	0	0	0	0	1	1	1
Inconclusive	4	0	1	100.0	100.0	100.0	100.0	100.0		3	0	0	0	0	0	0	0	0	0

Table14. Depth of tumor invasion

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
M	6,031	9	1,082	98.6	96.4	94.4	91.9	89.5	0.4	4,386	5	2	0	0	2	0	179	235	140
SM1	570	1	91	97.4	95.0	93.1	90.9	86.7	1.5	411	1	0	0	0	1	0	23	23	20
SM2 or deeper than SM2	584	1	81	96.6	92.2	88.9	85.7	82.4	1.6	408	5	0	1	1	6	0	27	37	18
Others	17	0	5	93.8	93.8	93.8	87.1	87.1	8.6	10	0	0	0	0	0	0	0	0	2
Inconclusive	13	0	3	92.3	68.4	68.4	68.4	68.4	13.1	6	0	0	0	0	0	0	0	4	0

Table15. Lymphatic invasion(ly)

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
ly(-)	6,795	9	1,200	98.4	96.1	94.2	91.7	89.2	0.4	4,941	9	2	0	0	4	0	209	265	165
ly(+)	394	2	59	96.0	92.2	88.6	84.6	79.9	2.1	263	3	0	1	0	5	0	21	30	12
Inconclusive	20	0	3	100.0	94.7	78.9	78.9	72.9	10.4	12	0	0	0	1	0	0	0	2	2

Table16. Venous invasion(v)

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
v(-)	6,969	11	1,219	98.4	96.1	94.1	91.6	89.0	0.4	5,066	8	2	0	0	5	0	216	283	170
v(+)	219	0	37	94.8	89.9	84.8	81.2	78.0	2.9	138	4	0	1	1	4	0	14	12	8
Inconclusive	24	0	7	95.5	90.7	85.6	85.6	79.9	9.1	13	0	0	0	0	0	0	0	2	2

Table17. UL

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
UL(-)	6,211	9	1,095	98.3	96.0	93.9	91.4	88.7	0.4	4,492	8	2	1	0	7	0	199	262	145
UL(+)	852	2	141	98.7	95.7	93.6	91.3	89.0	1.1	626	4	0	0	0	2	0	23	32	24
Inconclusive	31	0	7	100.0	96.4	89.1	89.1	89.1	5.9	21	0	0	0	0	0	0	1	1	1

Table18. Horizontal margin

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
HM0	6,725	10	1,182	98.5	96.1	94.2	91.8	89.2	0.4	4,895	10	0	1	0	6	0	212	264	155
HM1	182	0	24	97.2	94.3	91.3	87.1	83.4	2.9	130	0	2	0	1	2	0	5	11	7
HMX	333	1	62	95.8	91.8	86.3	82.7	79.5	2.4	211	2	0	0	0	1	0	13	25	19

Table19. Vertical margin

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
VM0	6,828	10	1,197	98.4	96.1	94.2	91.7	89.0	0.4	4,962	9	2	1	1	5	0	218	271	162
VM1	213	0	30	96.1	90.0	85.9	81.6	79.4	2.9	143	2	0	0	0	4	0	9	18	7
VMX	200	1	41	96.8	94.5	86.8	86.2	84.3	2.8	132	1	0	0	0	0	0	3	11	12

Table20. En-bloc resection with tumor-free margins

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
En-bloc resection with tumor-free margins	6,478	9	1,143	98.5	96.2	94.4	92.0	89.4	0.4	4,725	8	0	1	0	4	0	205	248	144
Positive or inconclusive resected margins	764	2	125	96.4	92.7	88.0	84.4	81.7	1.5	513	4	2	0	1	5	0	25	52	37

Table21. Curability

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Curative resection	3,707	2	677	98.8	96.5	94.9	92.6	90.2	0.5	2,710	4	0	0	0	0	0	113	124	79
Curative resection for expanded indication	1,936	4	332	98.5	96.4	94.5	92.4	89.8	0.7	1,427	0	0	0	0	2	0	57	75	43
Non-curative resection	1,599	5	259	97.0	93.7	90.3	86.7	83.5	1.0	1,101	8	2	1	1	7	0	60	101	59

Table22. Subsequent treatment for non-curative resection

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
No additional treatment	945	4	184	96.3	91.9	86.7	82.1	78.5	1.4	581	4	2	1	0	7	0	42	80	44
Surgery	582	1	59	98.4	96.8	95.9	93.9	91.7	1.2	477	2	0	0	1	0	0	15	18	10
Endoscopic resection	16	0	2	100.0	100.0	100.0	100.0	92.9	6.9	13	0	0	0	0	0	0	1	0	0
Endoscopic ablation	32	0	8	100.0	93.0	93.0	88.9	84.7	7.1	20	0	0	0	0	0	0	1	1	2
Others	6	0	2	60.0	60.0	60.0	60.0	60.0	21.9	2	1	0	0	0	0	0	0	1	0

Table23. *H. pylori* infection

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
-	1,366	4	204	98.2	95.8	93.6	91.2	88.0	0.9	1,014	2	1	0	0	3	0	50	59	33
+	2,781	2	407	99.3	97.8	96.9	95.3	93.8	0.5	2,217	4	0	0	0	1	0	55	65	32

Table24. Eradication therapy in *H. pylori*- positive cases

categories	total number	direct death	lost f.u.	1yr(%)	2yr(%)	3yr(%)	4yr(%)	5yr(%)	S.E.at 5yr	alive	primary disease	local rec.	lymph node.	peritoneal	liver rec	R	other cancer	other disease	un-known
Not performed	578	2	82	97.7	94.4	92.5	89.8	86.8	1.5	426	1	0	0	0	0	0	24	32	13
Performed	1,954	0	257	99.8	99.0	98.2	97.2	96.2	0.5	1,628	3	0	0	0	1	0	25	26	14