

胃癌学会全国登録解析結果報告 —2009年EMR/ESD症例—

1. 登録施設 計122施設

北海道・東北

独立行政法人国立病院機構・北海道がんセンター 市立函館病院 日鋼記念病院 KKR札幌医療センター斗南病院 北海道大学病院
KKR札幌医療センター 恵佑会札幌病院 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 岩手県立中央病院
大崎市民病院 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 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 福井大学病院 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 上尾中央総合病院 栃木県立がんセンター 獨協医科大学病院 自治医科大学附属病院
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 柏厚生総合病院 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 独立行政法人国立病院機構 横浜医療センター 国立がん研究センター中央病院
東京慈恵会医科大学 順天堂大学医学部附属順天堂医院 日本医科大学 東京大学医学部附属病院 東京女子医科大学東医療センター
東京都立墨東病院 がん研有明病院 国立病院機構・東京医療センター 東邦大学医療センター大橋病院 東京医科大学病院 中野総合病院
杏林大学医学部附属病院 公立昭和病院 社会医療法人財団大和会東大和病院 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 半田市立半田病院 三重大学医学部附属病院
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 大阪府立成人病センター
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 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
社会医療法人財団聖フランシスコ会・姫路聖マリア病院 兵庫県立がんセンター 加古川中央市民病院 神戸大学医学部附属病院 赤穂市民病院

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 国立病院機構・福山医療センター 広島大学病院 広島赤十字・原爆病院 広島記念病院
広島市立広島市民病院 県立広島病院 J A 広島総合病院 一般財団法人防府消化器病センター防府胃腸病院 徳島赤十字病院

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 **6,710 例**

3. 対象症例

登録対象は2009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	70.6	±9.229
	-39	18	(0.3%)
	40-59	792	(11.8%)
	60-79	4,761	(71.0%)
	80-	1,139	(17.0%)
Sex	Male	5,015	(74.7%)
	Female	1,695	(25.3%)
Prior endoscopic treatment	-	6,525	(97.2%)
	+	185	(2.8%)
Stomach condition	Normal stomach	6,444	(96.0%)
	Remnant stomach	206	(3.1%)
	Gastric tube	60	(0.9%)
Tumor location	U	1,135	(16.9%)
	M	2,650	(39.5%)
	L	2,917	(43.5%)
	Data unavailable	8	(0.1%)
Cross-sectional parts	Less	2,759	(41.1%)
	Gre	1,339	(20.0%)
	Ant	1,185	(17.7%)
	Post	1,423	(21.2%)
	Data unavailable	4	(0.1%)
Macroscopic type	Depressed type	3,545	(52.8%)
	Elevated type	2,488	(37.1%)
	Mixed type	650	(9.7%)
	Others	26	(0.4%)
	Data unavailable	1	(0.0%)
Method of endoscopic resection	ESD	6,502	(96.9%)
	EMR	206	(3.1%)
	Others	2	(0.0%)
En-bloc or piecemeal resection	En-bloc resection	6,545	(97.5%)
	Piecemeal resection	164	(2.4%)
	Data unavailable	1	(0.0%)
Bleeding requiring emergency surgery	Presence	26	(0.4%)
	Absence	6,684	(99.6%)
Perforation requiring emergency surgery	Presence	17	(0.3%)
	Absence	6,693	(99.7%)
Histological type	pap	178	(2.7%)
	tub1	5,272	(78.6%)
	tub2	974	(14.5%)
	por	118	(1.8%)
	sig	131	(2.0%)
	muc	4	(0.1%)
	Others	25	(0.4%)
	Inconclusive	8	(0.1%)

Depth of tumor invasion	M	5,647	(84.2%)
	SM1	520	(7.7%)
	SM2 or deeper than SM2	510	(7.6%)
	Others	25	(0.4%)
	Inconclusive	8	(0.1%)
Lymphatic invasion(ly)	-	6,360	(94.8%)
	+	324	(4.8%)
	Inconclusive	26	(0.4%)
Venous invasion(v)	-	6,514	(97.1%)
	+	170	(2.5%)
	Inconclusive	26	(0.4%)
UL	-	5,743	(85.6%)
	+	822	(12.3%)
	Inconclusive	145	(2.2%)
Horizontal margin	HM0	6,224	(92.8%)
	HM1	189	(2.8%)
	HMX	297	(4.4%)
Vertical margin	VM0	6,403	(95.4%)
	VM1	151	(2.3%)
	VMX	156	(2.3%)
En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	6,055	(90.2%)
	Positive or inconclusive resected margins	655	(9.8%)
Curability	Curative resection	3,380	(50.4%)
	Curative resection for expanded indication	1,980	(29.5%)
	Non-curative resection	1,350	(20.1%)
Subsequent treatment for non-curative resection	No additional treatment	791	(58.6%)
	Surgery	474	(35.1%)
	Endoscopic resection	21	(1.6%)
	Endoscopic ablation	46	(3.4%)
	Others	18	(1.3%)
<i>H. pylori</i> infection	-	1,104	(16.5%)
	+	2,495	(37.2%)
	Inconclusive	2,816	(42.0%)
	Others	295	(4.4%)
Eradication therapy in <i>H. pylori</i> -positive cases	Not performed	436	(17.5%)
	Performed	1,672	(67.0%)
	Inconclusive	387	(15.5%)
Total		6,710	(100.0%)

Methods of endoscopic resection		ESD	EMR
Age	mean±SD	70.5 ±9.236	72.5 ±8.806
	-39	17 (0.3%)	1 (0.5%)
	40-59	779 (12.0%)	12 (5.8%)
	60-79	4,608 (70.9%)	152 (73.8%)
	80-	1,098 (16.9%)	41 (19.9%)
Sex	Male	4,863 (74.8%)	151 (73.3%)
	Female	1,639 (25.2%)	55 (26.7%)
Prior endoscopic treatment	-	6,329 (97.3%)	194 (94.2%)
	+	173 (2.7%)	12 (5.8%)
Stomach condition	Normal stomach	6,254 (96.2%)	188 (91.3%)
	Remnant stomach	191 (2.9%)	15 (7.3%)
	Gastric tube	57 (0.9%)	3 (1.5%)
Tumor location	U	1,089 (16.7%)	46 (22.3%)
	M	2,581 (39.7%)	69 (33.5%)
	L	2,827 (43.5%)	88 (42.7%)
	Data unavailable	5 (0.1%)	3 (1.5%)
Cross-sectional parts	Less	2,688 (41.3%)	71 (34.5%)
	Gre	1,273 (19.6%)	65 (31.6%)
	Ant	1,154 (17.7%)	31 (15.0%)
	Post	1,383 (21.3%)	39 (18.9%)
	Data unavailable	4 (0.1%)	0 (0.0%)
Macroscopic type	Depressed type	3,489 (53.7%)	56 (27.2%)
	Elevated type	2,355 (36.2%)	131 (63.6%)
	Mixed type	635 (9.8%)	15 (7.3%)
	Others	22 (0.3%)	4 (1.9%)
	Data unavailable	1 (0.0%)	0 (0.0%)
En-bloc or piecemeal resection	En-bloc resection	6,404 (98.5%)	139 (67.5%)
	Piecemeal resection	97 (1.5%)	67 (32.5%)
	Data unavailable	1 (0.0%)	0 (0.0%)
Bleeding requiring emergency surgery	Presence	26 (0.4%)	0 (0.0%)
	Absence	6,476 (99.6%)	206 (100.0%)
Perforation requiring emergency surgery	Presence	17 (0.3%)	0 (0.0%)
	Absence	6,485 (99.7%)	206 (100.0%)
Histological type	pap	163 (2.5%)	15 (7.3%)
	tub1	5,106 (78.5%)	164 (79.6%)
	tub2	956 (14.7%)	18 (8.7%)
	por	115 (1.8%)	3 (1.5%)
	sig	130 (2.0%)	1 (0.5%)
	muc	3 (0.0%)	1 (0.5%)
	Others	23 (0.4%)	2 (1.0%)
	Inconclusive	6 (0.1%)	2 (1.0%)

		ESD	EMR
Depth of tumor invasion	M	5,466 (84.1%)	179 (86.9%)
	SM1	510 (7.8%)	10 (4.9%)
	SM2 or deeper than SM2	504 (7.8%)	6 (2.9%)
	Others	15 (0.2%)	10 (4.9%)
	Inconclusive	7 (0.1%)	1 (0.5%)
Lymphatic invasion(ly)	-	6,162 (94.8%)	196 (95.1%)
	+	322 (5.0%)	2 (1.0%)
	Inconclusive	18 (0.3%)	8 (3.9%)
Venous invasion(v)	-	6,315 (97.1%)	197 (95.6%)
	+	169 (2.6%)	1 (0.5%)
	Inconclusive	18 (0.3%)	8 (3.9%)
UL	-	5,569 (85.7%)	172 (83.5%)
	+	805 (12.4%)	17 (8.3%)
	Inconclusive	128 (2.0%)	17 (8.3%)
Horizontal margin	HM0	6,109 (94.0%)	113 (54.9%)
	HM1	173 (2.7%)	16 (7.8%)
	HMX	220 (3.4%)	77 (37.4%)
Vertical margin	VM0	6,222 (95.7%)	179 (86.9%)
	VM1	144 (2.2%)	7 (3.4%)
	VMX	136 (2.1%)	20 (9.7%)
	En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	5,944 (91.4%)
	Positive or inconclusive resected margins	558 (8.6%)	97 (47.1%)
Curability	Curative resection	3,291 (50.6%)	88 (42.7%)
	Curative resection for expanded indication	1,964 (30.2%)	16 (7.8%)
	Non-curative resection	1,247 (19.2%)	102 (49.5%)
Subsequent treatment for non-curative resection	No additional treatment	705 (56.5%)	85 (83.3%)
	Surgery	468 (37.5%)	6 (5.9%)
	Endoscopic resection	18 (1.4%)	3 (2.9%)
	Endoscopic ablation	38 (3.0%)	8 (7.8%)
	Others	18 (1.4%)	0 (0.0%)
<i>H. pylori</i> infection	-	1,077 (16.6%)	26 (12.6%)
	+	2,449 (37.7%)	46 (22.3%)
	Inconclusive	2,682 (41.2%)	133 (64.6%)
	Others	294 (4.5%)	1 (0.5%)
Eradication therapy in <i>H. pylori</i> -positive cases	Not performed	428 (17.5%)	8 (17.4%)
	Performed	1,638 (66.9%)	34 (73.9%)
	Inconclusive	383 (15.6%)	4 (8.7%)
Total		6,502 (100.0%)	206 (100.0%)

Survival curve of patients

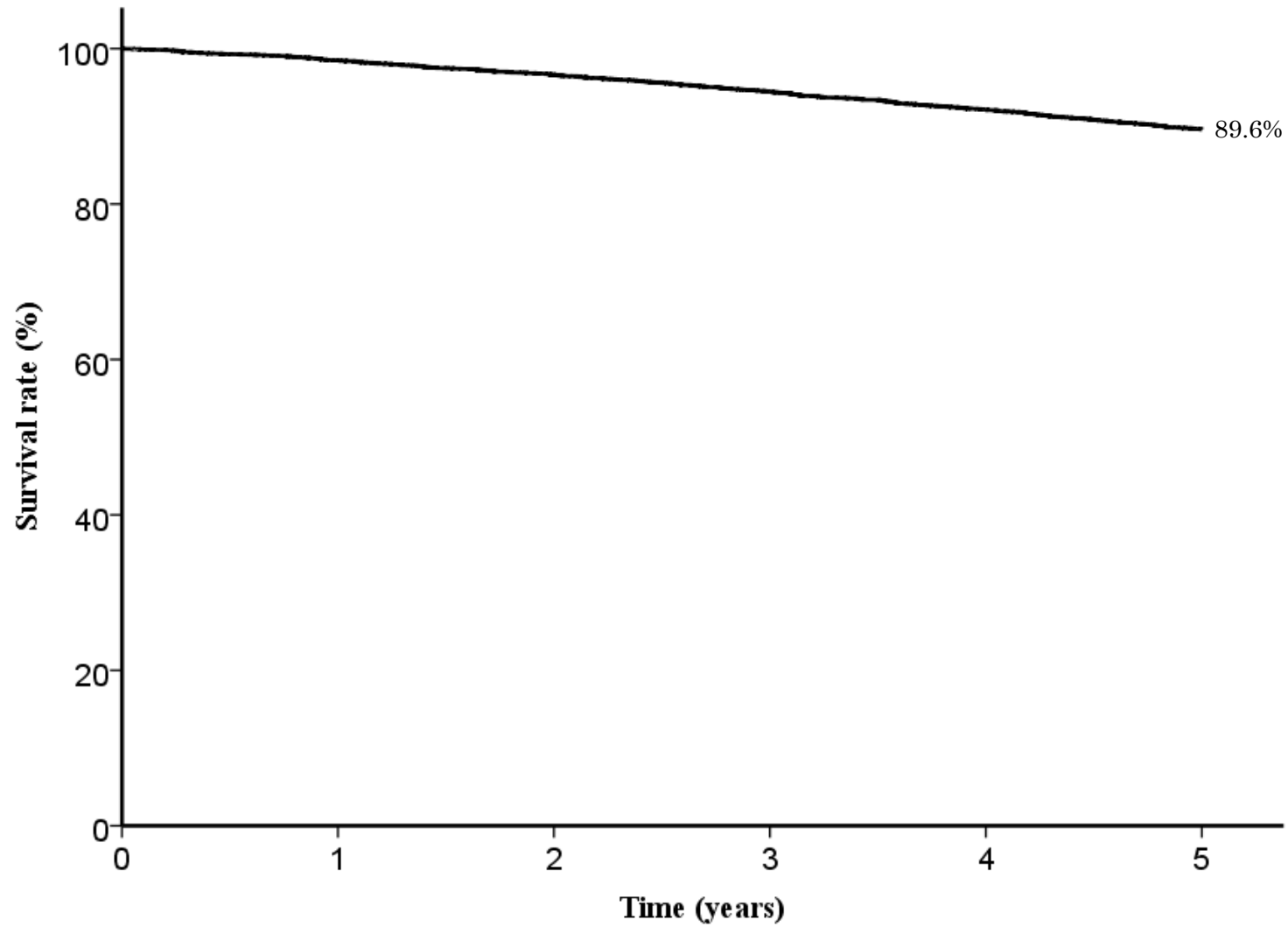


Fig. 1. Five year survival rates for all patients

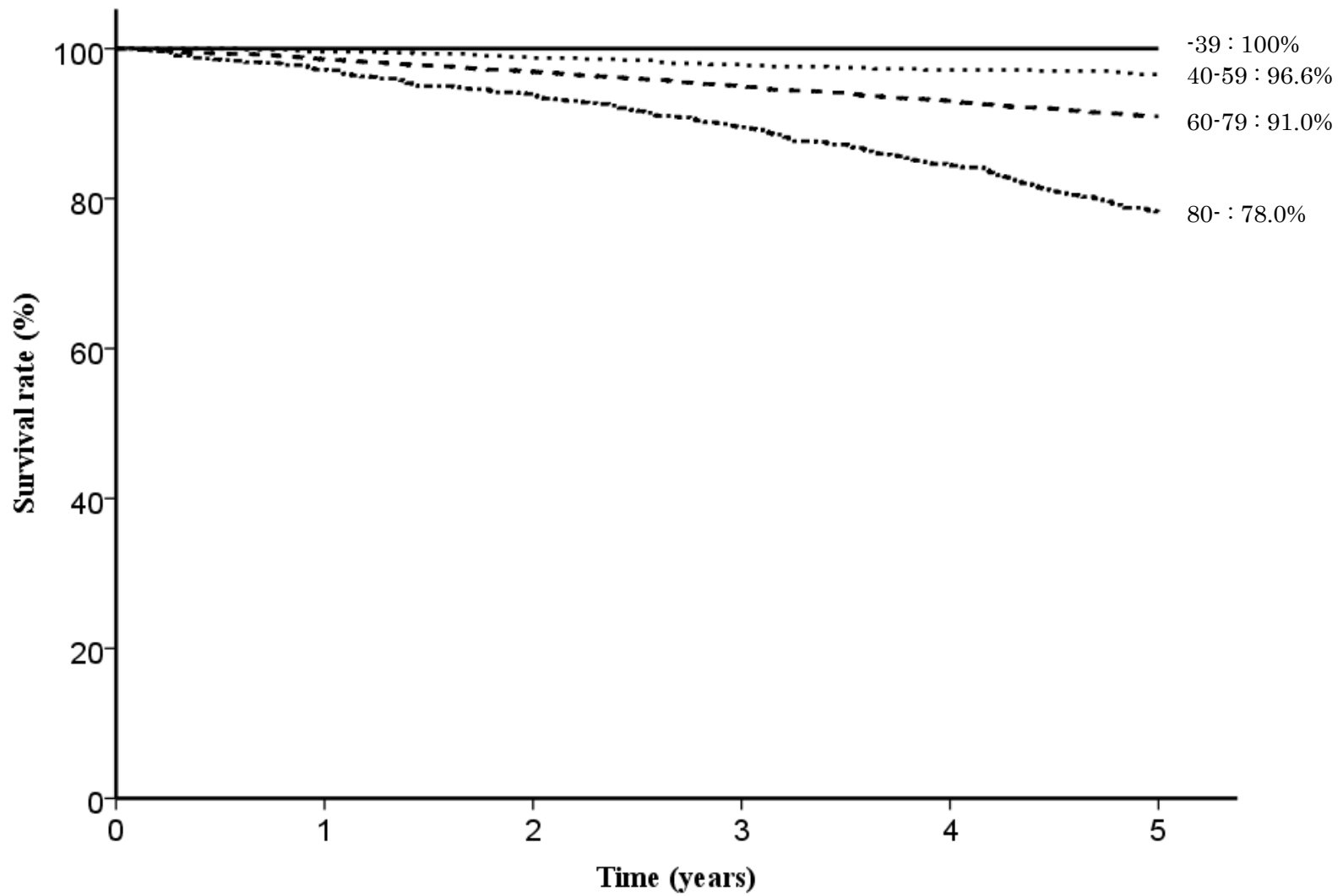


Fig. 2. Five year survival rates stratified by age

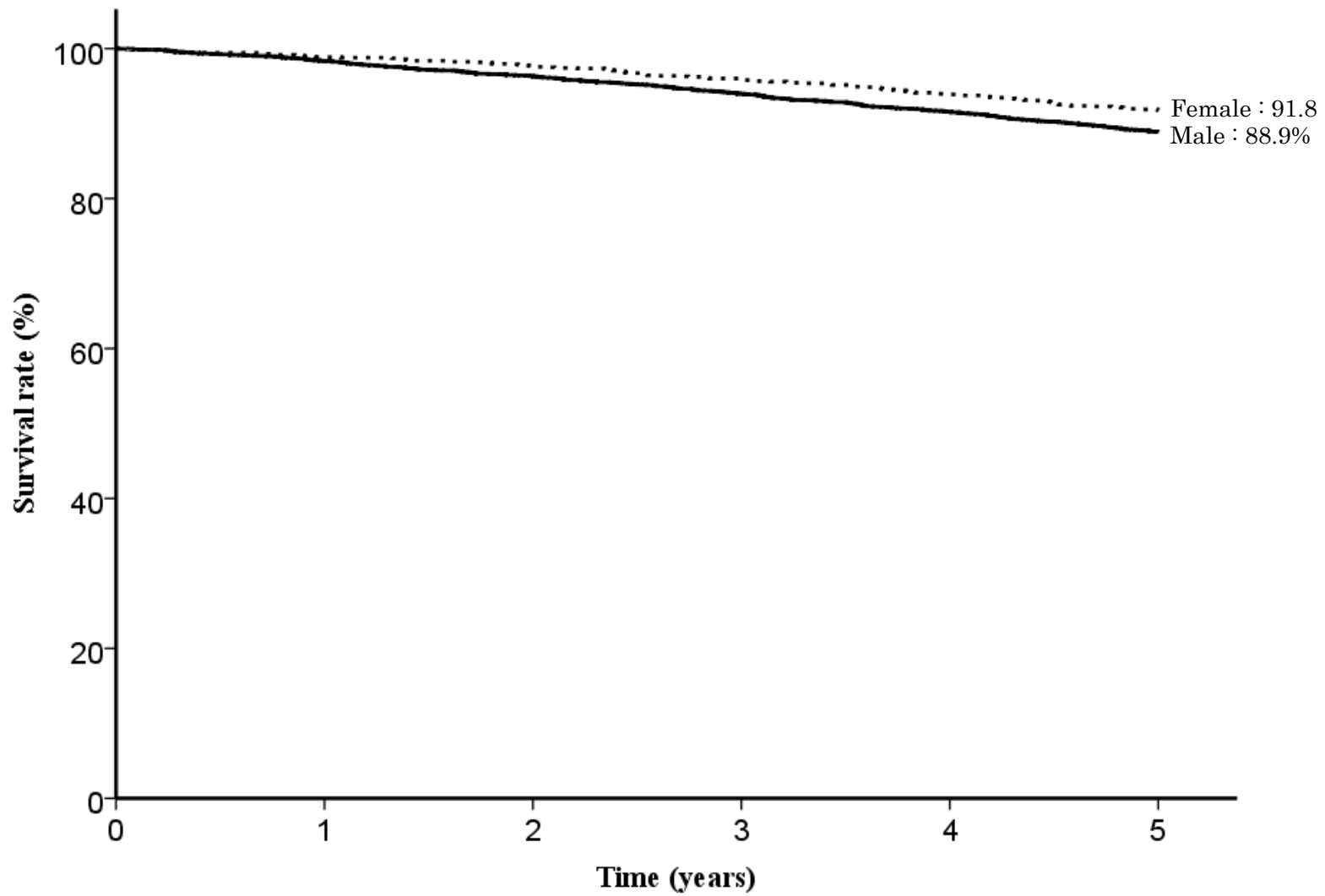


Fig. 3. Five year survival rates stratified by sex

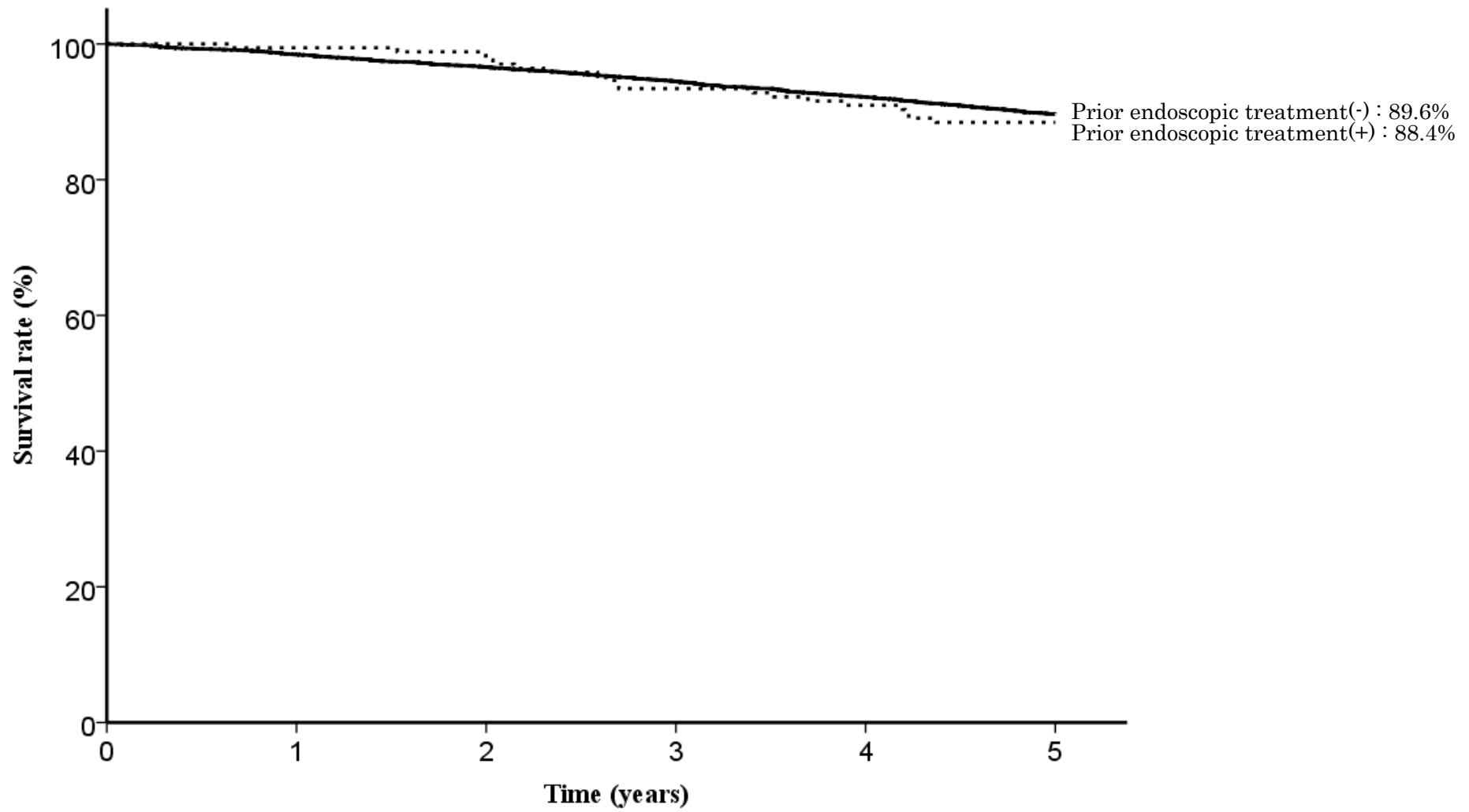


Fig. 4. Five year survival rates stratified by prior endoscopic treatment

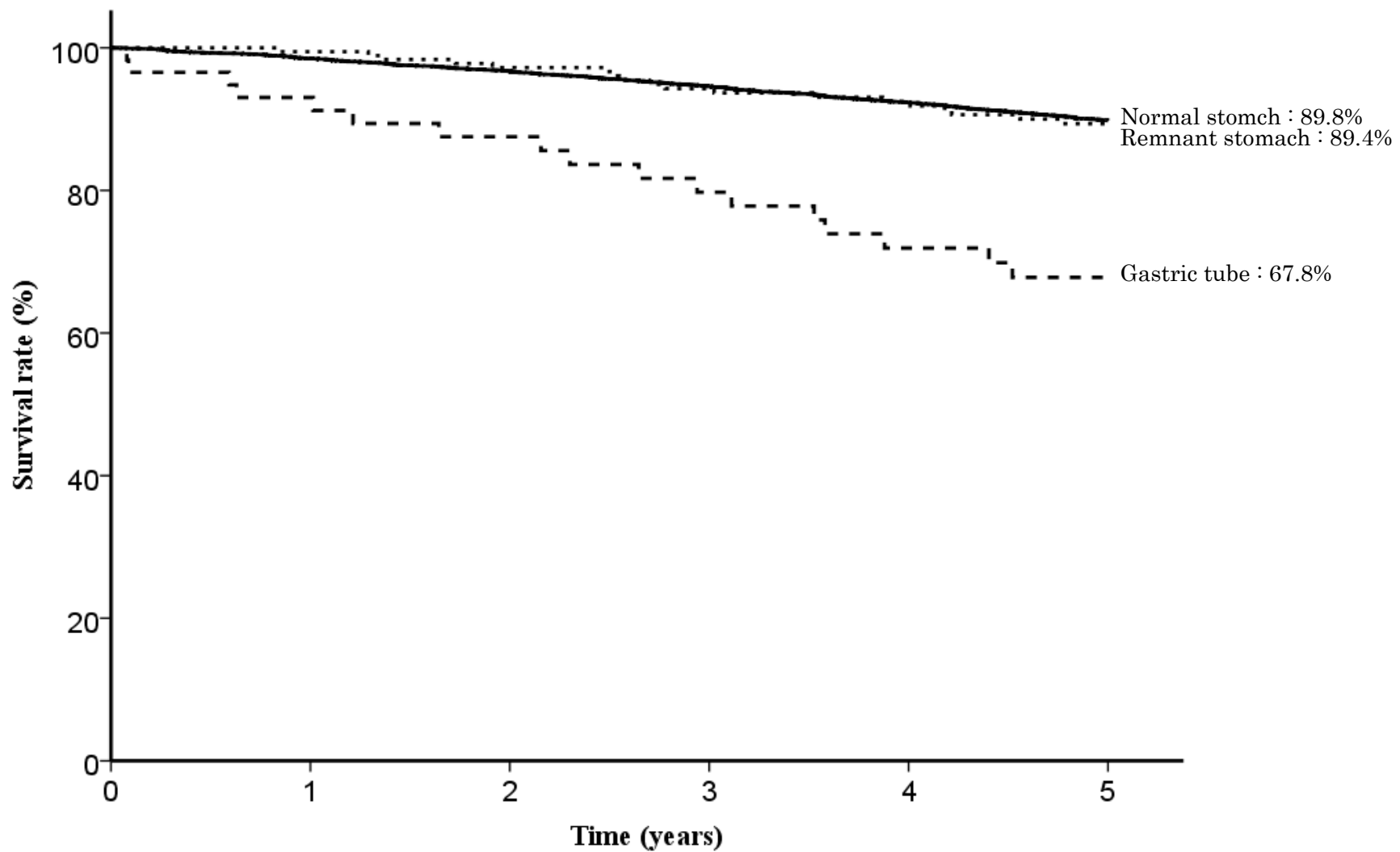


Fig. 5. Five year survival rates stratified by stomach condition

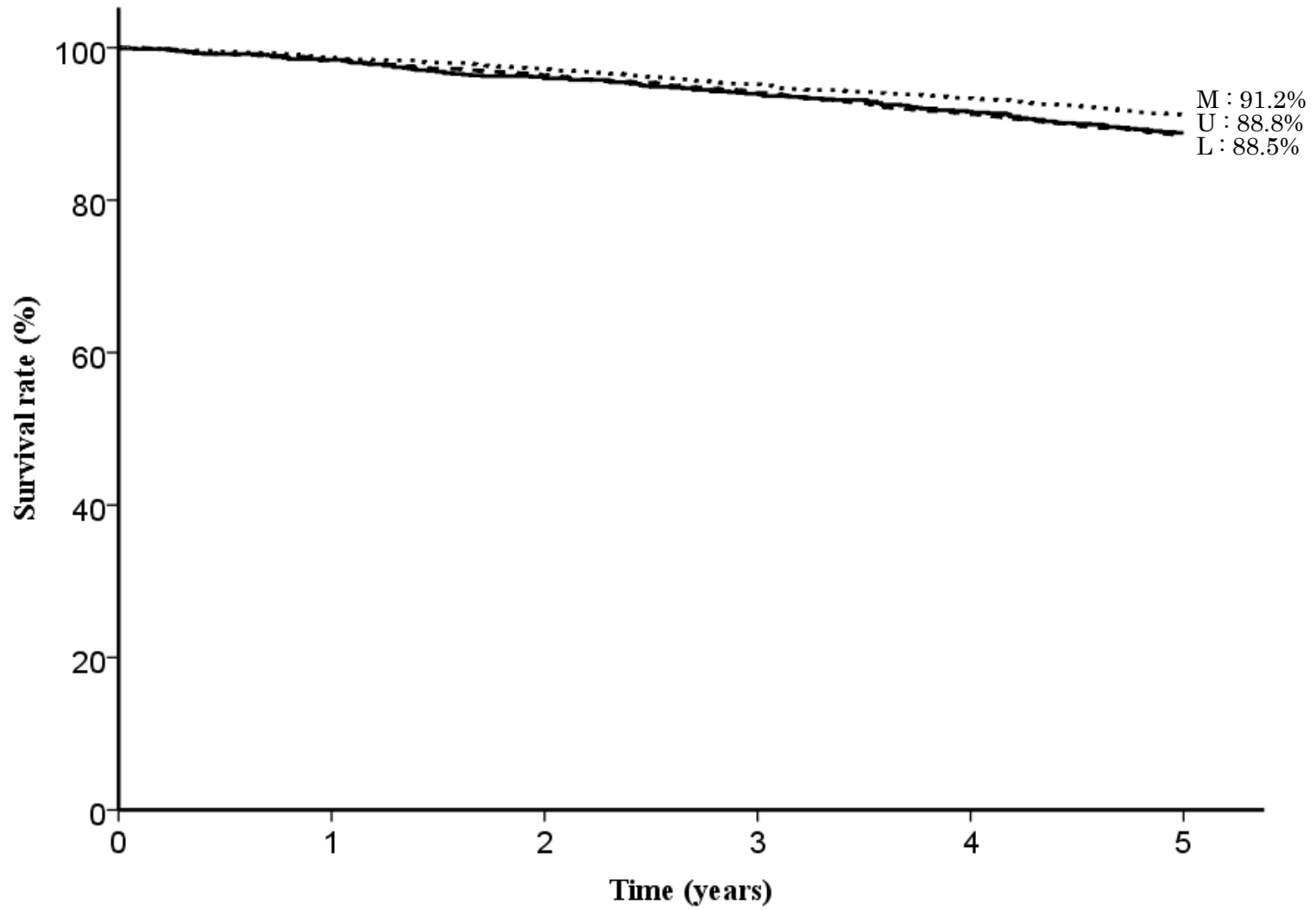


Fig. 6. Five year survival rates stratified by tumor location

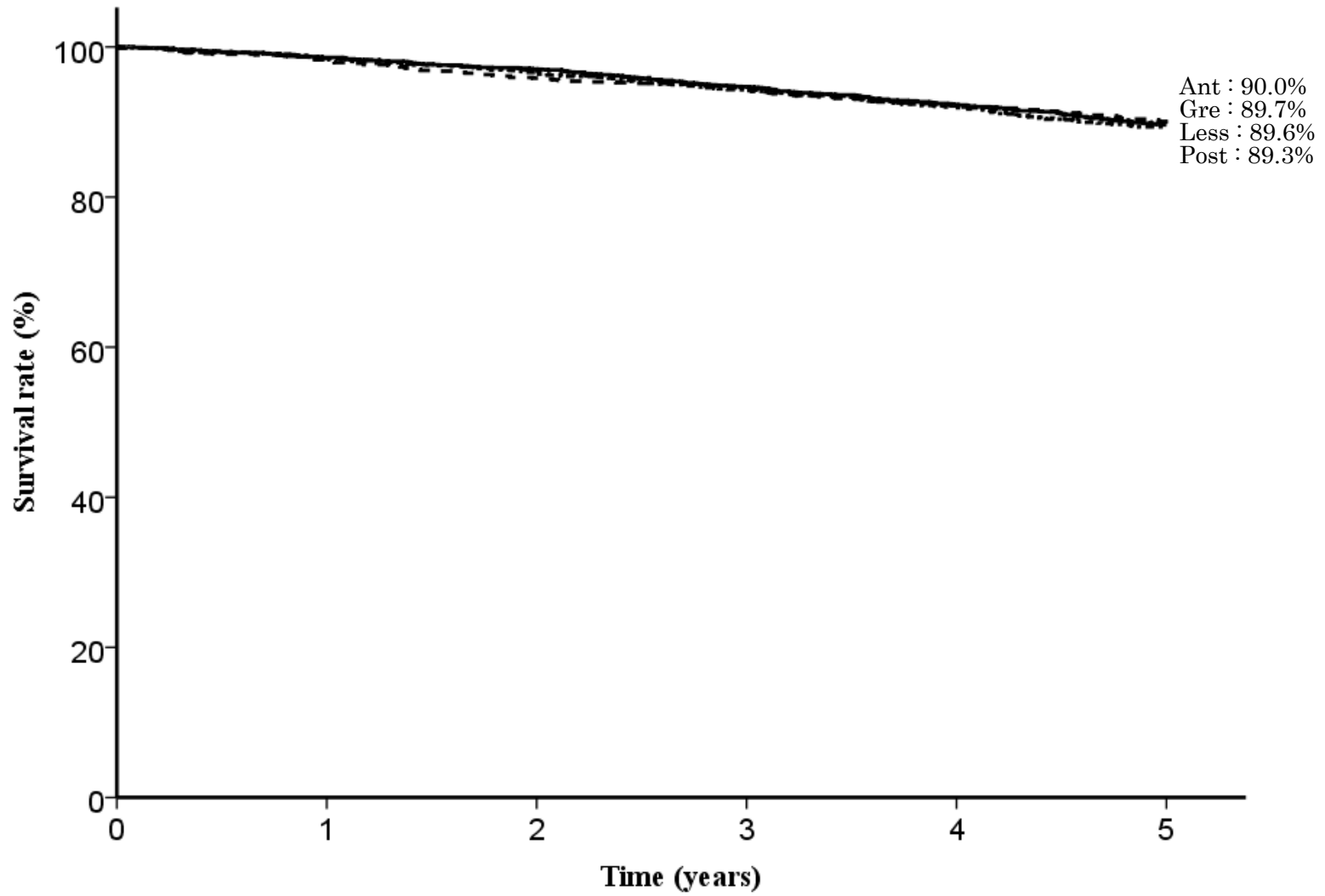


Fig. 7. Five year survival rates stratified by cross-sectional parts

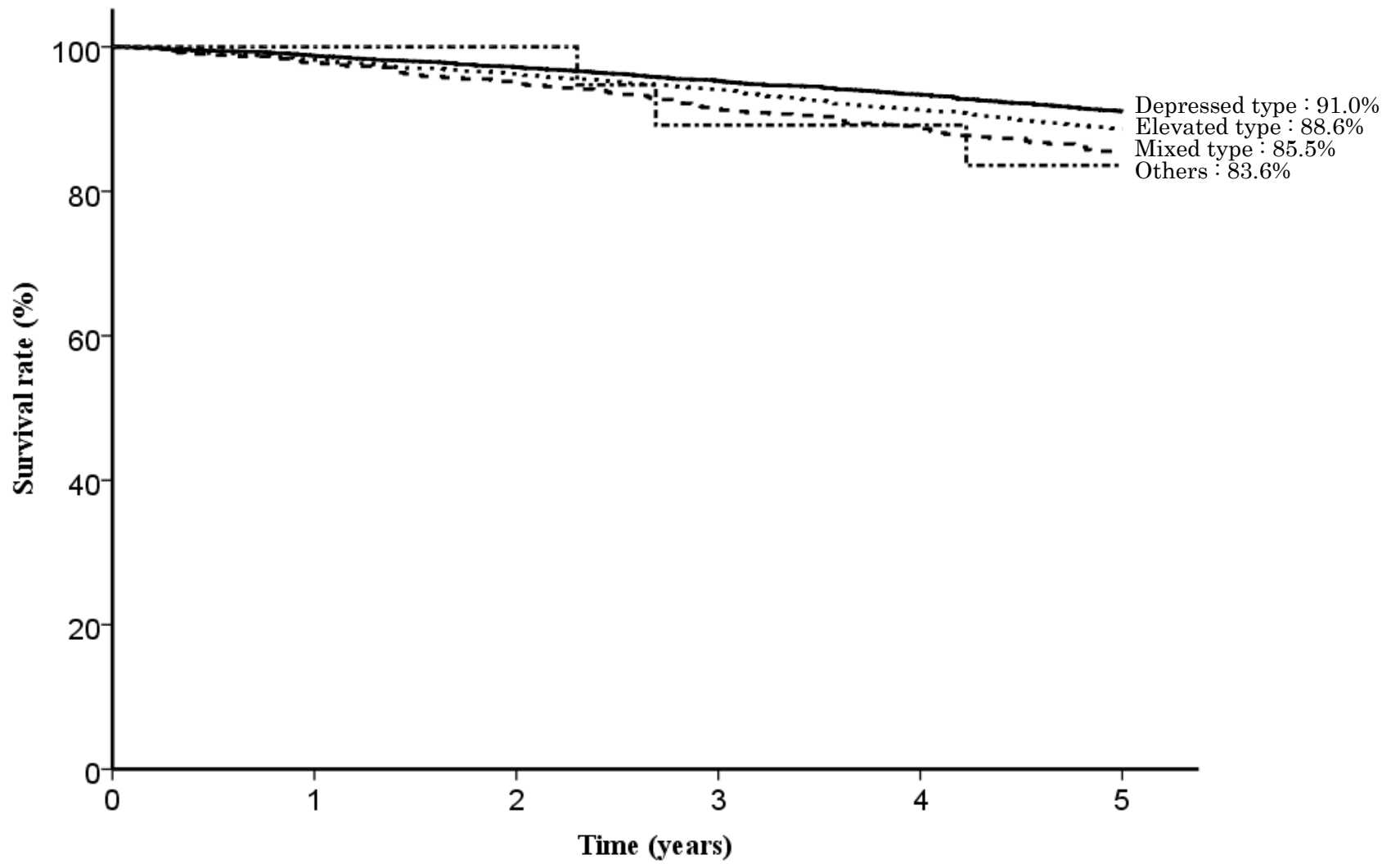


Fig. 8. Five year survival rates stratified by macroscopic type

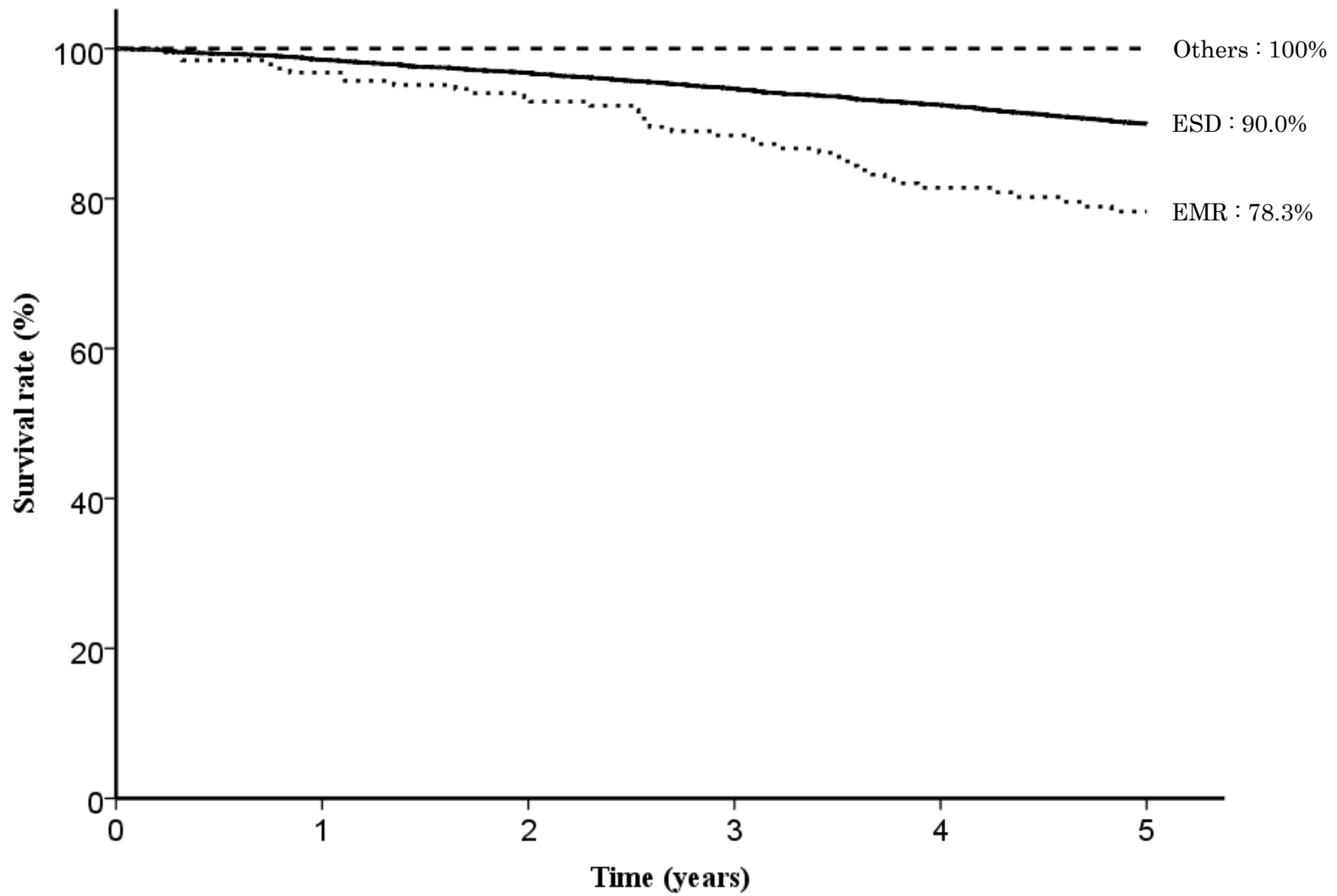


Fig. 9. Five year survival rates stratified by method of endoscopic resection

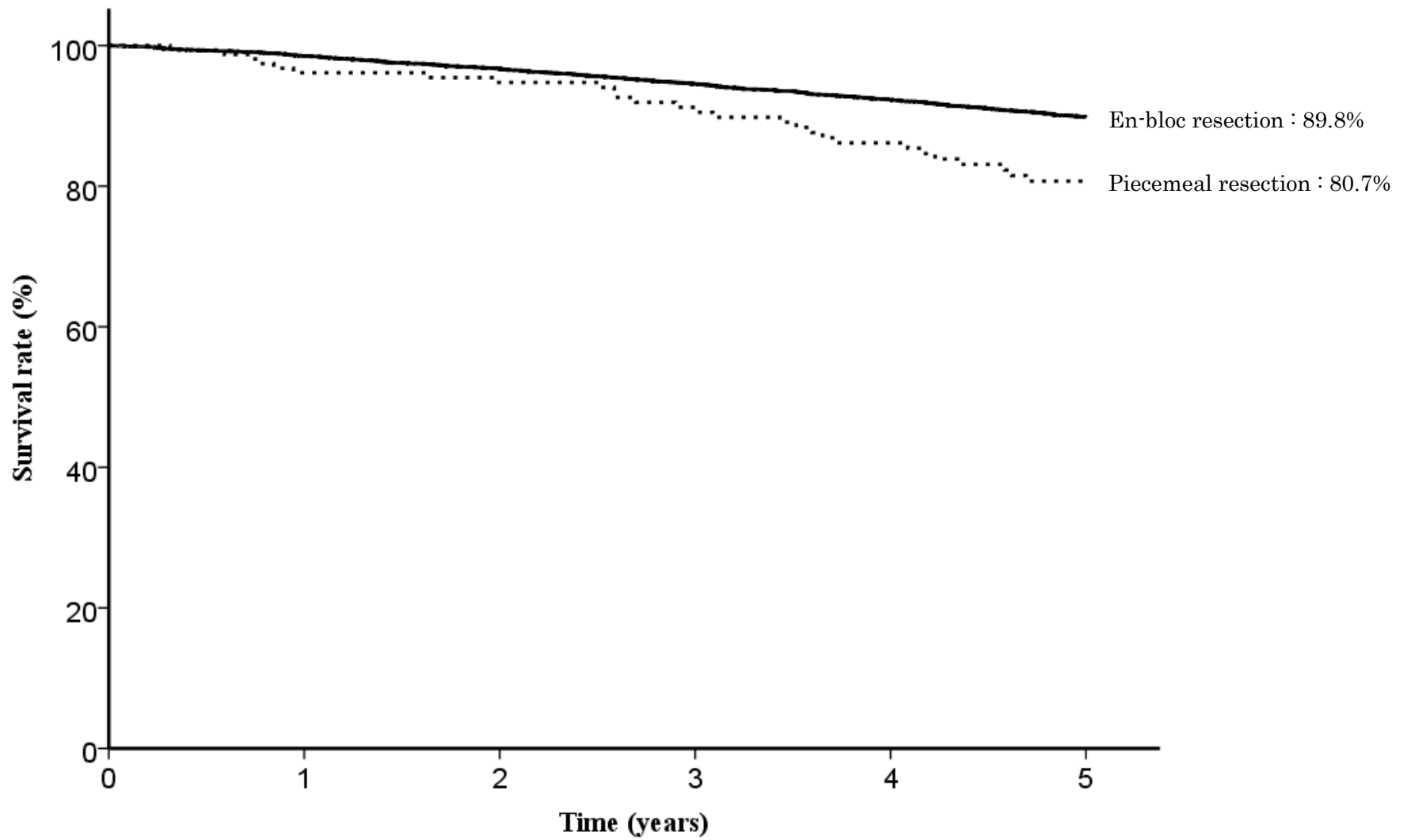


Fig. 10. Five year survival rates stratified by en-bloc or piecemeal resection

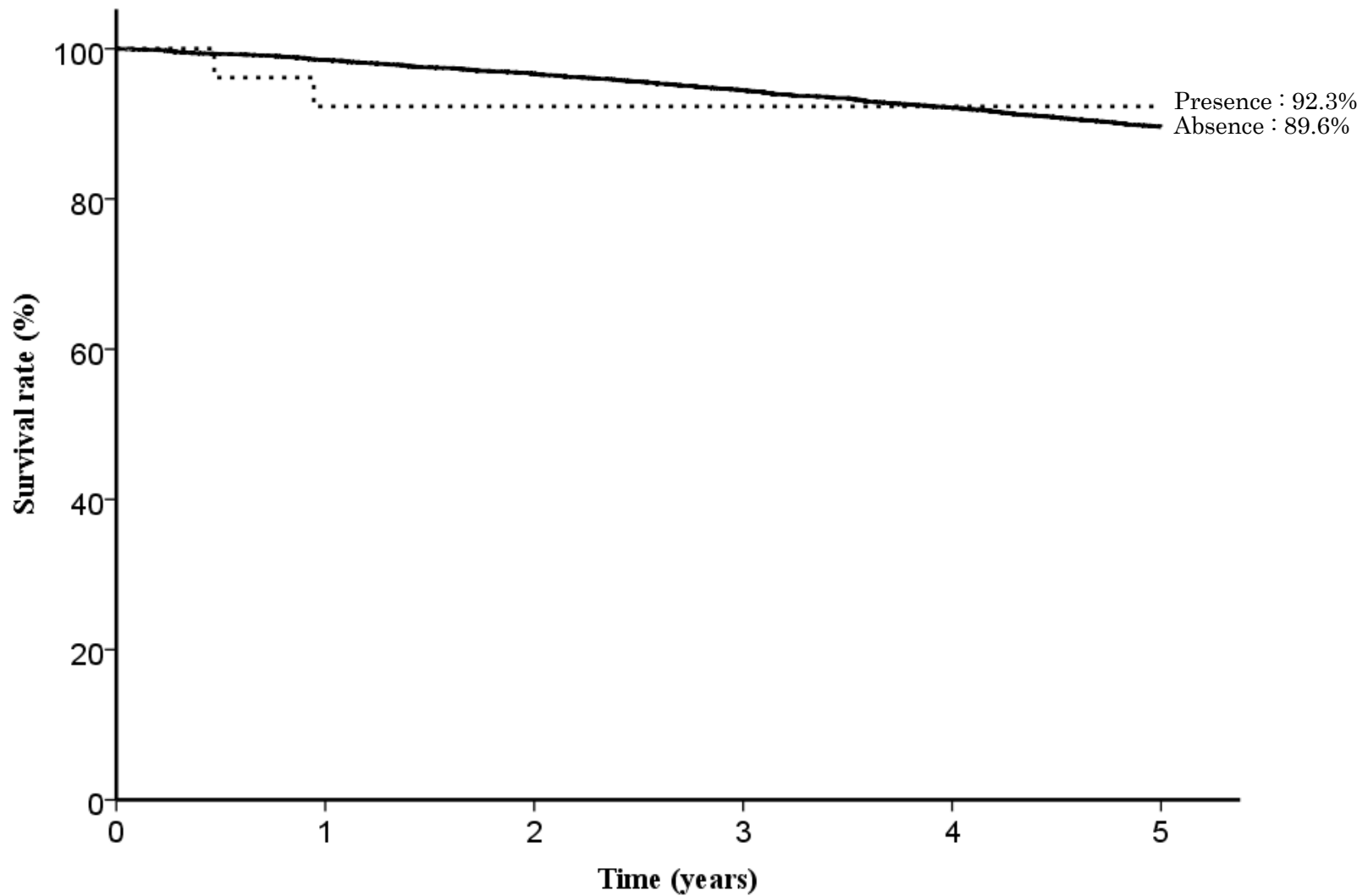


Fig. 11. Five year survival rates stratified by bleeding requiring emergency surgery

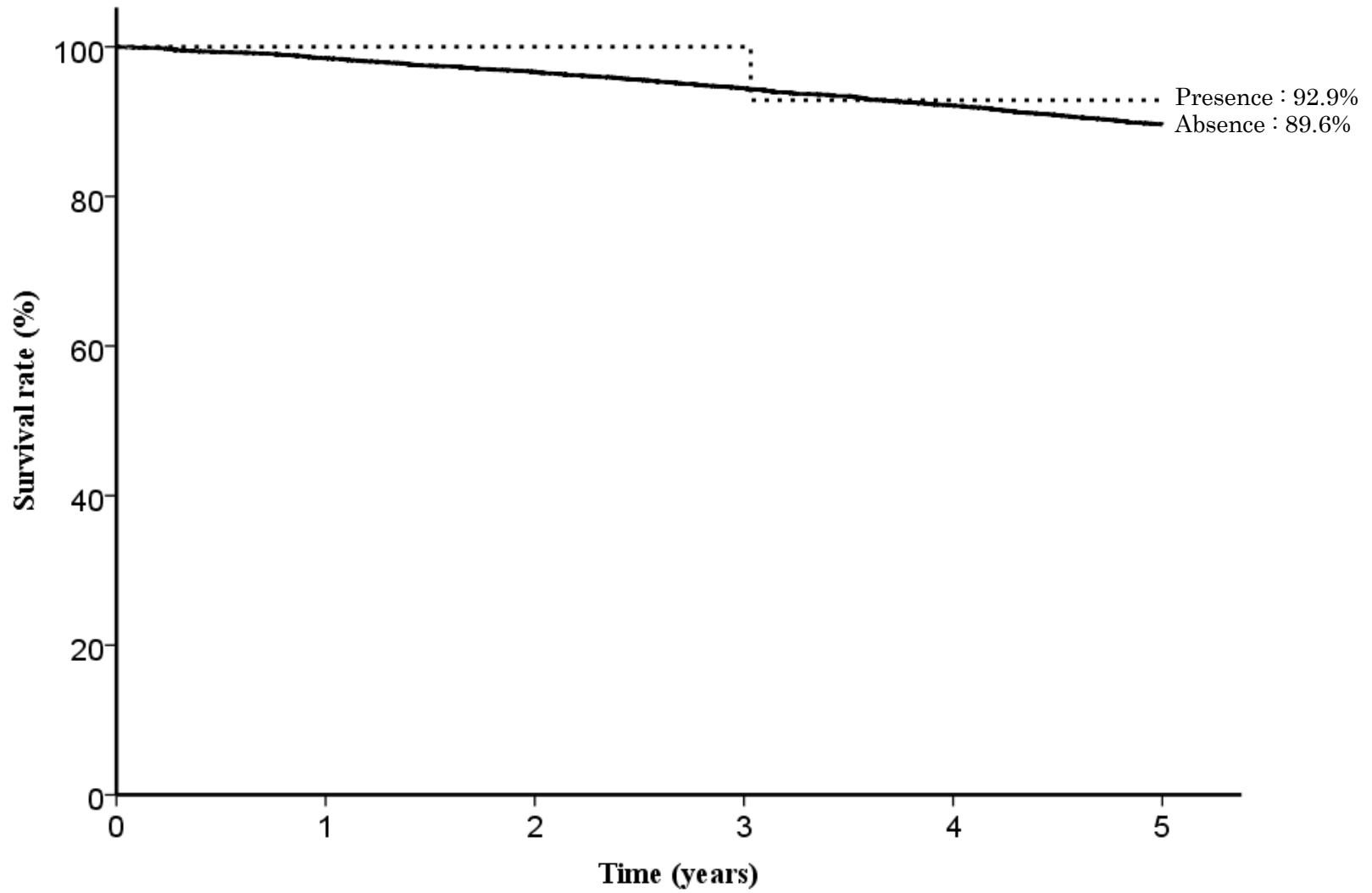


Fig. 12. Five year survival rates stratified by perforation requiring emergency surgery

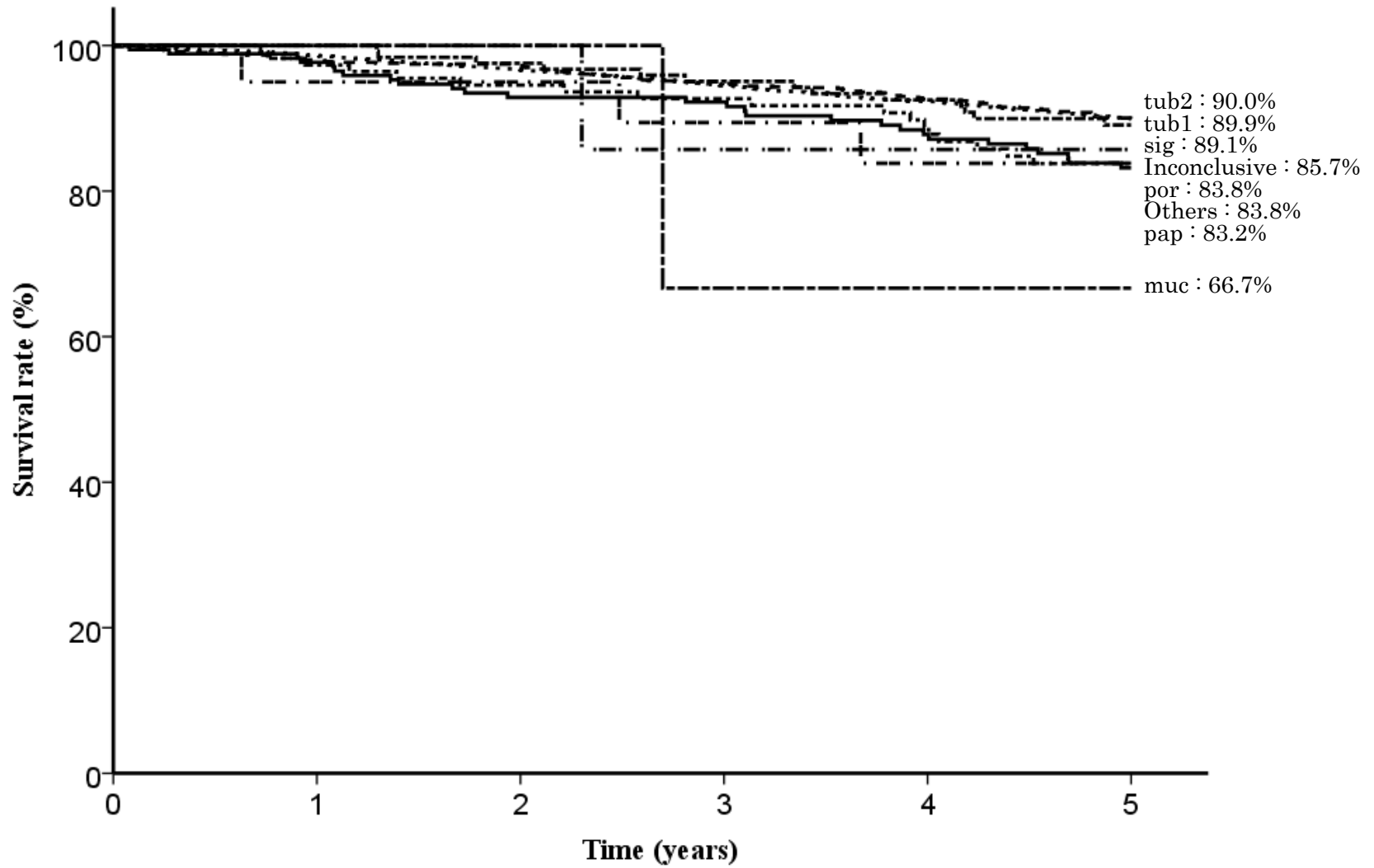


Fig. 13. Five year survival rates stratified by histological type

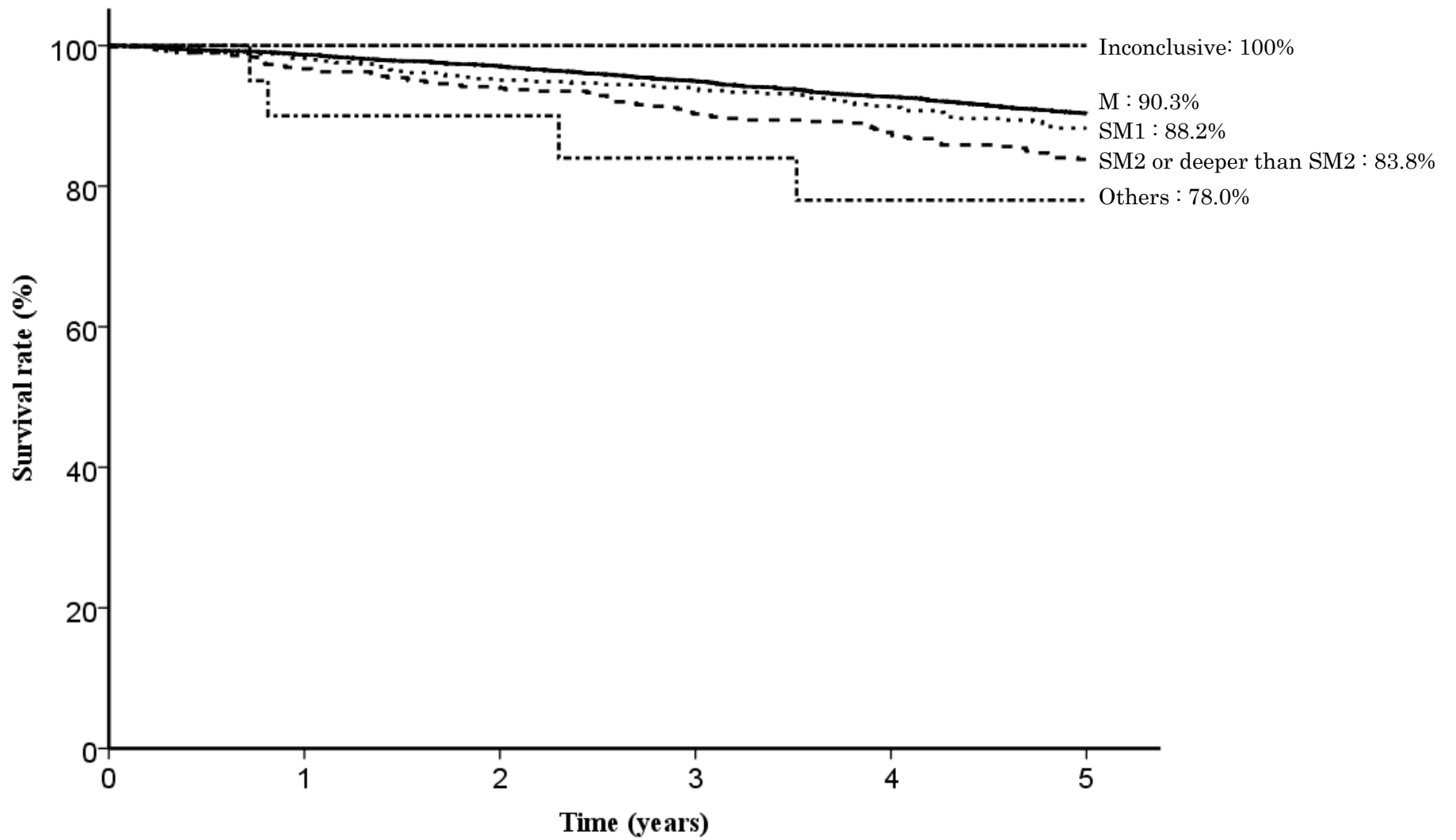


Fig. 14. Five year survival rates stratified by depth of tumor invasion

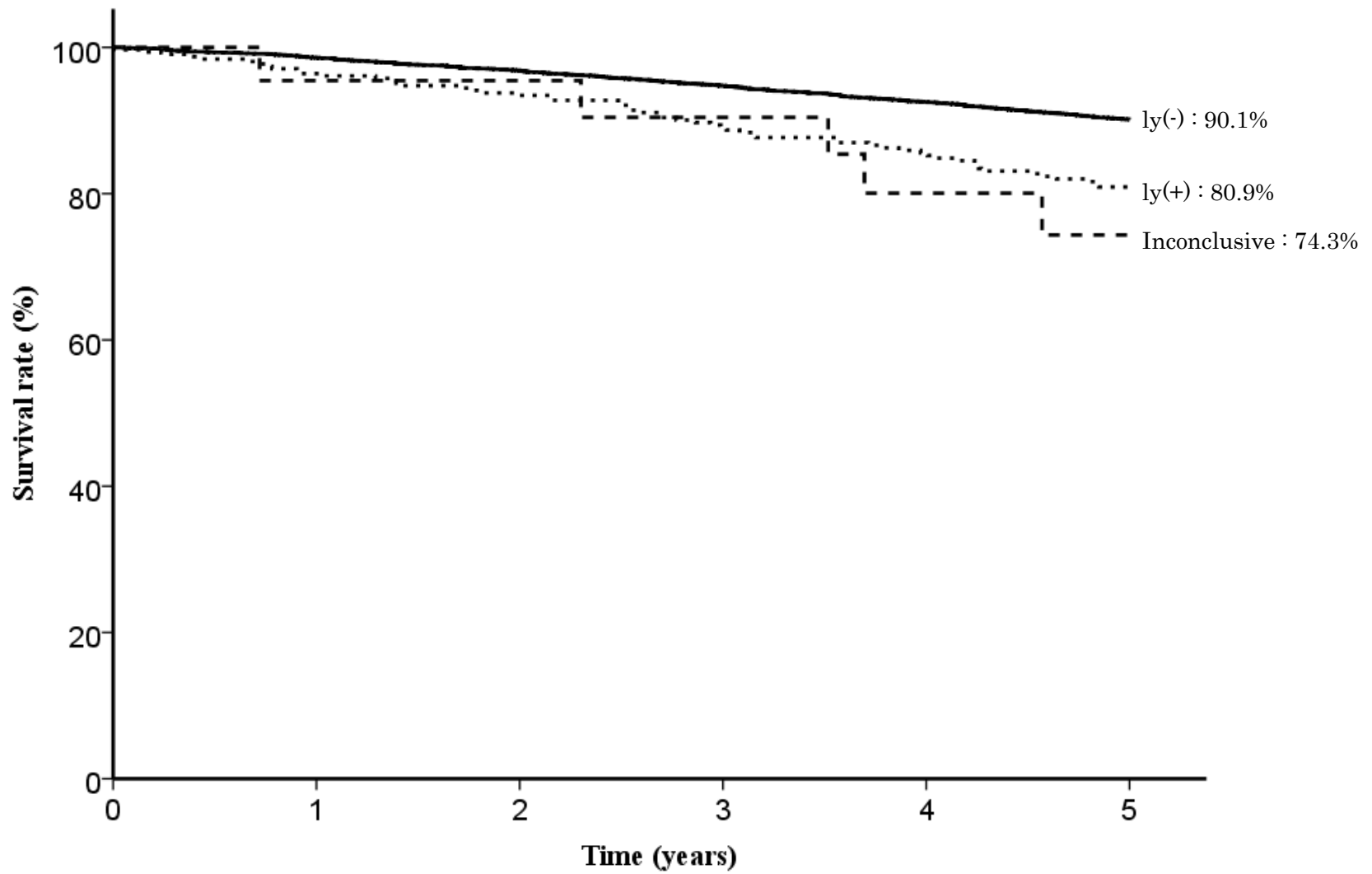


Fig. 15. Five year survival rates stratified by lymphatic invasion

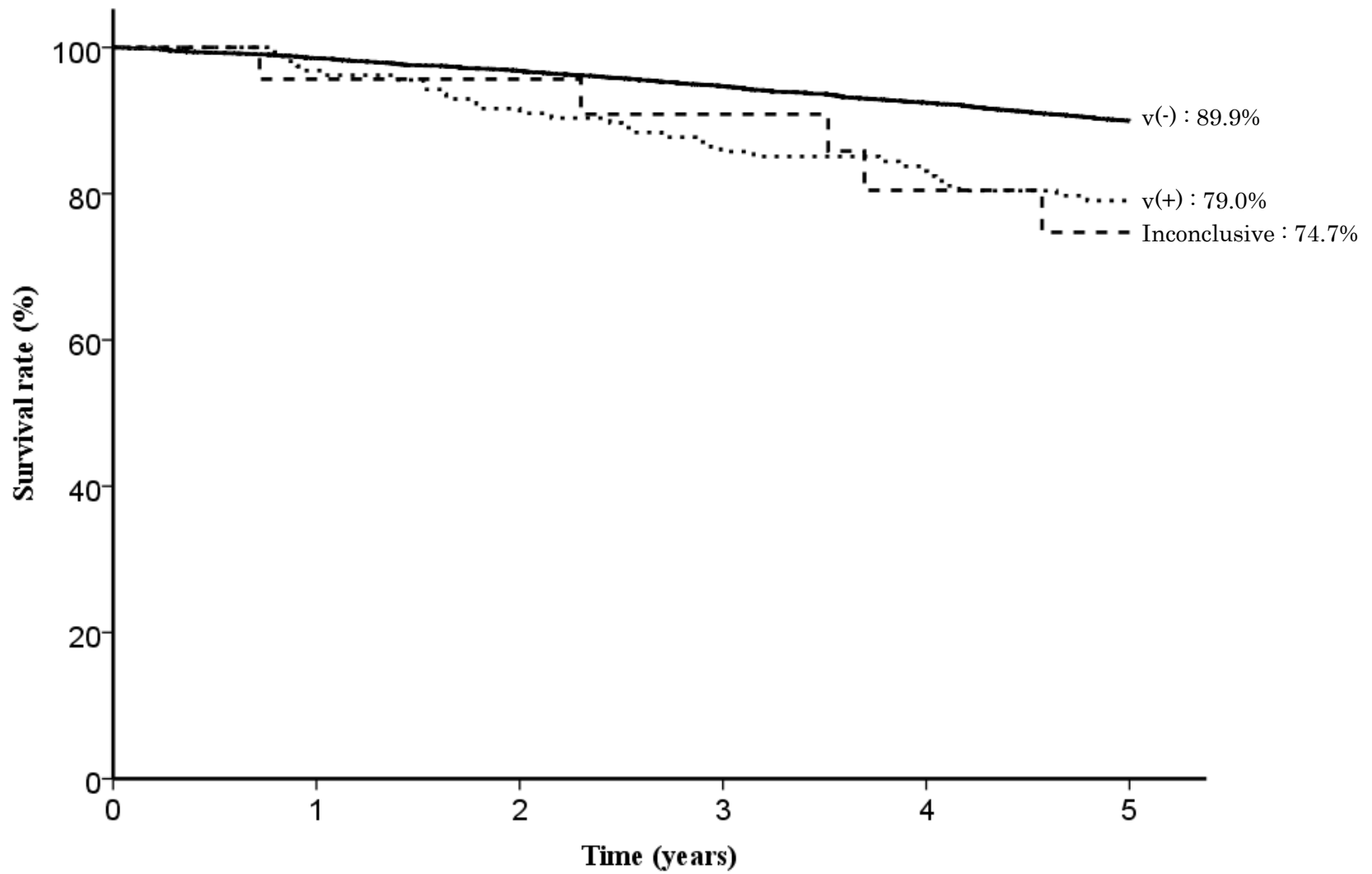


Fig. 16. Five year survival rates stratified by venous invasion

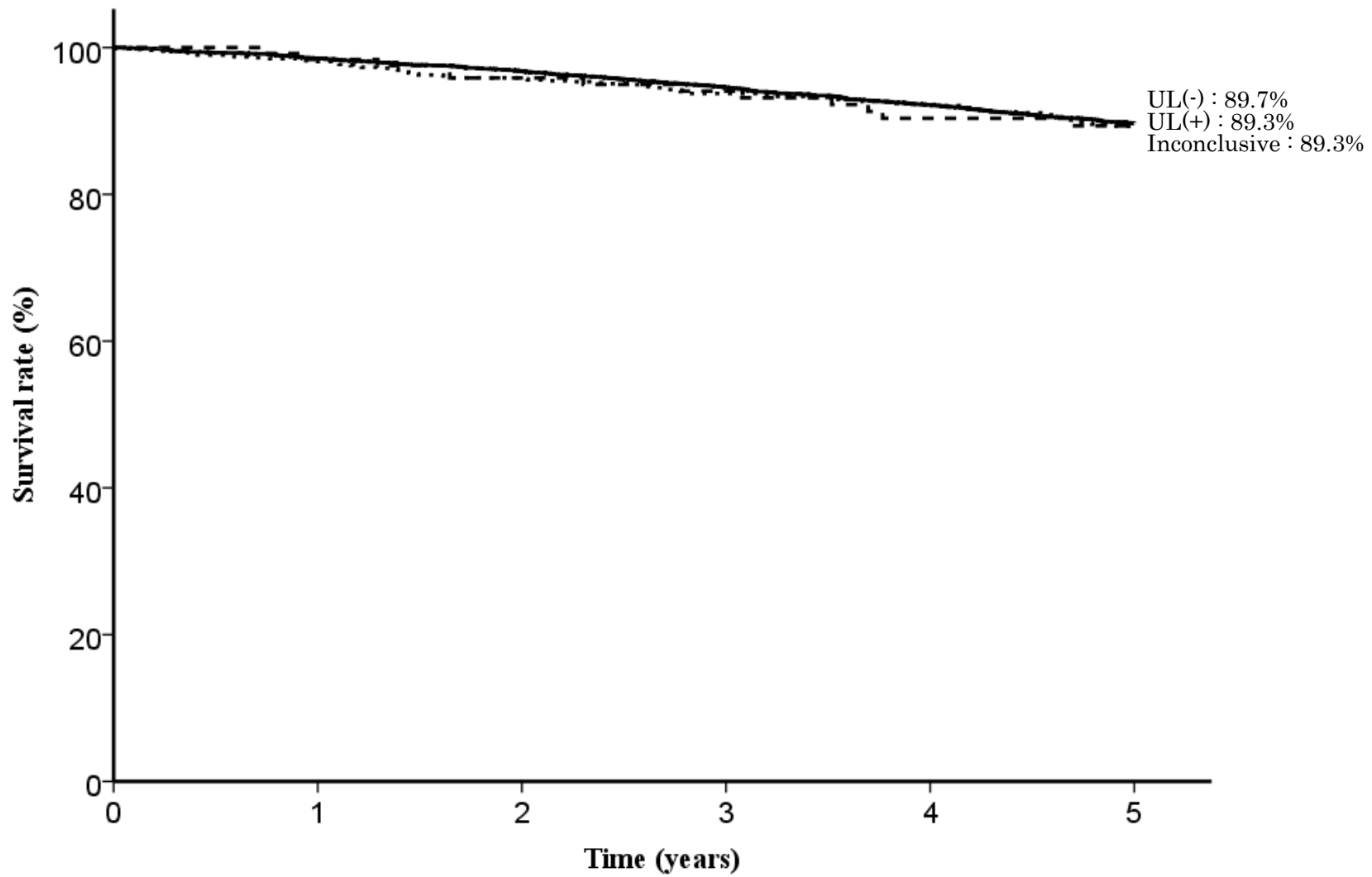


Fig. 17. Five year survival rates stratified by UL

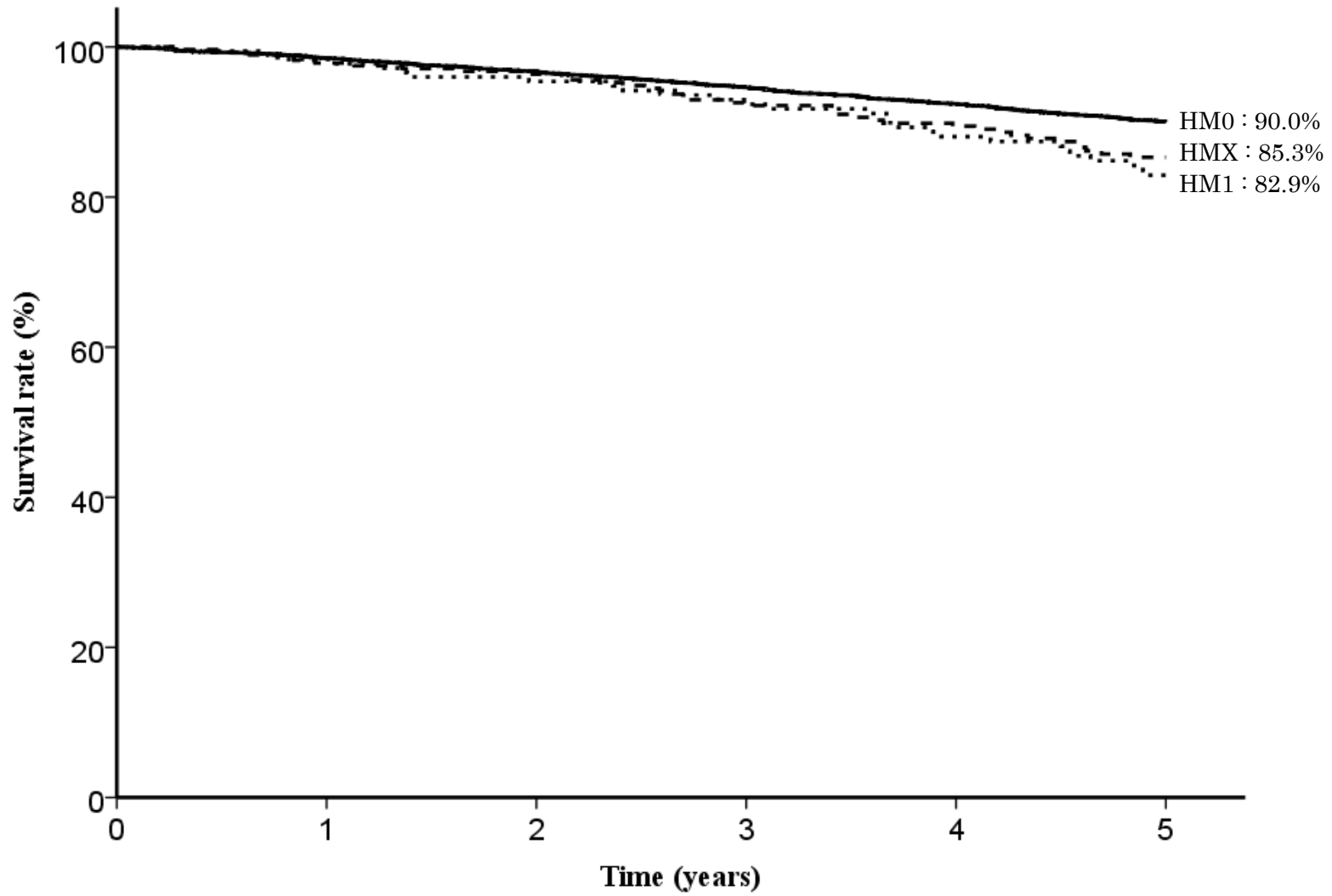


Fig. 18. Five year survival rates stratified by horizontal margin

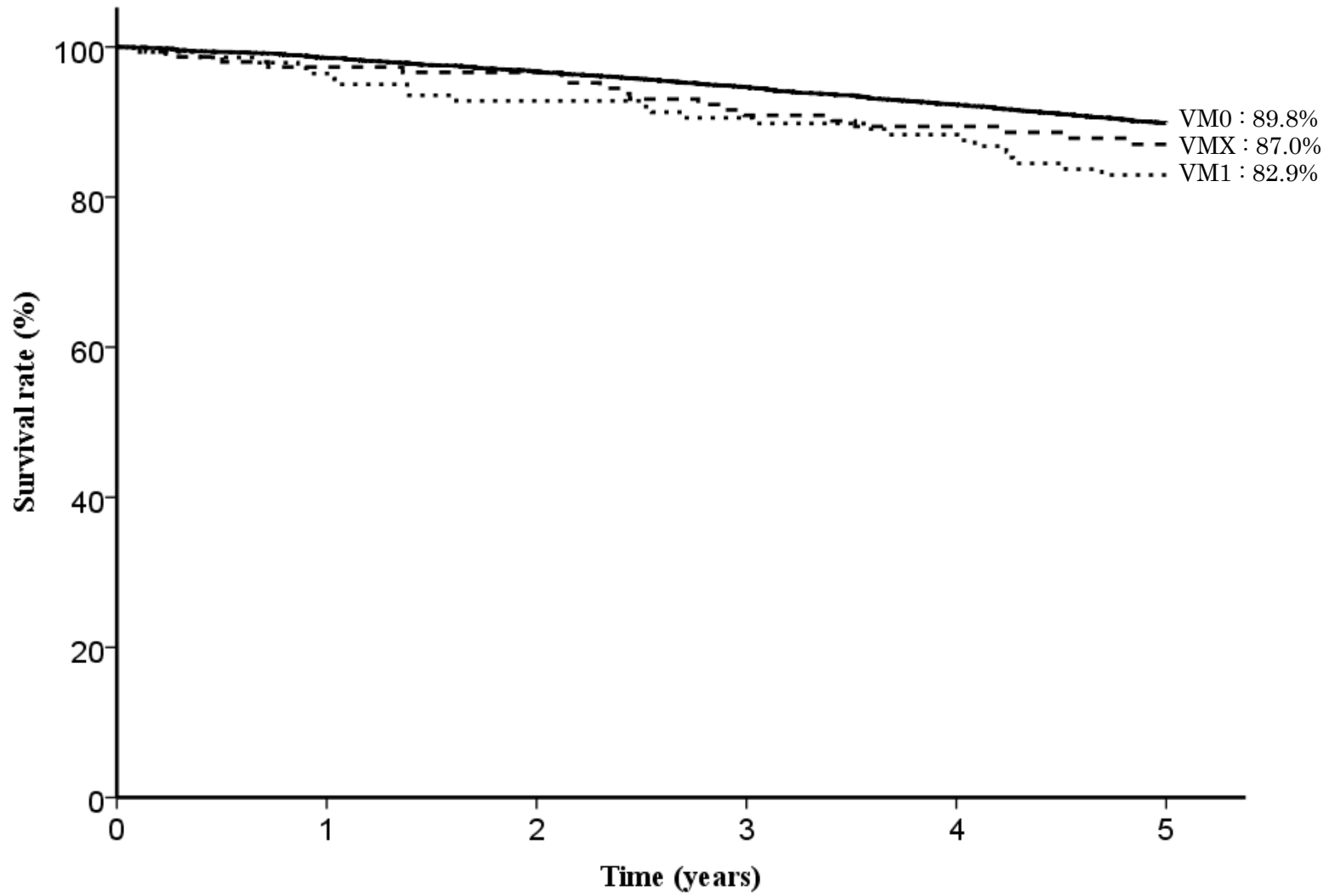


Fig. 19. Five year survival rates stratified by vertical margin

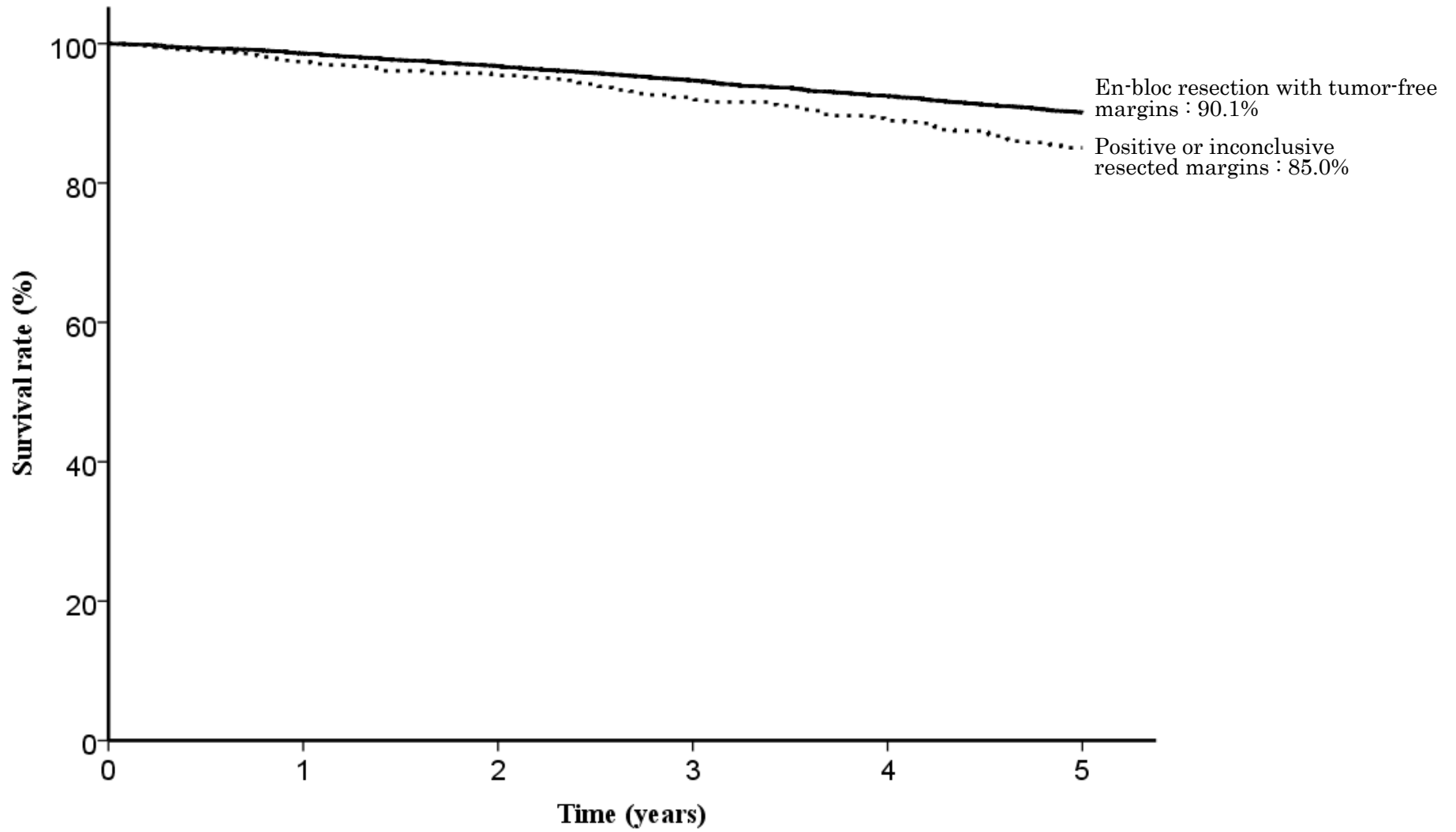


Fig. 20. Five year survival rates stratified by en-bloc resection with tumor-free margins

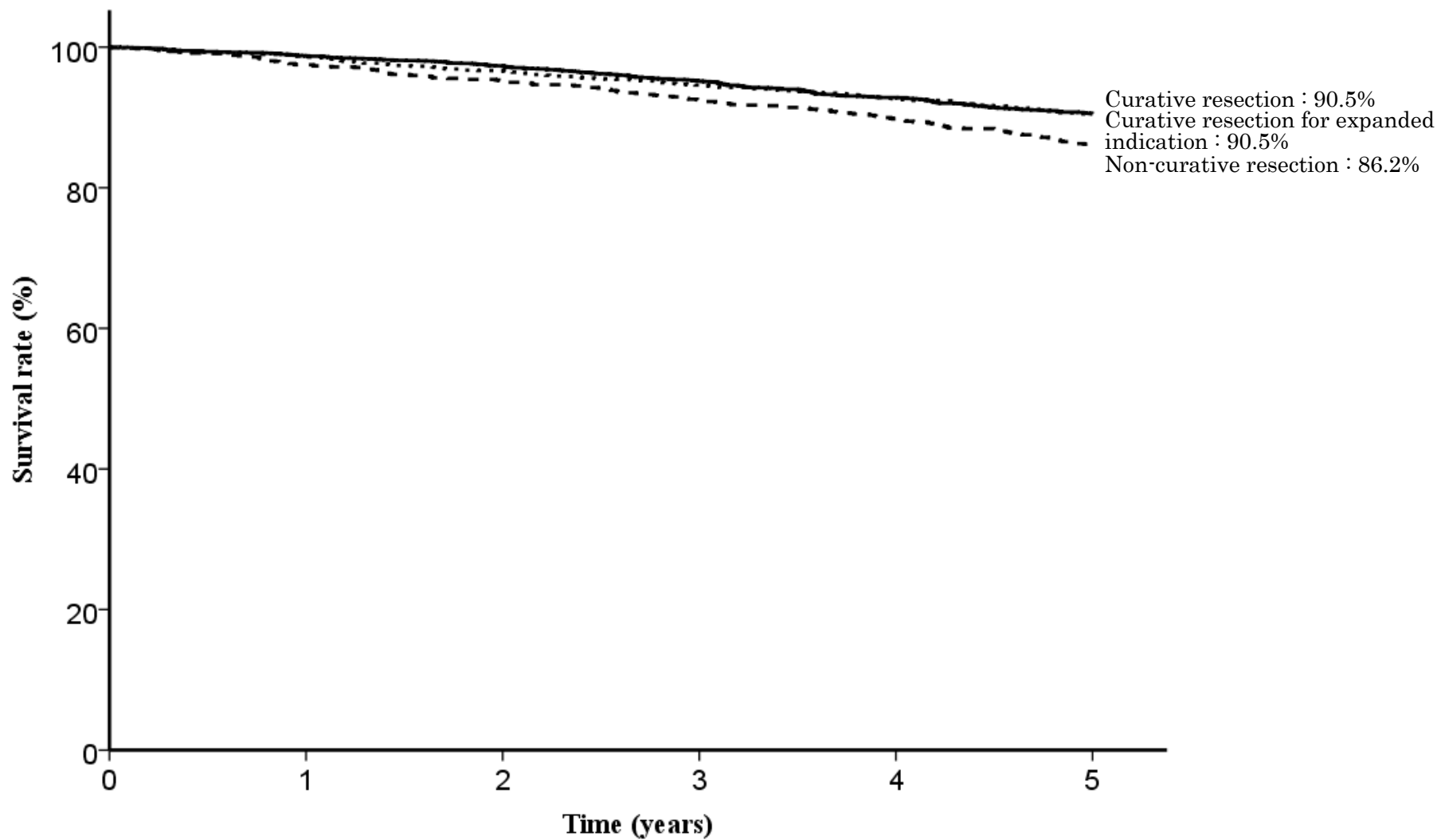


Fig. 21. Five year survival rates stratified by curability

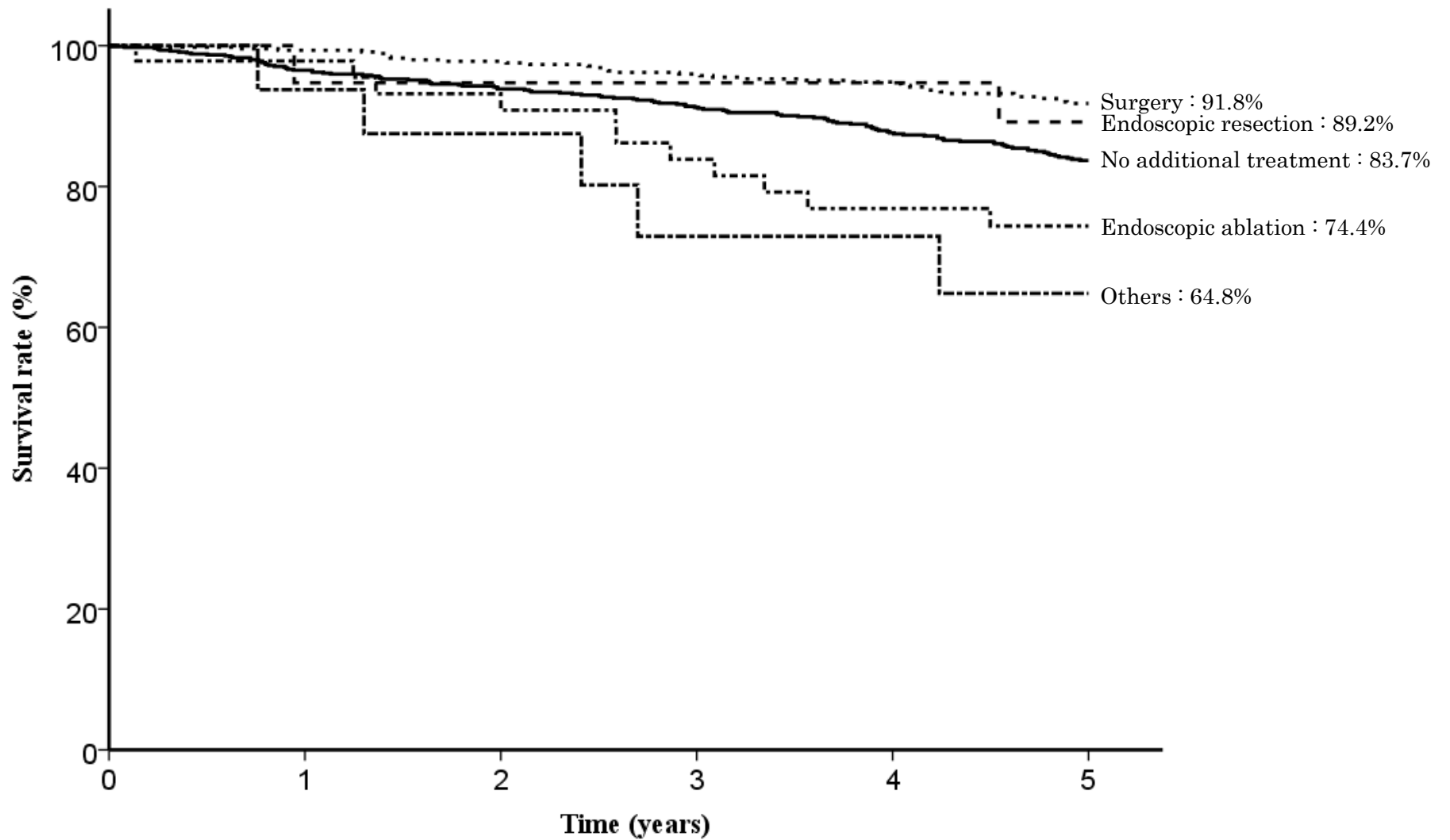


Fig. 22. Five year survival rates stratified by subsequent treatment for non-curative resection

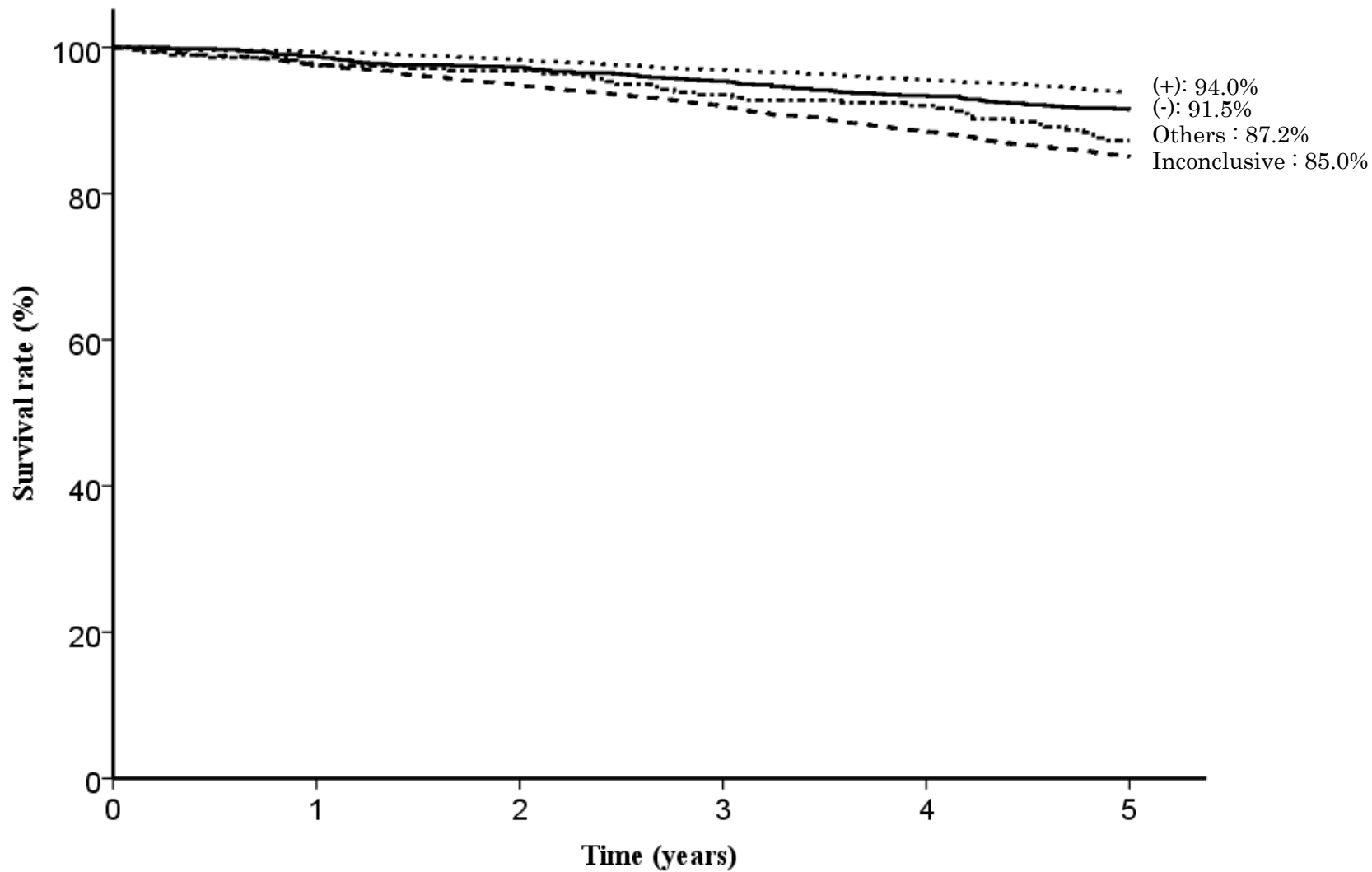


Fig. 23. Five year survival rates stratified by *H. pylori* infection

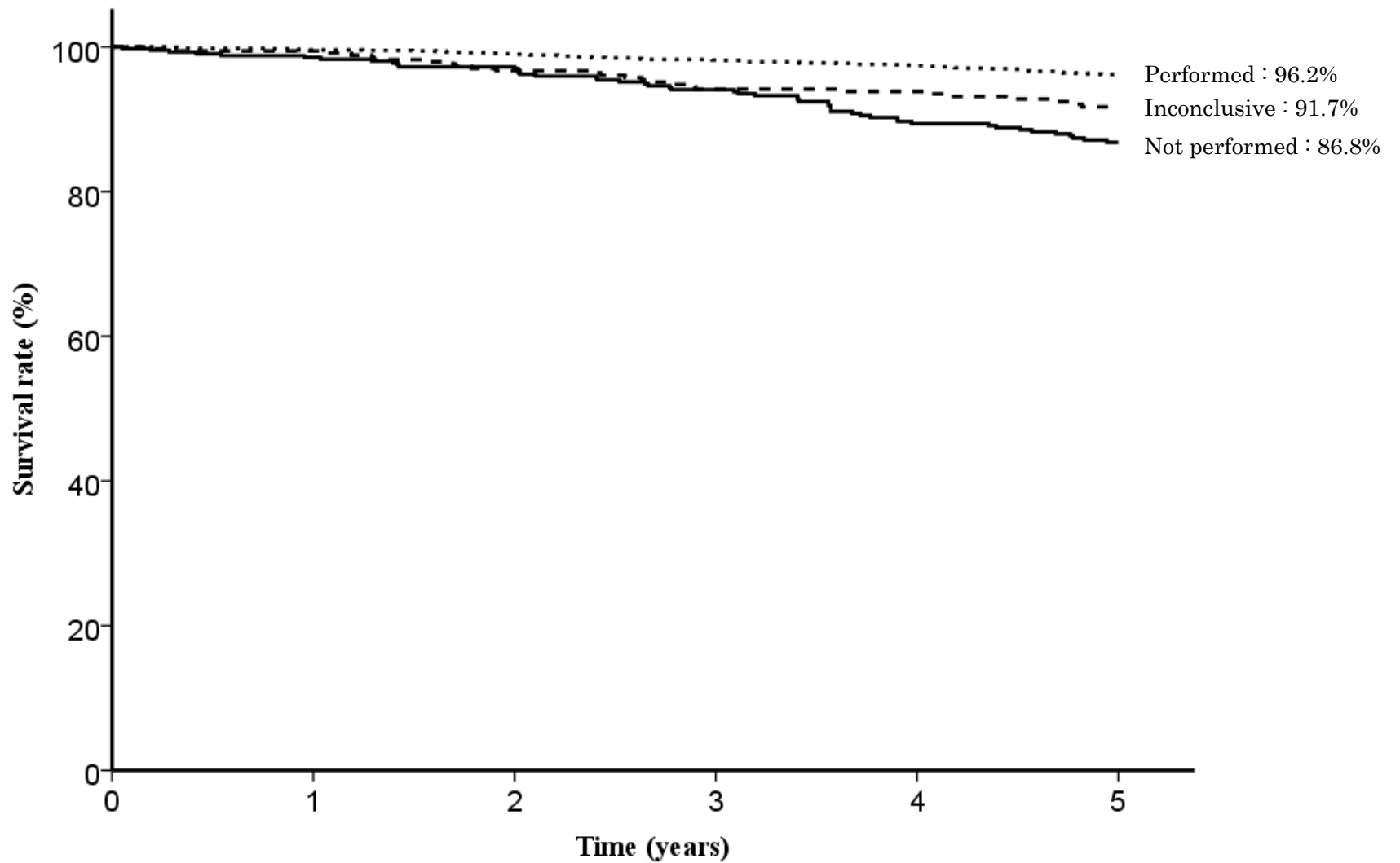


Fig. 22. Five year survival rates stratified by Eradication therapy
in H. pylori - positive cases

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	6,710	6	1,382	98.5	96.6	94.5	92.2	89.6	0.4	4,724	15	5	2	0	7	0	194	237	144

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	18	0	4	100.0	100.0	100.0	100.0	100.0		14	0	0	0	0	0	0	0	0	0
40-59	792	0	145	99.6	98.7	97.9	97.2	96.6	0.7	623	2	0	0	0	0	0	9	6	7
60-79	4,761	5	907	98.6	96.9	95.0	93.0	91.0	0.4	3,476	9	2	2	0	6	0	132	145	82
80-	1,139	1	326	97.2	94.0	89.5	84.5	78.0	1.4	611	4	3	0	0	1	0	53	86	55

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	5,015	4	949	98.3	96.3	94.0	91.6	88.9	0.5	3,577	15	4	2	0	6	0	164	195	103
Female	1,695	2	433	98.8	97.7	95.9	94.0	91.8	0.7	1,147	0	1	0	0	1	0	30	42	41

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 (-)	6,525	6	1,351	98.4	96.6	94.5	92.2	89.6	0.4	4,589	15	5	2	0	6	0	185	236	136
Prior endoscopic treatment (+)	185	0	31	99.4	98.2	93.4	91.0	88.4	2.5	135	0	0	0	0	1	0	9	1	8

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	6,444	5	1,319	98.5	96.7	94.6	92.3	89.8	0.4	4,556	14	3	2	0	5	0	188	223	134
Remnant stomach	206	0	52	99.5	97.2	94.3	92.5	89.4	2.4	136	0	1	0	0	1	0	4	8	4
Gastric tube	60	1	11	93.0	87.5	79.7	71.9	67.8	6.5	32	1	1	0	0	1	0	2	6	6

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.	peritoneal	liver rec	R	other cancer	other disease	un-known
Upper third	1,135	2	221	98.4	96.0	94.0	91.6	88.8	1.0	803	4	2	1	0	0	0	30	49	25
Middle third	2,650	4	535	98.7	97.3	95.2	93.4	91.2	0.6	2,092	5	2	1	0	4	0	69	71	49
Lower third	2,917	0	624	98.3	96.4	94.1	91.4	88.5	0.6	2,003	6	1	0	0	3	0	94	116	70

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.	peritoneal	liver rec	R	other cancer	other disease	un-known
Less	2,759	2	590	98.6	97.0	94.7	92.3	89.6	0.6	1,923	8	3	0	0	4	0	74	111	46
Gre	1,339	0	285	98.4	96.7	94.3	92.0	89.7	0.9	934	2	1	1	0	0	0	44	42	30
Ant	1,185	2	236	98.3	95.8	94.5	92.0	90.0	0.9	846	3	0	1	0	1	0	33	40	25
Post	1,423	2	270	98.5	96.6	94.3	92.1	89.3	0.9	1,020	1	1	0	0	2	0	43	43	43

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.	peritoneal	liver rec	R	other cancer	other disease	un-known
Depressed type	3,545	2	691	98.8	97.2	95.3	93.4	91.0	0.5	2,576	6	2	0	0	3	0	94	102	71
Elevated type	2,488	3	536	98.2	96.2	94.1	91.3	88.6	0.7	1,709	5	1	1	0	2	0	79	107	48
Mixed type	650	1	146	97.8	95.2	91.4	88.7	85.5	1.5	424	4	2	1	0	2	0	21	28	22
Others	26	0	9	100.0	100.0	94.7	89.2	83.6	8.7	0	0	0	0	0	0	0	0	0	3

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.	peritoneal	liver rec	R	other cancer	other disease	un-known
ESD	6,502	6	1,334	98.5	96.7	94.6	92.5	90.0	0.4	4,602	14	5	2	0	7	0	180	224	134
EMR	206	0	48	96.8	93.5	88.4	81.4	78.3	3.1	120	1	0	0	0	0	0	14	13	10
Others	2	0	0	100.0	100.0	100.0	100.0	100.0		0	0	0	0	0	0	0	0	0	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.	peritoneal	liver rec	R	other cancer	other disease	un-known
En-bloc resection	6,545	6	1,345	98.5	96.7	94.5	92.3	89.8	0.4	4,623	14	5	2	0	7	0	183	230	136
Piecemeal resection	164	0	37	96.1	94.8	91.2	86.1	80.7	3.4	100	1	0	0	0	0	0	11	7	8

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	26	0	3	92.3	92.3	92.3	92.3	92.3	5.2	21	0	0	0	0	0	0	1	1	0
Absence	6,684	6	1,379	98.5	96.7	94.5	92.2	89.6	0.4	4,703	15	5	2	0	7	0	193	236	144

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	17	0	3	100.0	100.0	100.0	92.9	92.9	6.9	13	0	0	0	0	0	0	0	1	0
Absence	6,693	6	1,379	98.5	96.6	94.4	92.2	89.6	0.4	4,711	15	5	2	0	7	0	194	236	144

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	178	1	26	97.7	92.9	92.2	87.8	83.2	3.0	125	0	1	0	0	1	0	7	14	4
tub1	5,272	4	1,123	98.6	96.7	94.5	92.4	89.9	0.4	3,692	11	1	1	0	3	0	148	187	106
tub2	974	1	183	97.9	97.2	94.9	92.6	90.0	1.0	706	1	1	1	0	0	0	27	28	27
por	118	0	21	97.3	94.6	92.7	88.8	83.8	3.6	80	1	2	0	0	0	0	6	3	5
sig	131	0	18	100.0	97.6	95.1	92.5	89.1	2.9	100	2	0	0	0	0	0	5	5	1
muc	4	0	1	100.0	100.0	66.7	66.7	66.7	27.2	2	0	0	0	0	1	0	0	0	0
Others	25	0	8	95.0	95.0	89.4	83.8	83.8	8.6	14	0	0	0	0	2	0	1	0	0
Inconclusive	8	0	2	100.0	100.0	85.7	85.7	85.7	13.2	5	0	0	0	0	0	0	0	0	1

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	5,647	5	1,212	98.7	97.1	94.9	92.7	90.3	0.4	3,965	10	2	0	0	3	0	161	183	111
SM1	520	0	81	98.2	95.1	93.8	91.4	88.2	1.5	384	1	0	0	0	0	0	15	30	9
SM2 or deeper than SM2	510	1	76	96.7	93.9	90.3	87.6	83.8	1.7	359	4	3	2	0	4	0	18	24	20
Others	25	0	11	90.0	90.0	84.0	78.0	78.0	9.8	10	0	0	0	0	0	0	0	0	4
Inconclusive	8	0	2	100.0	100.0	100.0	100.0	100.0		6	0	0	0	0	0	0	0	0	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(-)	6,360	5	1,324	98.6	96.8	94.8	92.6	90.1	0.4	4,493	11	2	1	0	5	0	180	217	127
ly(+)	324	1	49	96.4	93.4	89.0	85.6	80.9	2.3	219	4	3	1	0	2	0	13	19	14
Inconclusive	26	0	9	95.5	95.5	90.4	80.1	74.3	10.0	12	0	0	0	0	0	0	1	1	3

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(-)	6,514	6	1,348	98.5	96.8	94.7	92.4	89.9	0.4	4,599	14	4	1	0	6	0	187	223	132
v(+)	170	0	26	96.8	91.0	85.7	83.1	79.0	3.3	112	1	1	1	0	1	0	6	13	9
Inconclusive	26	0	8	95.7	95.7	90.9	80.5	74.7	9.9	13	0	0	0	0	0	0	1	1	3

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(-)	5,743	4	1,209	98.5	96.8	94.6	92.2	89.7	0.4	5,231	13	4	2	0	6	0	167	202	118
UL(+)	822	2	123	98.1	95.7	93.7	92.2	89.3	1.1	619	2	1	0	0	1	0	22	31	23
Inconclusive	145	0	50	98.4	95.9	94.1	90.4	89.3	2.9	83	0	0	0	0	0	0	5	4	3

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	6,224	6	1,286	98.5	96.7	94.6	92.4	90.0	0.4	4,400	12	2	2	0	6	0	172	220	124
HM1	189	0	34	98.3	95.4	93.0	88.0	82.9	3.0	127	1	1	0	0	0	0	9	7	10
HMX	297	0	62	97.9	96.4	92.2	89.4	85.3	2.2	197	2	2	0	0	1	0	13	10	10

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	6,403	5	1,325	98.5	96.7	94.6	92.3	89.8	0.4	4,515	12	1	1	0	6	0	185	225	133
VM1	151	1	22	96.5	92.8	90.6	88.3	82.9	3.2	106	1	2	1	0	1	0	5	9	4
VMX	156	0	35	97.3	96.6	90.9	89.4	87.0	2.9	103	2	2	0	0	0	0	4	3	7

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	6,055	5	1,255	98.6	96.8	94.7	92.5	90.1	0.4	4,282	11	0	1	0	6	0	166	212	122
Positive or inconclusive resected margins	655	1	127	97.4	95.4	92.1	89.1	85.0	1.5	442	4	5	1	0	1	0	28	25	22

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	3,380	1	760	98.8	97.3	95.2	92.8	90.5	0.5	2,358	6	0	0	0	1	0	88	114	63
Curative resection for expanded indication	1,980	3	385	98.7	96.6	94.6	92.7	90.5	0.7	1,429	2	0	0	0	2	0	58	66	38
Non-curative resection	1,350	2	237	97.5	95.1	92.5	89.8	86.2	1.0	947	7	5	2	0	4	0	48	57	43

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	791	2	168	96.5	93.8	91.2	87.6	83.7	1.4	511	3	4	2	0	2	0	31	36	34
Surgery	474	0	53	99.3	97.8	96.0	94.8	91.8	1.3	385	4	0	0	0	1	0	10	16	5
Endoscopic resection	21	0	4	94.7	94.7	94.7	94.7	89.2	7.2	15	0	0	0	0	0	0	1	1	0
Endoscopic ablation	46	0	7	97.8	90.8	83.9	76.9	74.4	6.7	28	0	1	0	0	0	0	4	2	4
Others	18	0	5	93.8	87.5	72.9	72.9	64.8	12.9	8	0	0	0	0	1	0	2	2	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
-	1,104	0	197	98.8	97.3	95.4	93.4	91.5	0.9	823	0	1	1	0	1	0	36	29	16
+	2,495	1	475	99.4	98.3	96.9	95.5	94.0	0.5	1,888	4	1	1	0	2	0	40	61	23
Inconclusive	2,816	4	679	97.6	94.8	91.9	88.5	85.0	0.7	1,784	11	3	0	0	4	0	110	142	83
Others	295	1	31	97.5	96.8	93.5	92.0	87.2	2.0	229	0	0	0	0	0	0	8	5	22

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	436	1	91	98.5	97.0	94.1	89.4	86.8	1.8	296	1	1	0	0	2	0	15	22	8
Performed	1,672	0	272	99.6	99.0	98.2	97.4	96.2	0.5	1,343	3	0	0	0	0	0	16	24	14
Inconclusive	387	0	112	99.4	96.7	94.2	93.8	91.7	1.6	249	0	0	1	0	0	0	9	15	1