

# 胃癌学会全国登録解析結果報告 —2008年EMR/ESD症例—

## 1. 登録施設 計124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 恵佑会札幌病院  
釧路労災病院 青森県立中央病院 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 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 仙台厚生病院 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 新潟大学医歯学総合病院 新潟県立がんセンター新潟病院 市立砺波総合病院 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 福井県済生会病院 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 埼玉医科大学国際医療センター 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 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 国立がん研究センター東病院  
柏厚生総合病院 川崎市立川崎病院 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  
東京通信病院 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 東京都立広尾病院 国立病院機構・東京医療センター  
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 山梨大学医学部附属病院

## 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 羽島市民病院 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 大津市民病院 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 院済生会中和病院 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 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 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 広島市立安佐市民病院  
広島記念病院 広島市立広島市民病院 呉医療センター・中国がんセンター 一般財団法人防府消化器病センター防府胃腸病院 徳島県立中央病院  
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 長崎大学病院 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 鹿児島共済会南風病院  
社会医療法人敬愛会中頭病院

2. 症例数                    6,747 例

3. 対象症例

登録対象は 2008 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

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

All Patients			
Age	mean±SD	70.8	±9.156
	-39	20	( 0.3%)
	40-59	774	(11.5%)
	60-79	4,794	(71.1%)
	80-	1,159	(17.2%)
Sex	Male	5,150	(76.3%)
	Female	1,597	(23.7%)
Prior endoscopic treatment	-	6,612	(98.0%)
	+	135	( 2.0%)
Stomach condition	Normal stomach	6,525	(96.7%)
	Remnant stomach	173	( 2.6%)
	Gastric tube	49	( 0.7%)
Tumor location	U	1,302	(19.3%)
	M	2,489	(36.9%)
	L	2,945	(43.6%)
	Data unavailable	11	( 0.2%)
Cross-sectional parts	Less	2,823	(41.8%)
	Gre	1,221	(18.1%)
	Ant	1,209	(17.9%)
	Post	1,483	(22.0%)
	Data unavailable	11	( 0.2%)
Macroscopic type	Depressed type	3,609	(53.5%)
	Elevated type	2,440	(36.2%)
	Mixed type	680	( 10.1%)
	Others	17	( 0.3%)
	Data unavailable	1	( 0.0%)
Method of endoscopic resection	ESD	6,498	(96.3%)
		248	(3.7%)
	Others	1	(0.0%)
En-bloc or piecemeal resection	En-bloc resection	6,569	(97.4%)
	Piecemeal resection	175	( 2.6%)
	Others	3	( 0.0%)
Bleeding requiring emergency surgery	Presence	14	( 0.2%)
	Absence	6,733	(99.8%)
Perforation requiring emergency surgery	Presence	17	( 0.3%)
	Absence	6,730	(99.7%)
Histological type	pap	198	( 2.9%)
	tub1	5,246	(77.8%)
	tub2	1,025	(15.2%)
	por	132	( 2.0%)
	sig	126	( 1.9%)
	muc	5	( 0.1%)
	Others	8	( 0.1%)
	Inconclusive	7	( 0.1%)

Depth of tumor invasion	M	5,647	(83.7%)
	SM1	513	( 7.6%)
	SM2 or deeper than SM2	545	( 8.1%)
	Others	24	( 0.4%)
	Inconclusive	18	( 0.3%)
Lymphatic invasion(ly)	-	6,420	(95.2%)
	+	305	( 4.5%)
	Inconclusive	22	( 0.3%)
Venous invasion(v)	-	6,543	(97.0%)
	+	179	( 2.7%)
	Inconclusive	25	( 0.4%)
UL	-	5,890	(87.3%)
	+	732	(10.8%)
	Inconclusive	123	( 1.8%)
	Data unavailable	2	( 0.0%)
Horizontal margin	HM0	6,237	(92.4%)
	HM1	221	( 3.3%)
	HMX	289	( 4.3%)
Vertical margin	VM0	6,441	(95.5%)
	VM1	182	( 2.7%)
	VMX	124	( 1.8%)
En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	6,053	(89.7%)
	Positive or inconclusive resected margins	694	(10.3%)
Curability	Curative resection	3,341	(49.4%)
	Curative resection for expanded indication	1,990	(29.5%)
	Non-curative resection	1,416	(21.0%)
Subsequent treatment for non-curative resection	No additional treatment	842	(59.5%)
	Surgery	497	(35.1%)
	Endoscopic resection	12	( 0.8%)
	Endoscopic ablation	58	( 4.1%)
	Others	7	( 0.5%)
Total		6,747	( 100.0%)

Methods of endoscopic resection		ESD	EMR
Age	mean±SD	70.7 ±9.160	72.6 ±8.873
	-39	20 (0.3%)	0 (0.0%)
	40-59	757 (11.6%)	17 (6.9%)
	60-79	4,618 (71.1%)	176 (71.0%)
	80-	1,103 (17.0%)	55 (22.2%)
Sex	Male	4,955 (76.3%)	194 (78.2%)
	Female	1,543 (23.7%)	54 (21.8%)
Prior endoscopic treatment	-	6,371 (98.0%)	240 (96.8%)
	+	127 (2.0%)	8 (3.2%)
Stomach condition	Normal stomach	6,294 (96.9%)	230 (92.7%)
	Remnant stomach	159 (2.4%)	14 (5.6%)
	Gastric tube	45 (0.7%)	4 (1.6%)
Tumor location	U	1,253 (19.3%)	49 (19.8%)
	M	2,406 (37.0%)	83 (33.5%)
	L	2,829 (43.5%)	115 (46.4%)
	Data unavailable	10 (0.2%)	1 (0.4%)
Cross-sectional parts	Less	2,725 (41.9%)	97 (39.1%)
	Gre	1,163 (17.9%)	58 (23.4%)
	Ant	1,161 (17.9%)	48 (19.4%)
	Post	1,438 (22.1%)	45 (18.1%)
	Data unavailable	11 (0.2%)	0 (0.0%)
Macroscopic type	Depressed type	3,505 (53.9%)	103 (41.5%)
	Elevated type	2,310 (35.5%)	130 (52.4%)
	Mixed type	668 (10.3%)	12 (4.8%)
	Others	14 (0.2%)	3 (1.2%)
	Data unavailable	1 (0.0%)	0 (0.0%)
En-bloc or piecemeal resection	En-bloc resection	6,384 (98.2%)	184 (74.2%)
	Piecemeal resection	111 (1.7%)	64 (25.9%)
	Data unavailable	3 (0.0%)	0 (0.0%)
Bleeding requiring emergency surgery	Presence	14 (0.2%)	0 (0.0%)
	Absence	6,484 (99.8%)	248 (100.0%)
Perforation requiring emergency surgery	Presence	17 (0.3%)	0 (0.0%)
	Absence	6,481 (99.7%)	248 (100.0%)
Histological type	pap	185 (2.8%)	13 (5.2%)
	tub1	5,040 (77.6%)	205 (82.7%)
	tub2	1,005 (15.5%)	20 (8.1%)
	por	127 (2.0%)	5 (2.0%)
	sig	123 (1.9%)	3 (1.2%)
	muc	5 (0.1%)	0 (0.0%)
	Others	7 (0.1%)	1 (0.4%)
	Inconclusive	6 (0.1%)	1 (0.4%)

		ESD	EMR
Depth of tumor invasion	M	5,425 (83.5%)	221 (89.1%)
	SM1	499 (7.7%)	14 (5.6%)
	SM2 or deeper than SM2	538 (8.3%)	7 (2.8%)
	Others	18 (0.3%)	6 (2.4%)
	Inconclusive	18 (0.3%)	0 (0.0%)
Lymphatic invasion(ly)	-	6,181 (95.1%)	238 (96.0%)
	+	298 (4.6%)	7 (2.8%)
	Inconclusive	19 (0.3%)	3 (1.2%)
Venous invasion(v)	-	6,301 (97.0%)	241 (97.2%)
	+	174 (2.7%)	5 (2.0%)
	Inconclusive	23 (0.4%)	2 (0.8%)
UL	-	5,681 (87.4%)	209 (84.3%)
	+	724 (11.1%)	8 (3.2%)
	Inconclusive	91 (1.4%)	31 (12.5%)
	Data unavailable	2 (0.0%)	0 (0.0%)
Horizontal margin	HM0	6,089 (93.7%)	147 (59.3%)
	HM1	191 (2.9%)	30 (12.1%)
	HMX	218 (3.4%)	71 (28.6%)
Vertical margin	VM0	6,219 (95.7%)	221 (89.1%)
	VM1	176 (2.7%)	6 (2.4%)
	VMX	103 (1.6%)	21 (8.5%)
En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	5,907 (90.9%)	145 (58.5%)
	Positive or inconclusive resected margins	591 (9.1%)	103 (41.5%)
Curability	Curative resection	3,228 (49.7%)	112 (45.2%)
	Curative resection for expanded indication	1,963 (30.2%)	27 (10.9%)
	Non-curative resection	1,307 (20.1%)	109 (44.0%)
Subsequent treatment for non-curative resection	No additional treatment	762 (58.3%)	80 (73.4%)
	Surgery	492 (37.6%)	5 (4.6%)
	Endoscopic resection	10 (0.8%)	2 (1.8%)
	Endoscopic ablation	36 (2.8%)	22 (20.2%)
	Others	7 (0.5%)	0 (0.0%)
Total		6,478 (100.0%)	248 (100.0%)

## Survival curve of patients

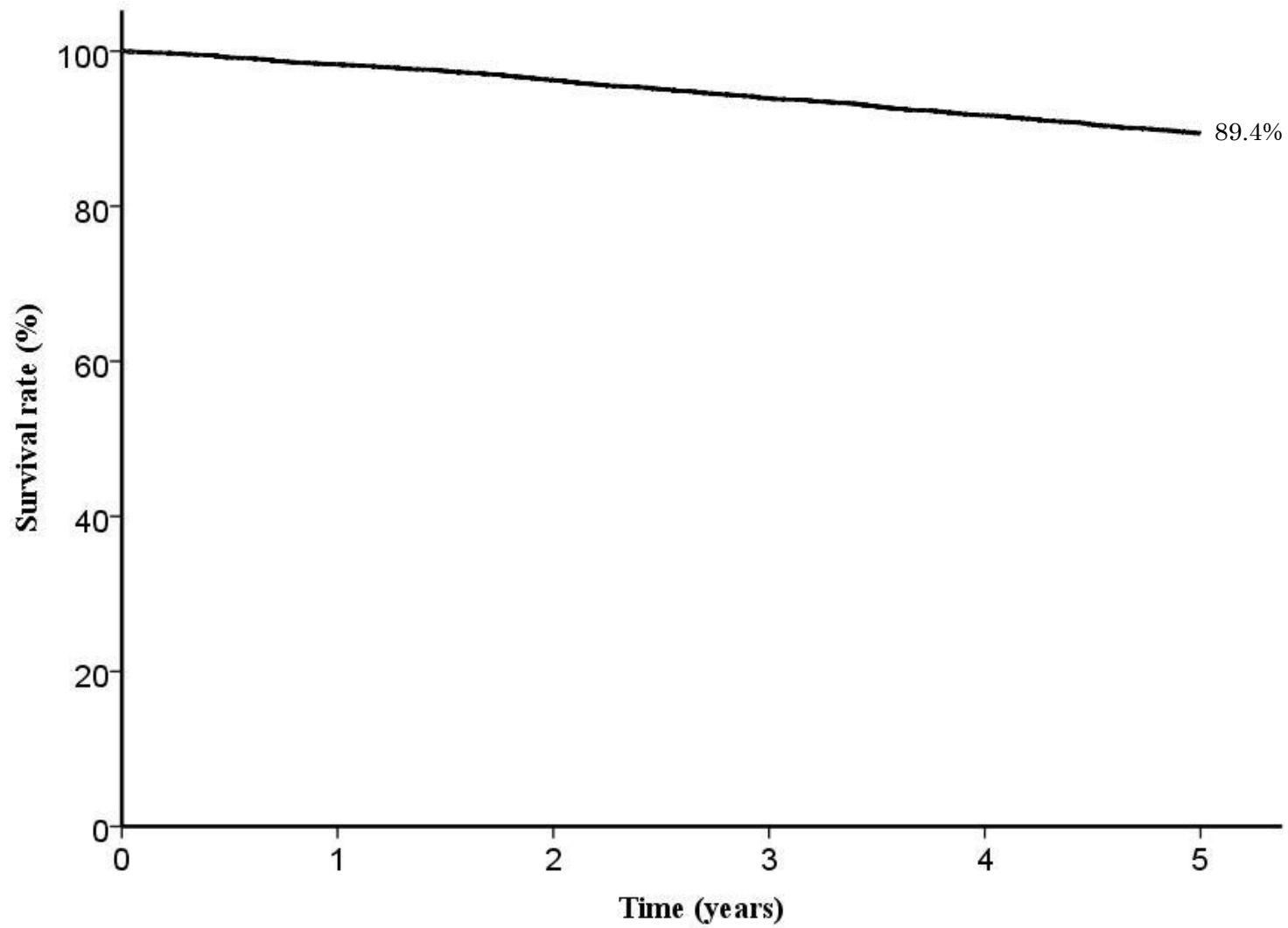


Fig. 1. Five year survival rates for all patients

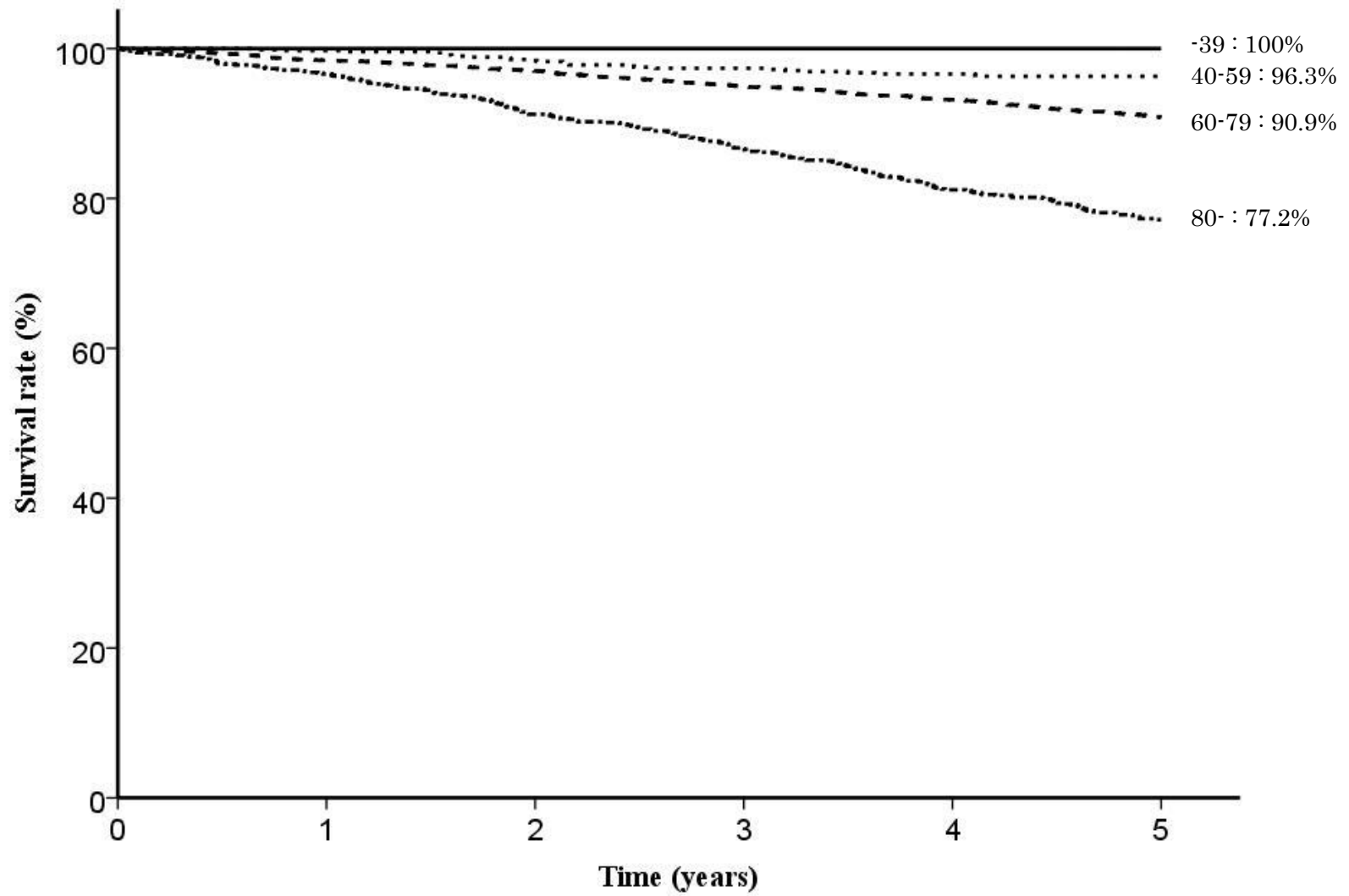


Fig. 2. Five year survival rates stratified by age

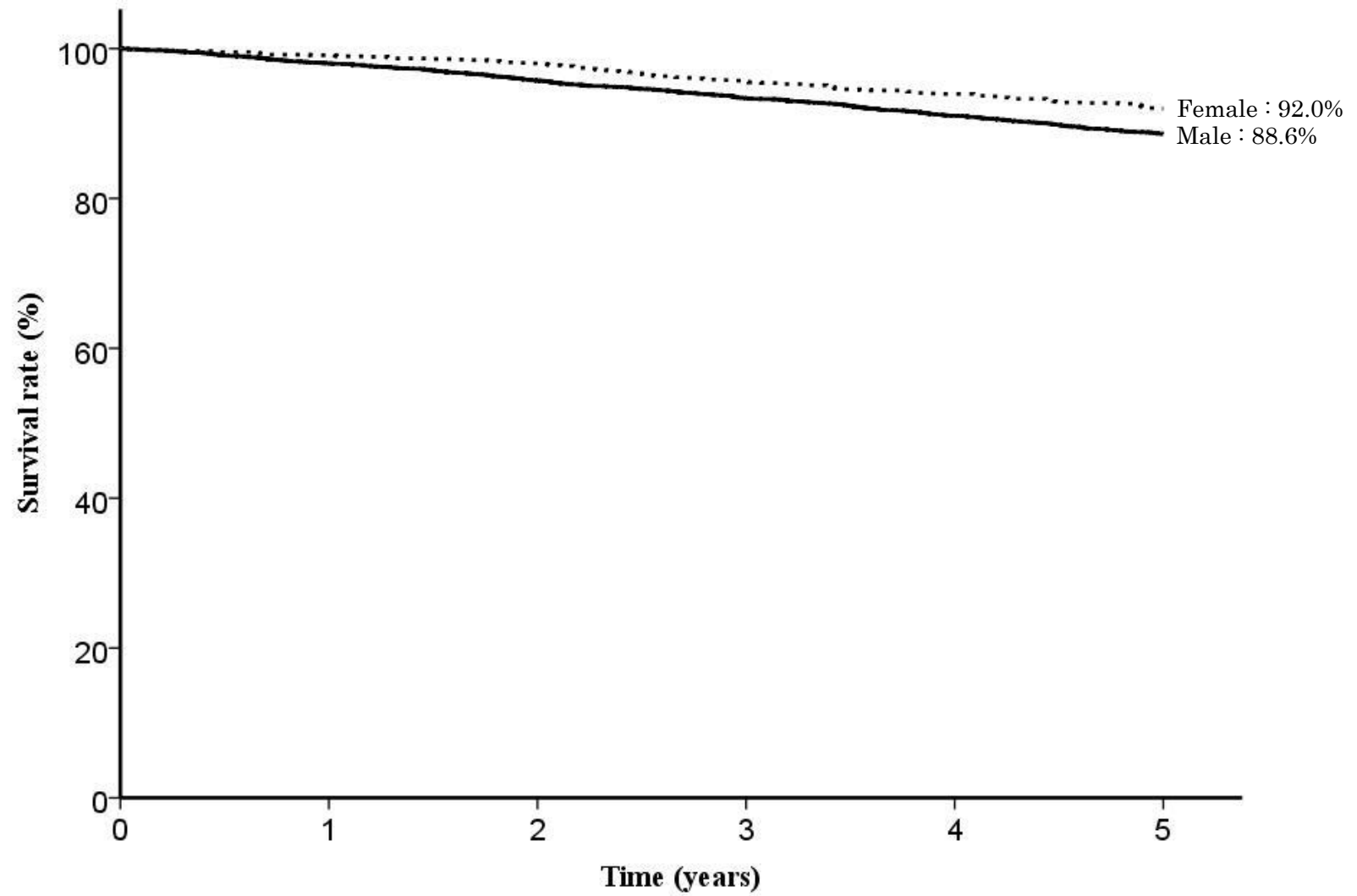


Fig. 3. Five year survival rates stratified by sex



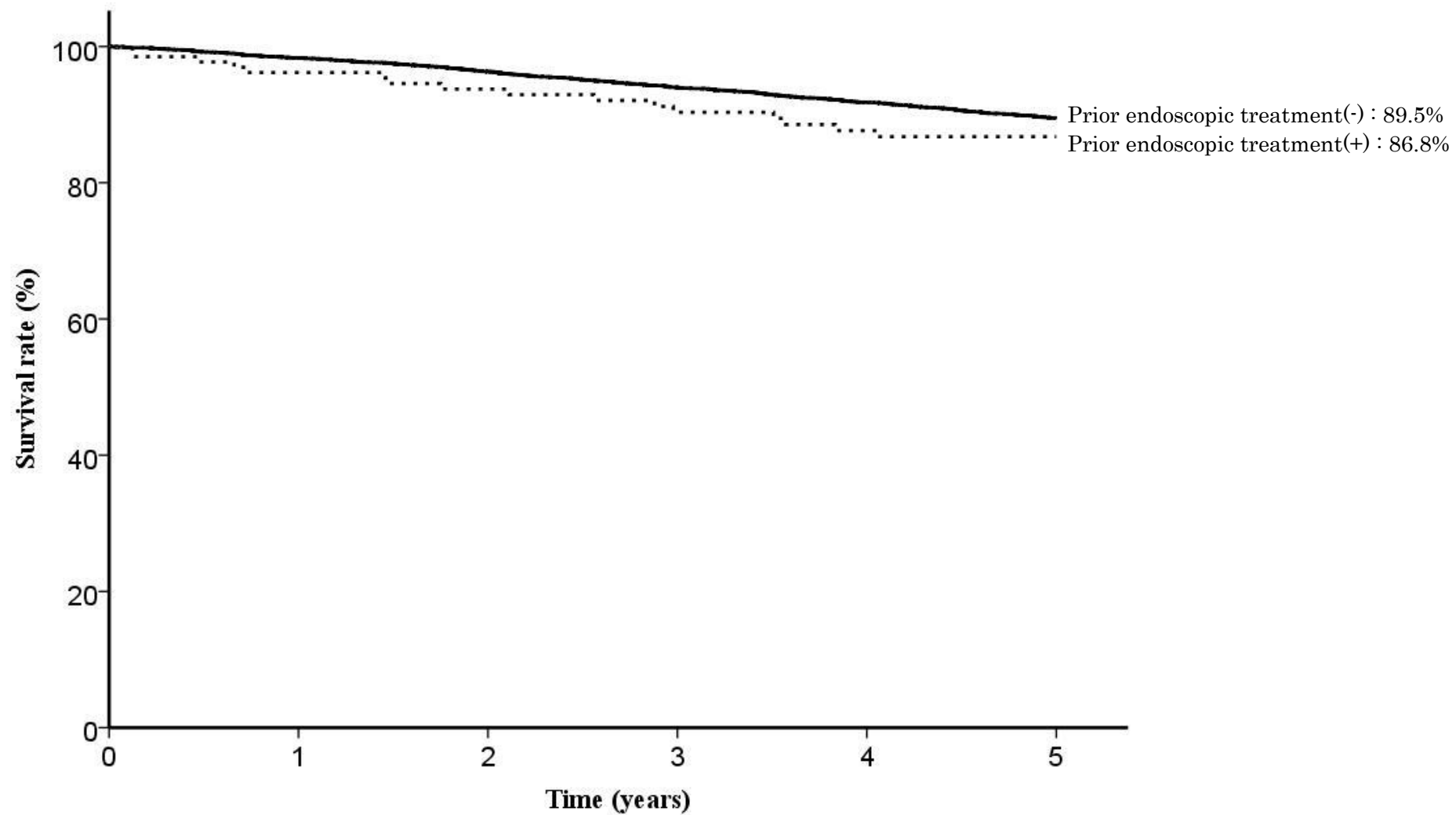


Fig. 4. Five year survival rates stratified by prior endoscopic treatment

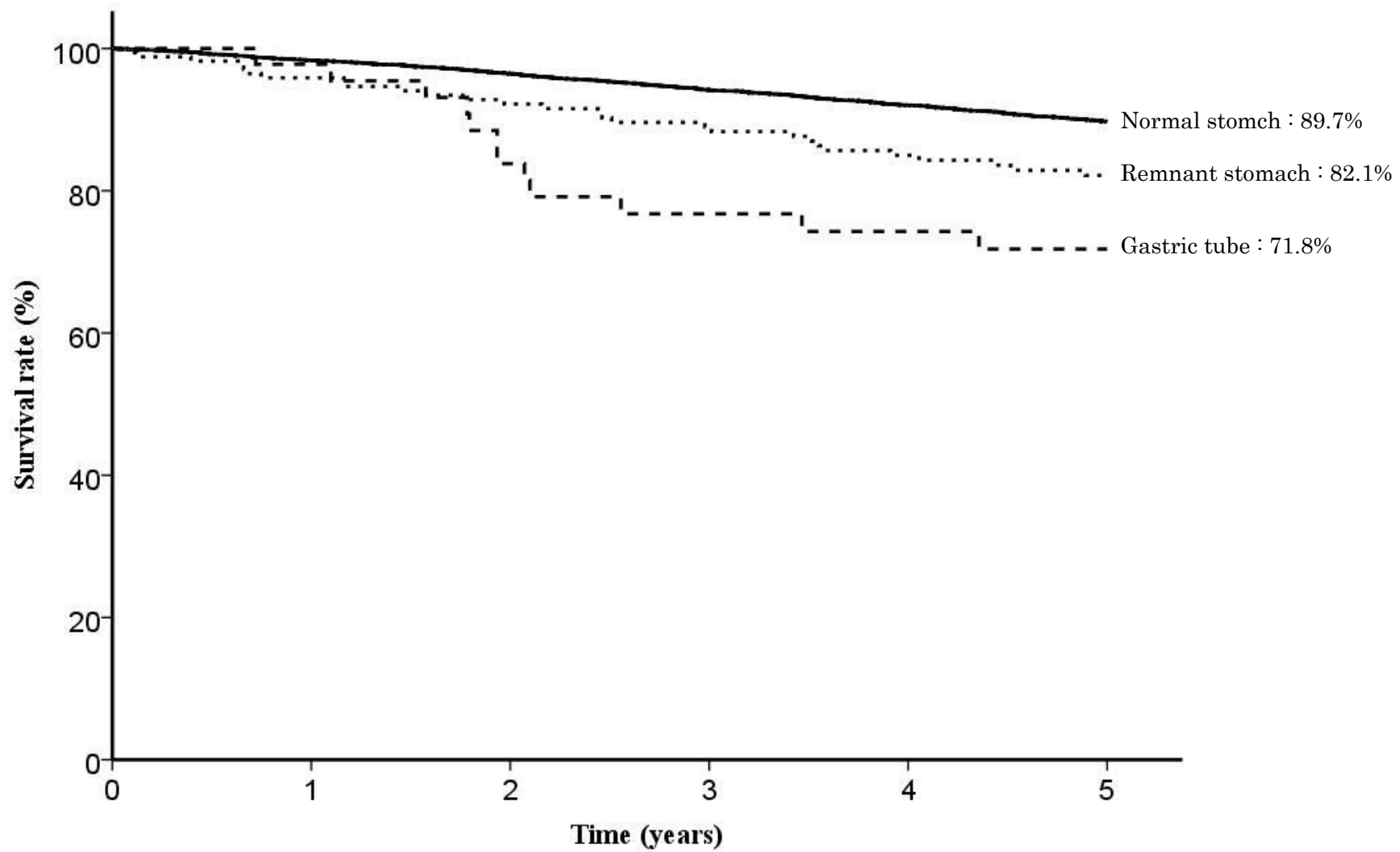


Fig. 5. Five year survival rates stratified by stomach condition

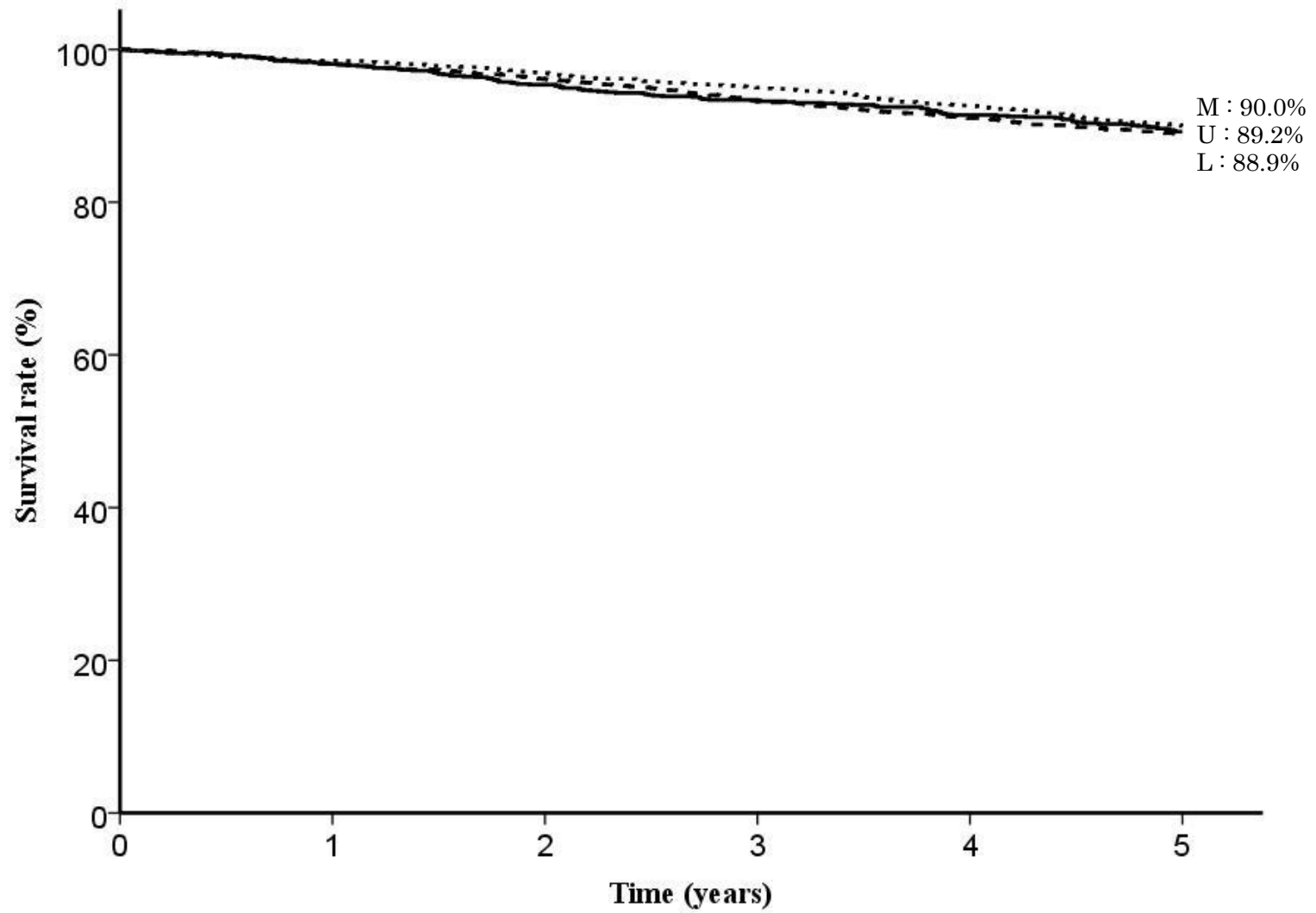


Fig. 6. Five year survival rates stratified by tumor location

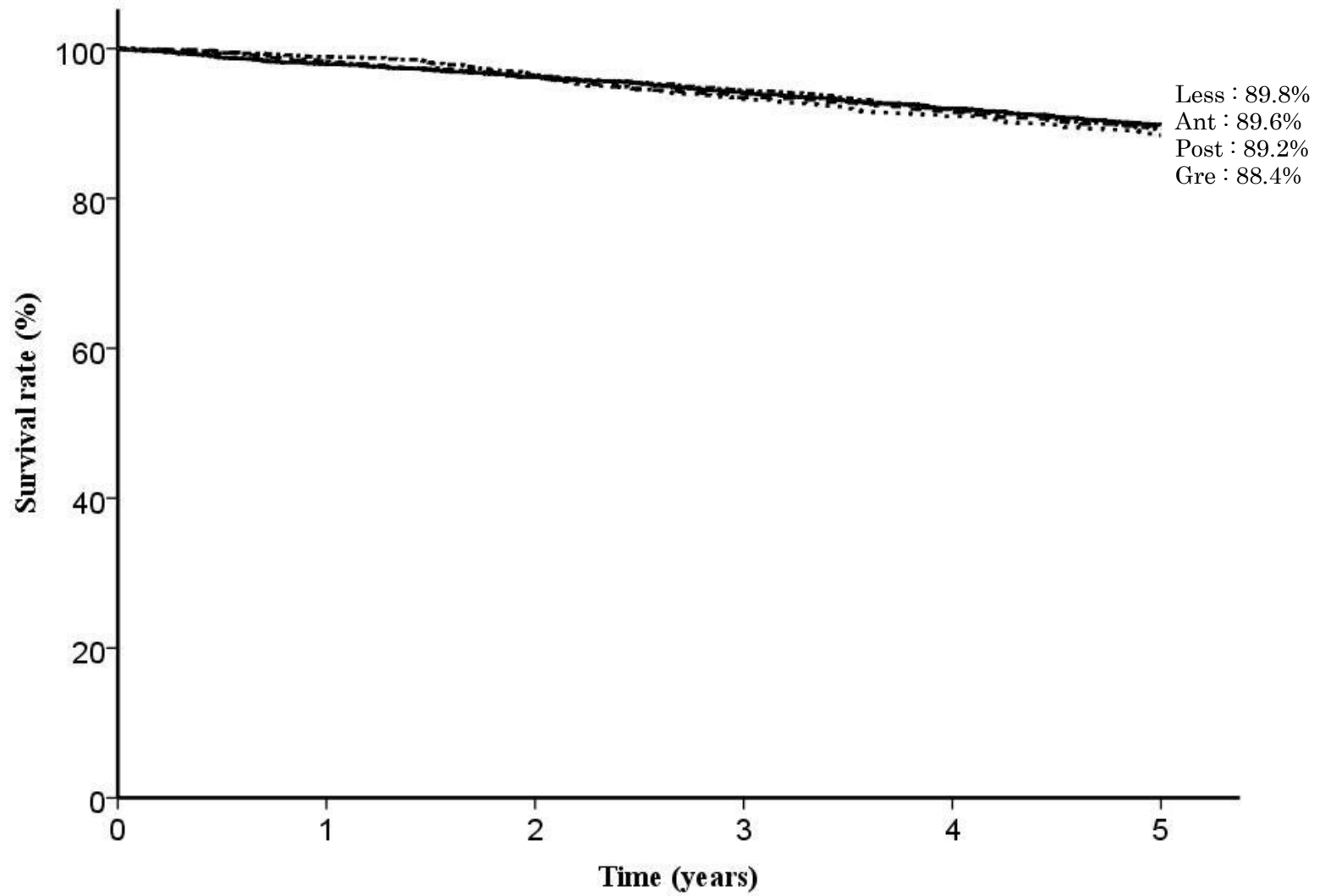


Fig. 7. Five year survival rates stratified by cross-sectional parts

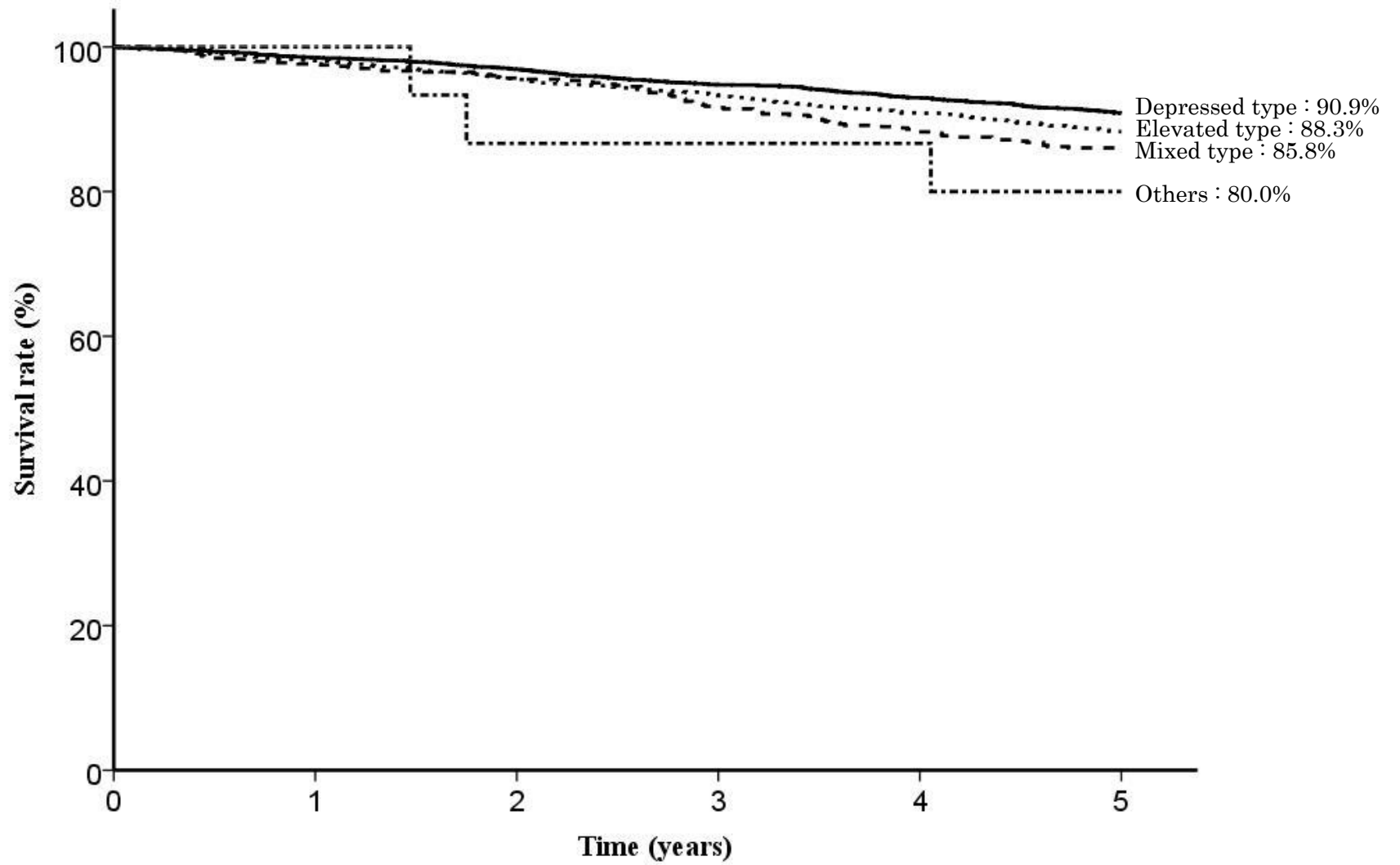


Fig. 8. Five year survival rates stratified by macroscopic type

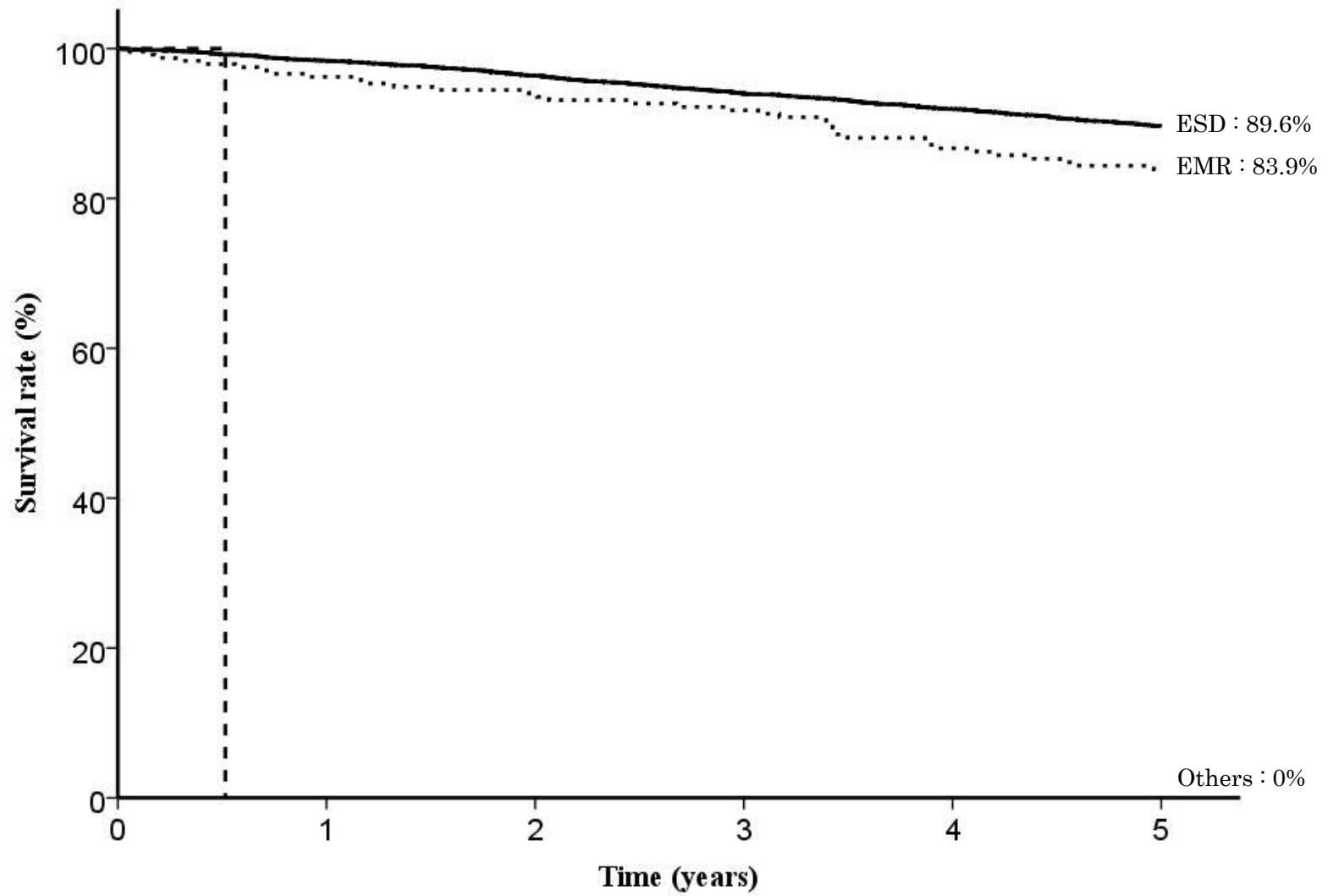


Fig. 9. Five year survival rates stratified by method of endoscopic resection

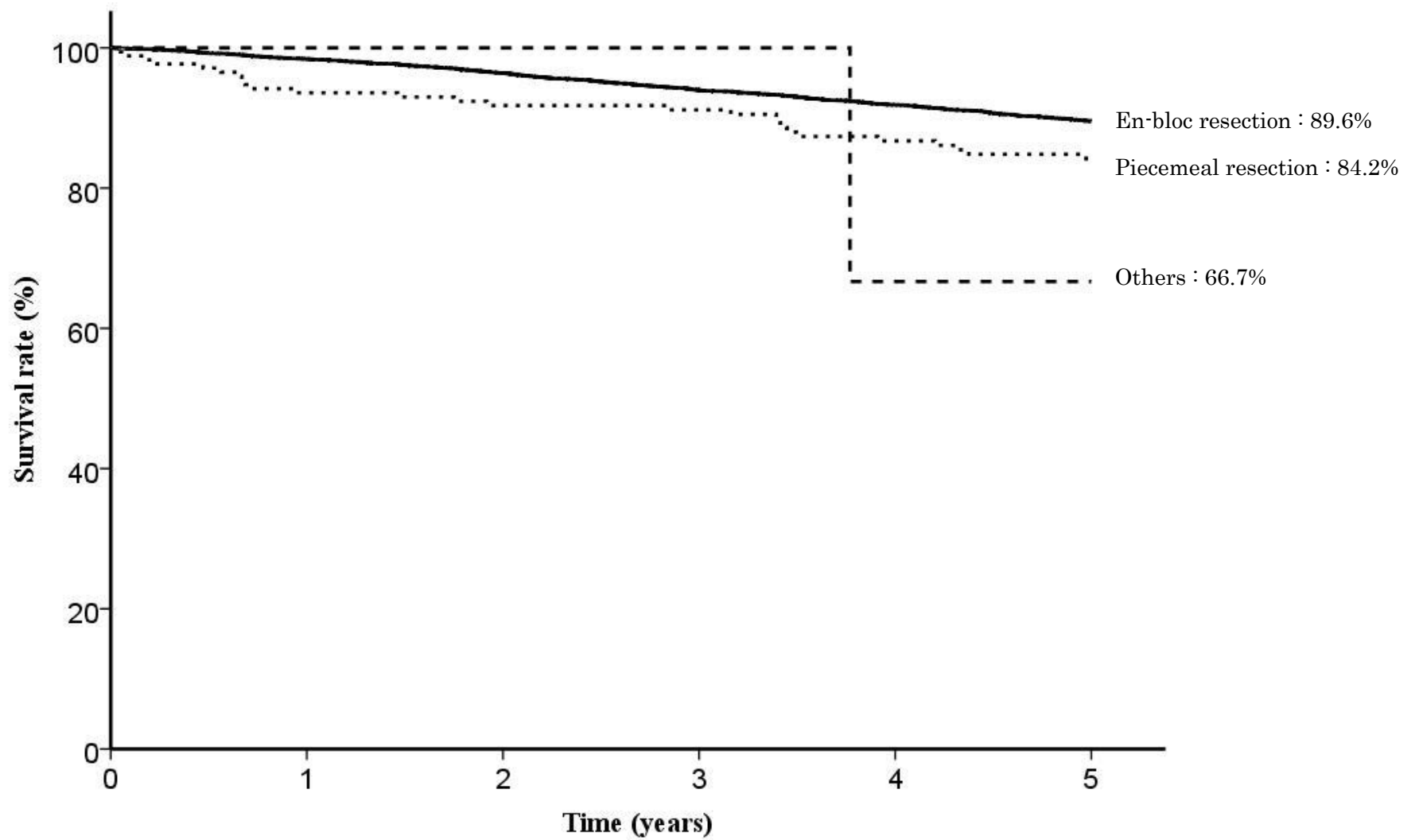


Fig. 10. Five year survival rates stratified by en-bloc or piecemeal resection

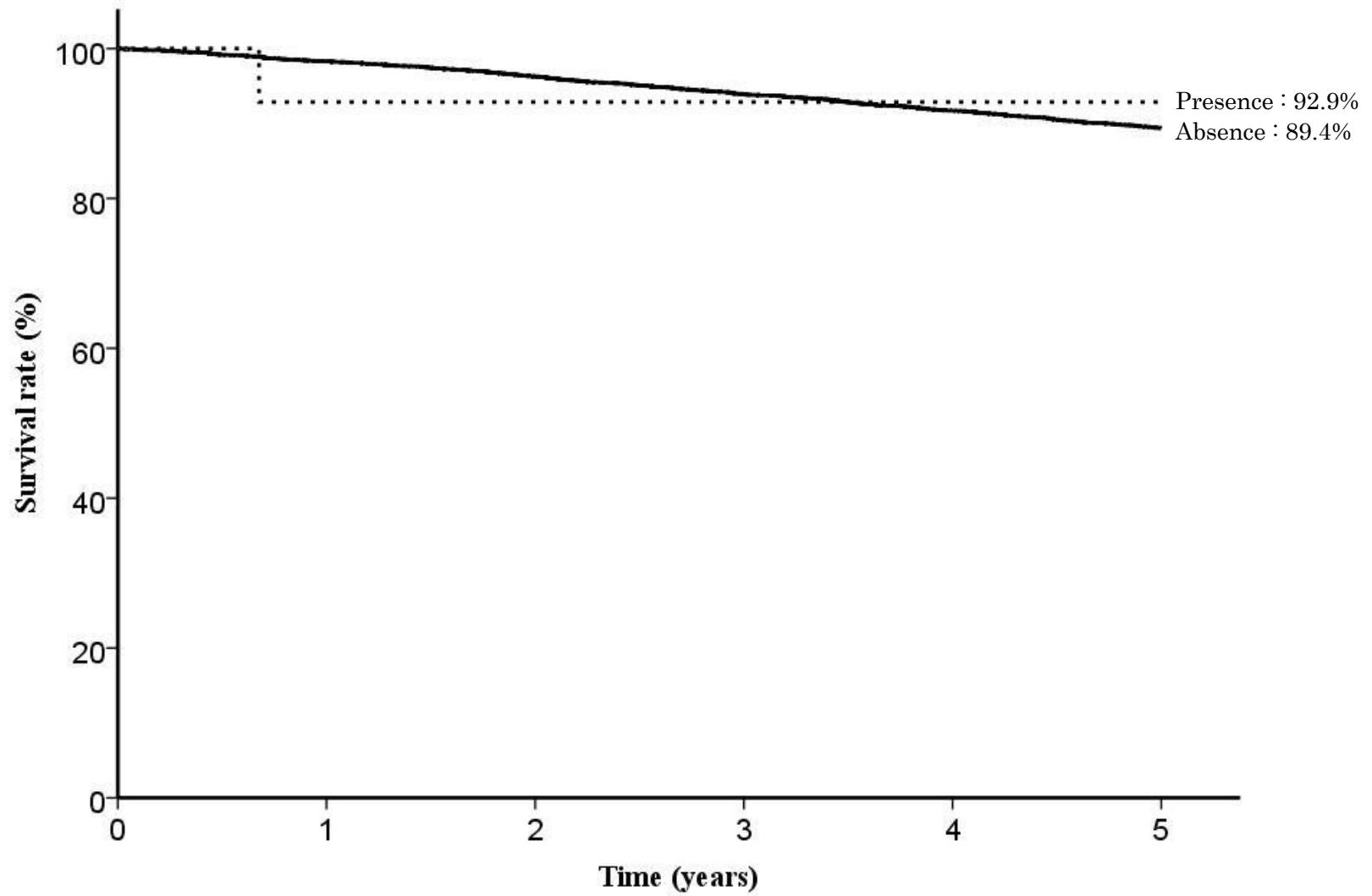


Fig. 11. Five year survival rates stratified by bleeding requiring emergency surgery



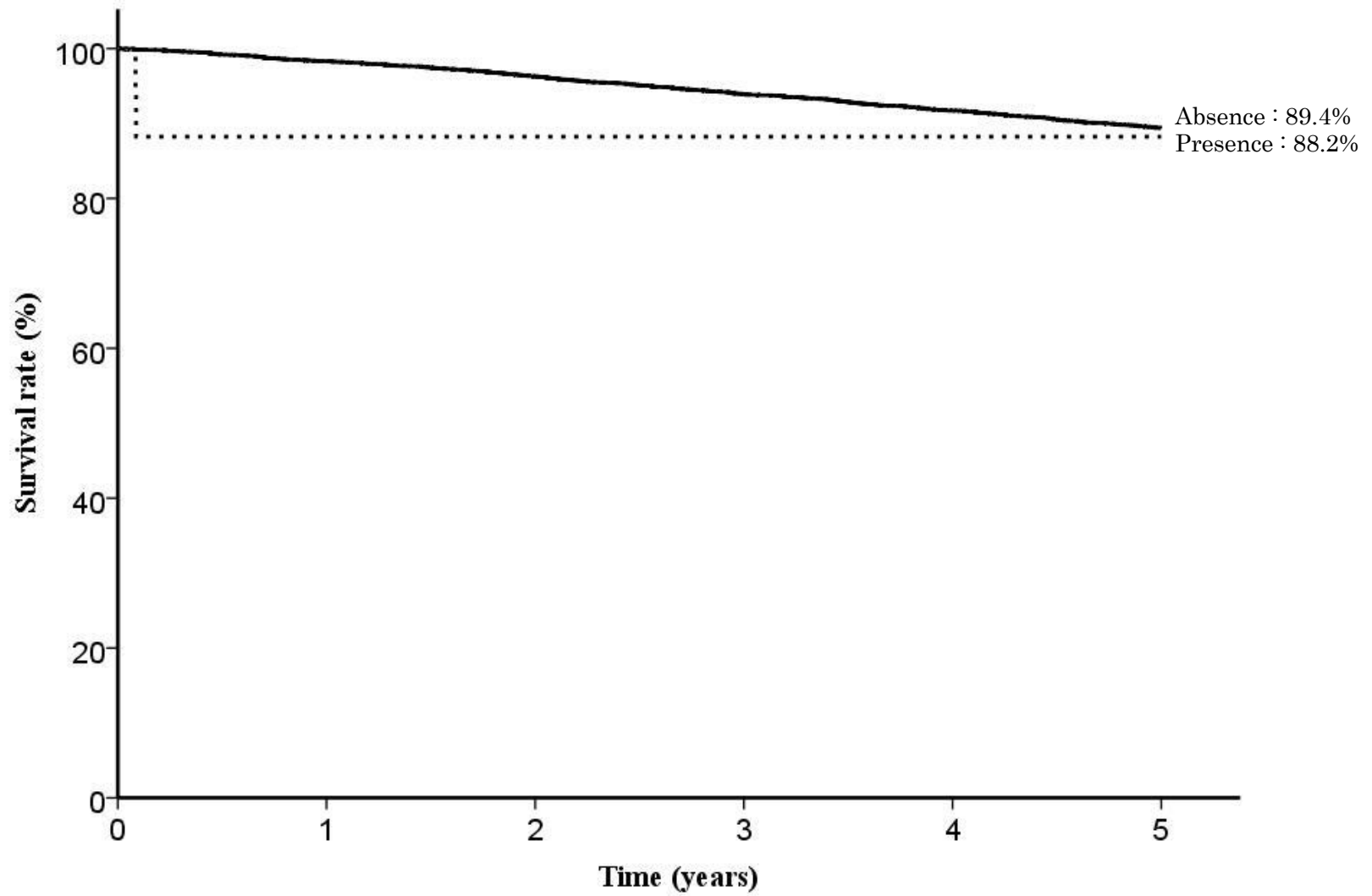


Fig. 12. Five year survival rates stratified by perforation requiring emergency surgery

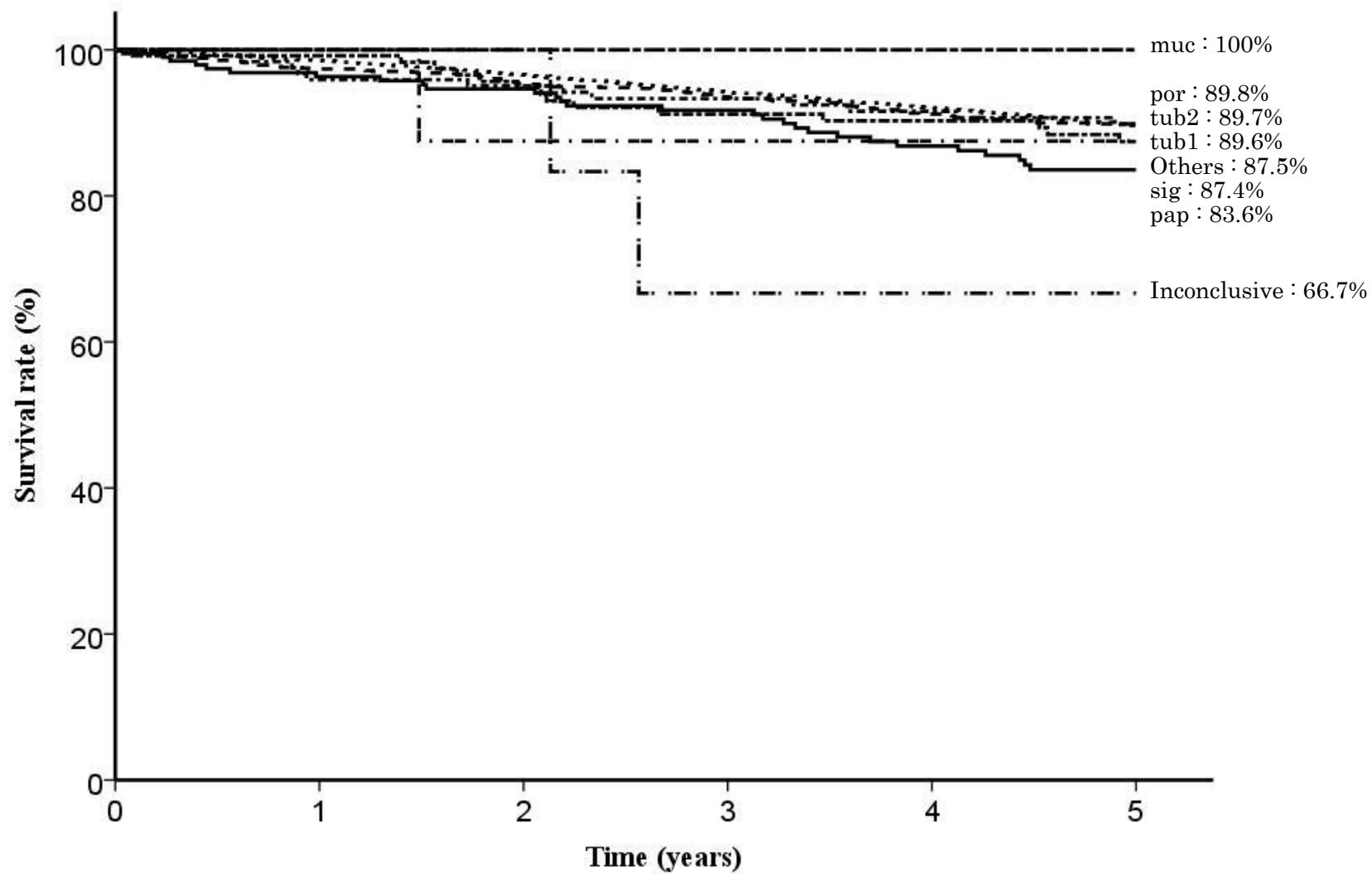


Fig. 13. Five year survival rates stratified by histological type

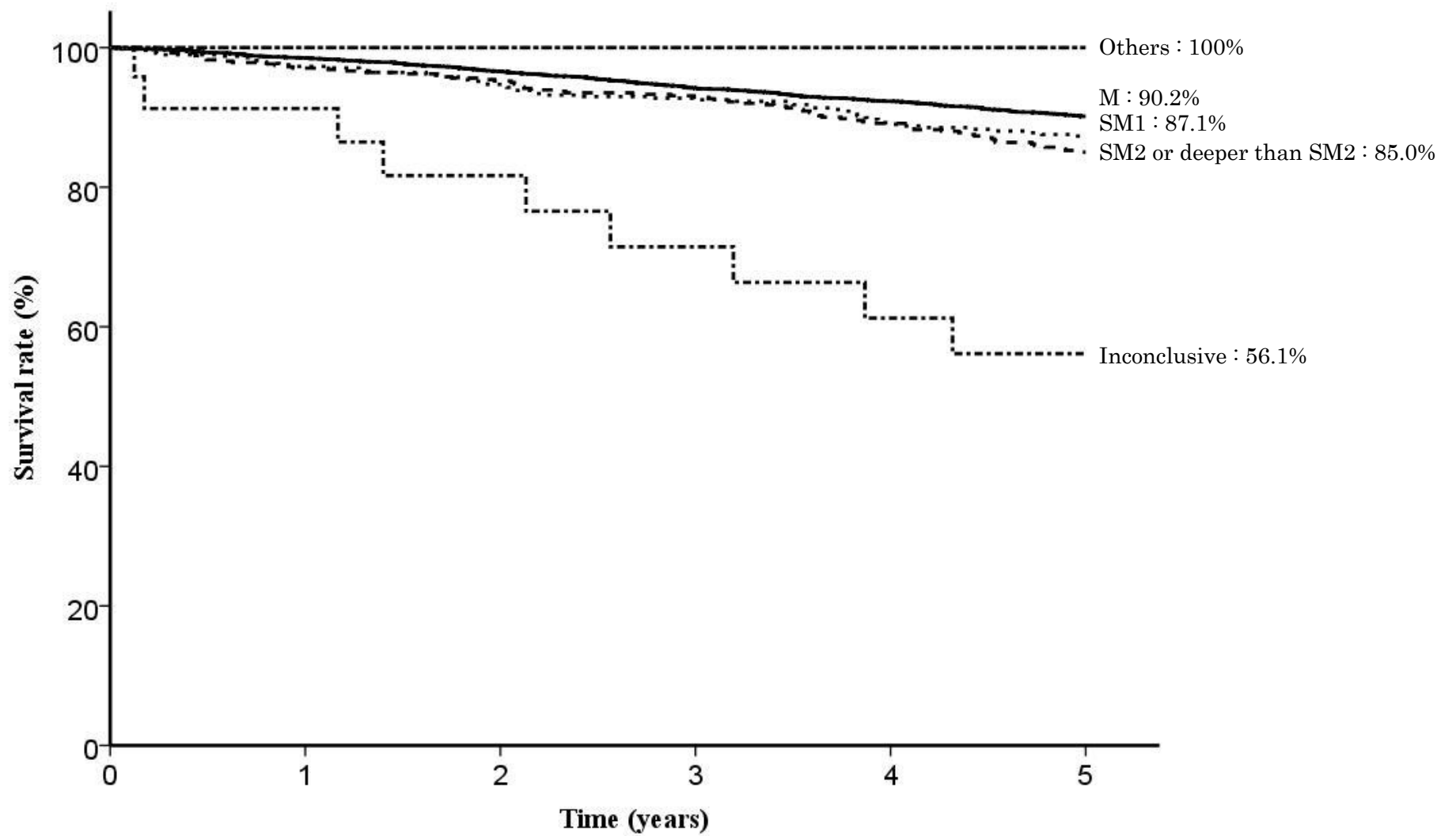


Fig. 14. Five year survival rates stratified by depth of tumor invasion

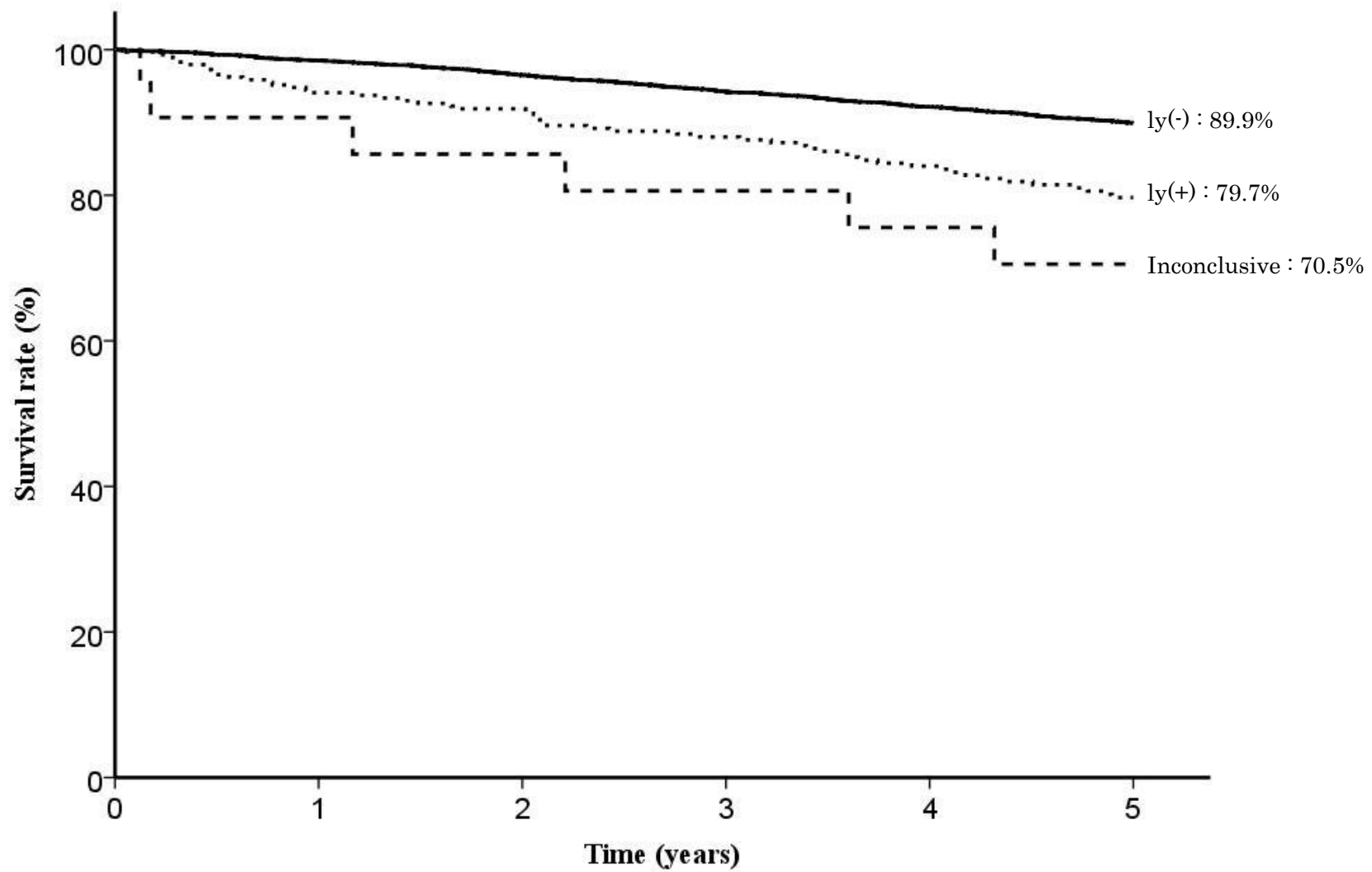


Fig. 15. Five year survival rates stratified by lymphatic invasion

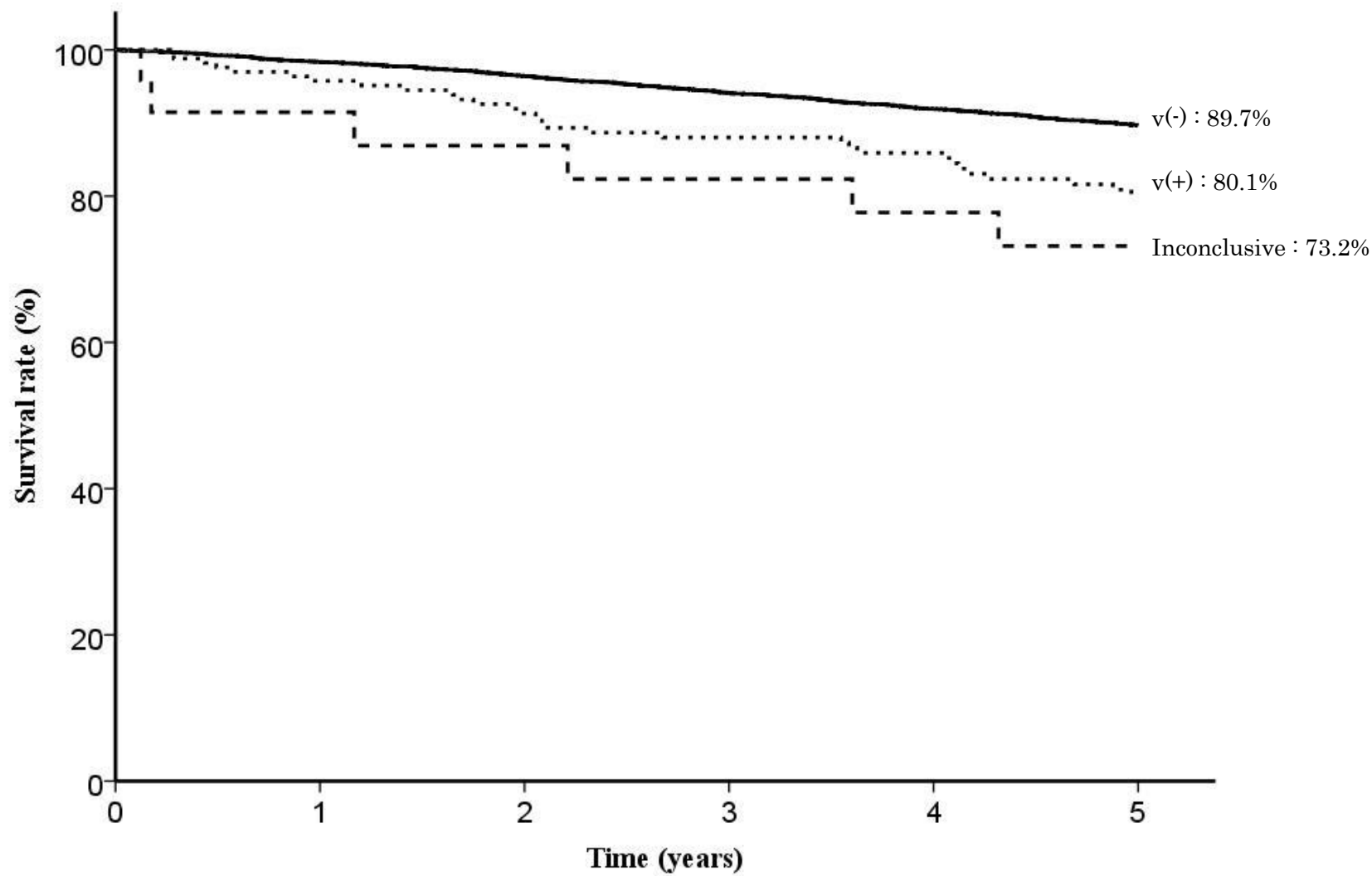


Fig. 16. Five year survival rates stratified by venous invasion

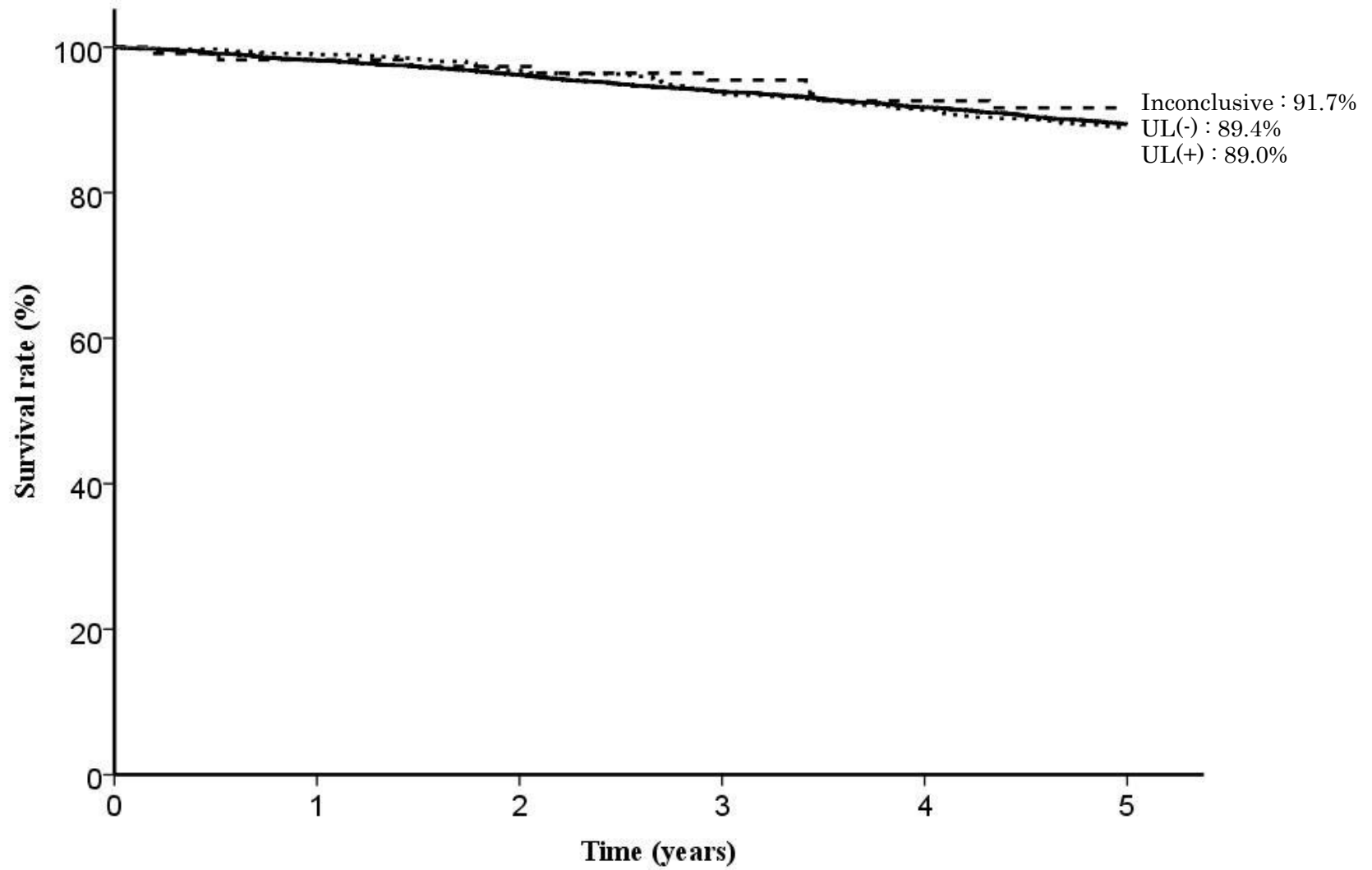


Fig. 17. Five year survival rates stratified by UL

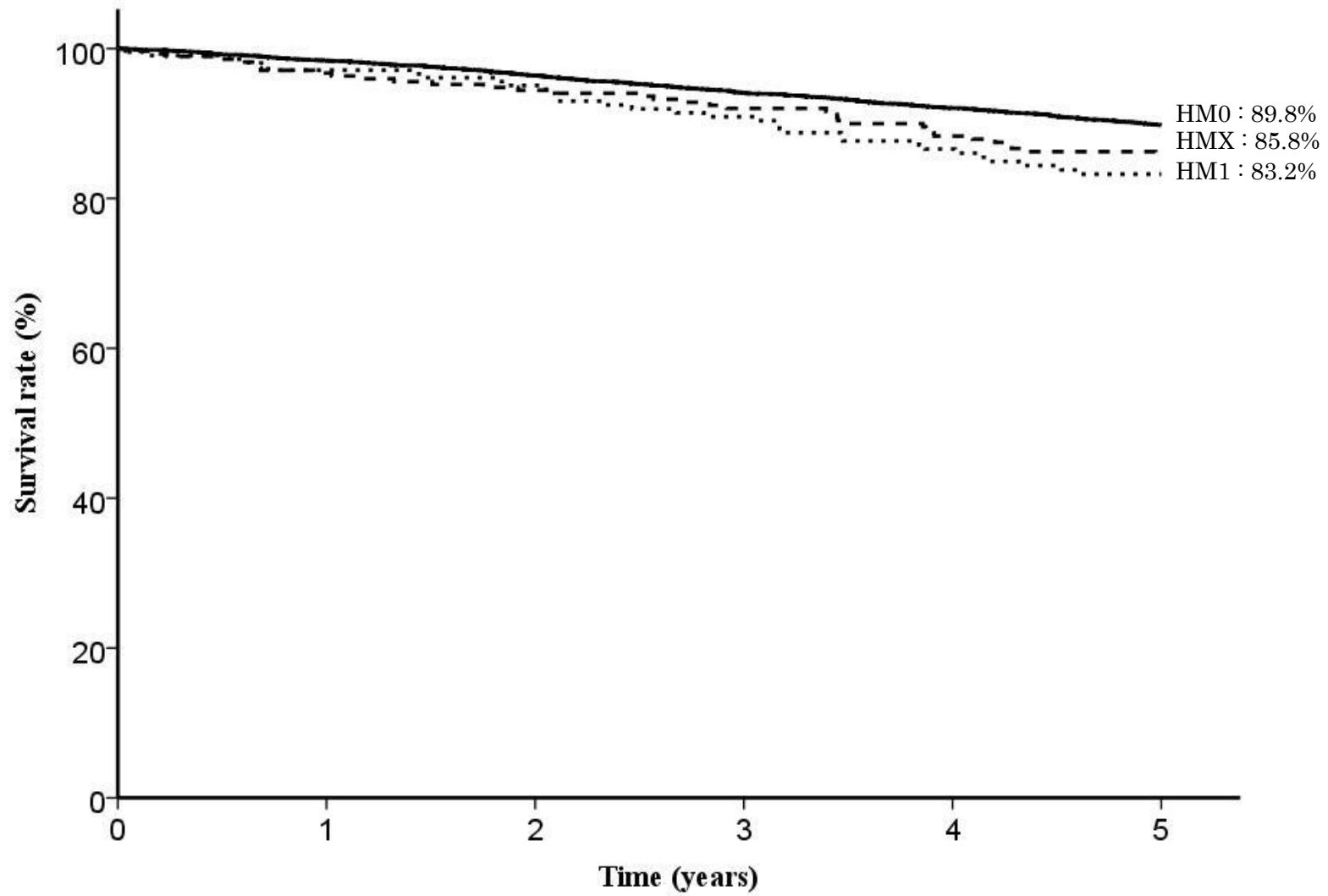


Fig. 18. Five year survival rates stratified by horizontal margin

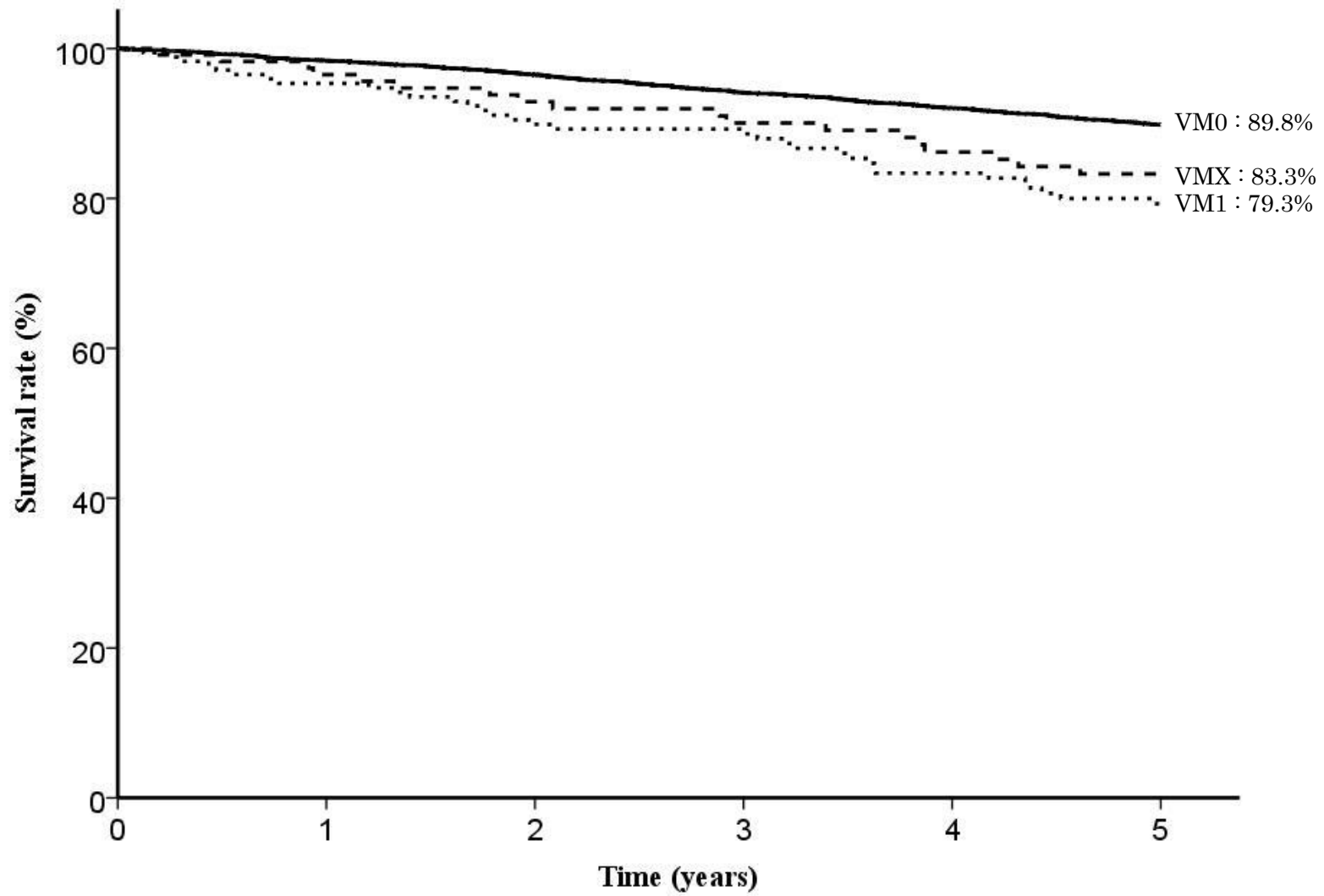


Fig. 19. Five year survival rates stratified by vertical margin



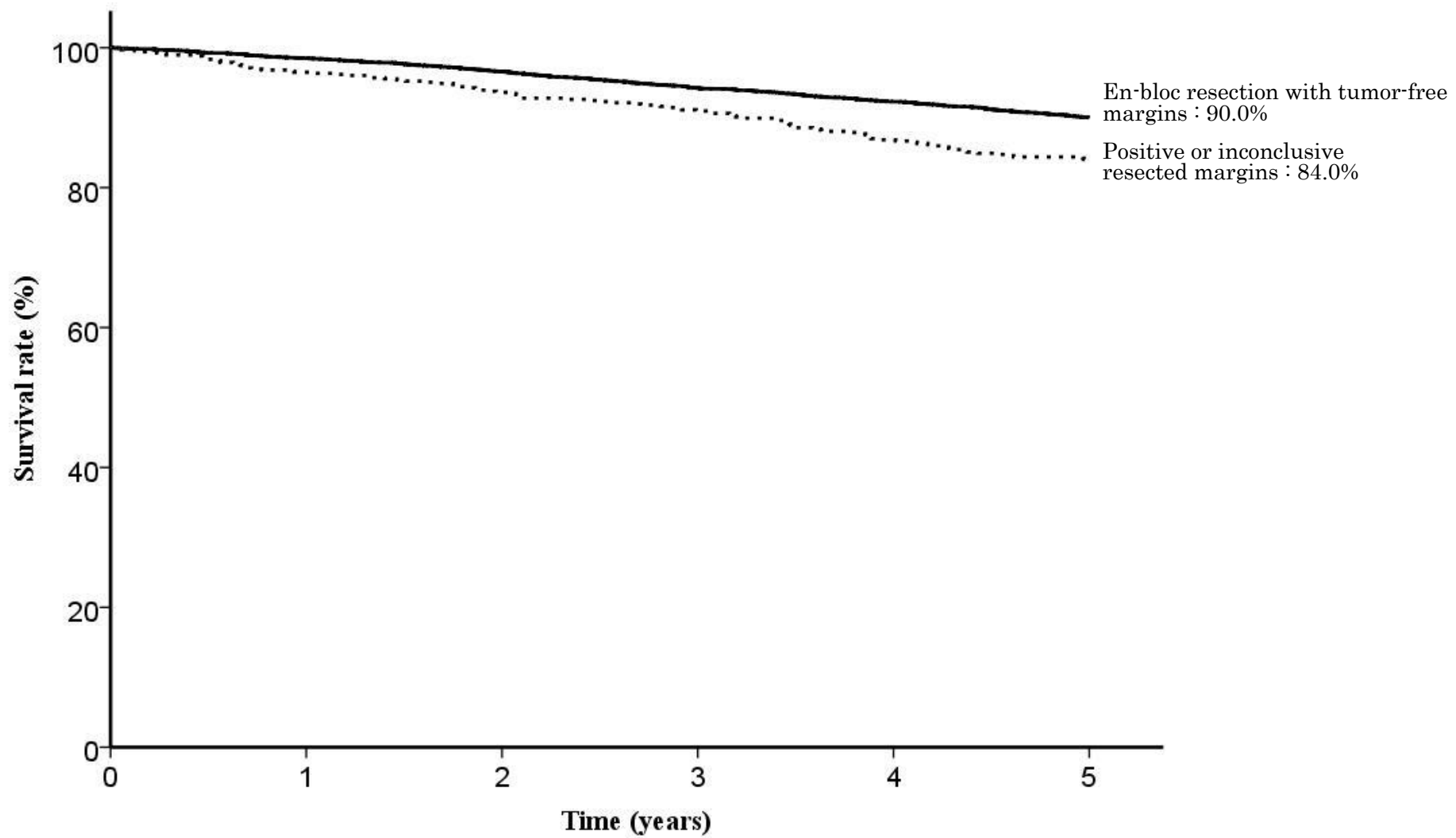


Fig. 20. Five year survival rates stratified by en-bloc resection with tumor-free margins

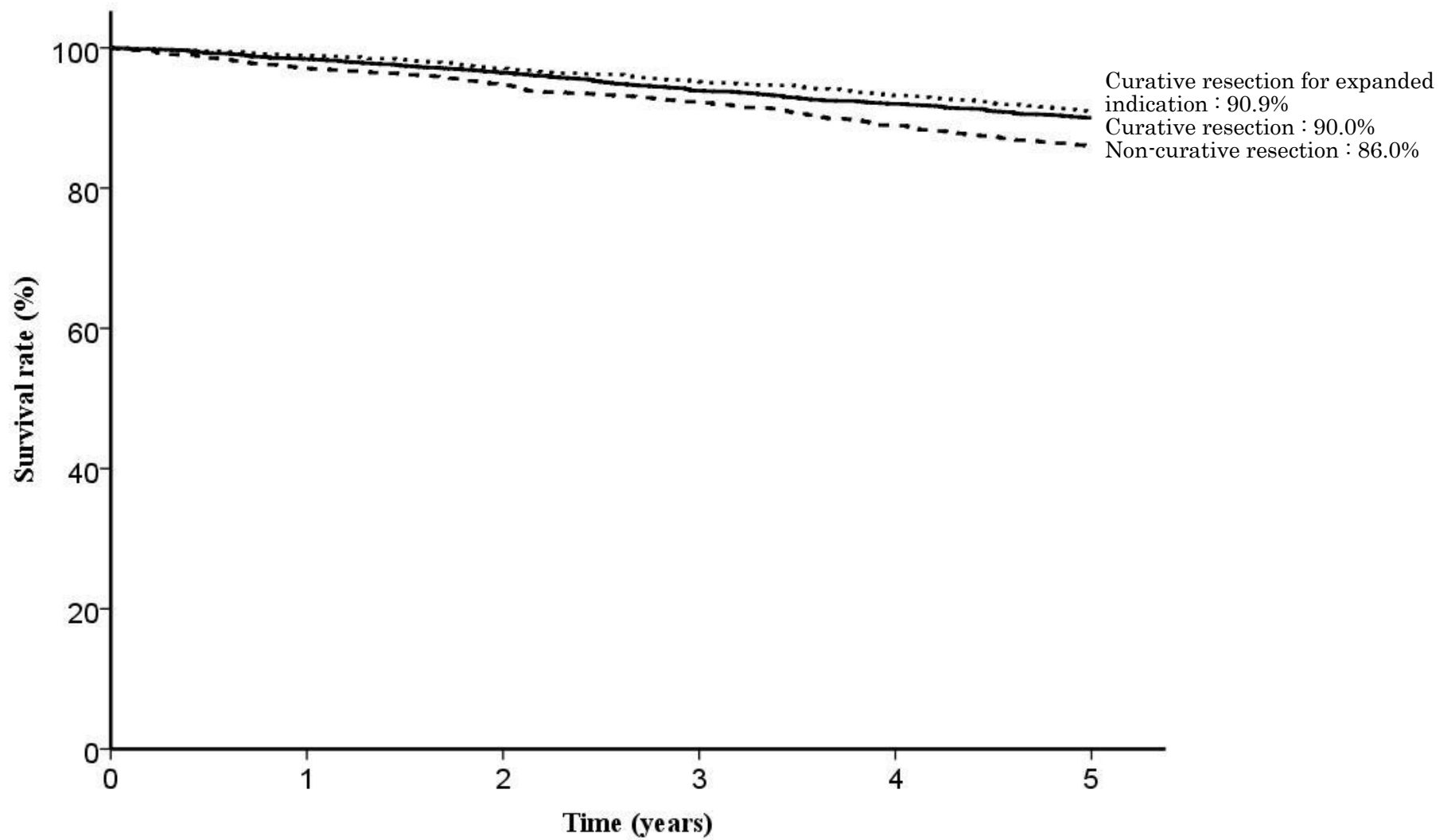


Fig. 21. Five year survival rates stratified by curability

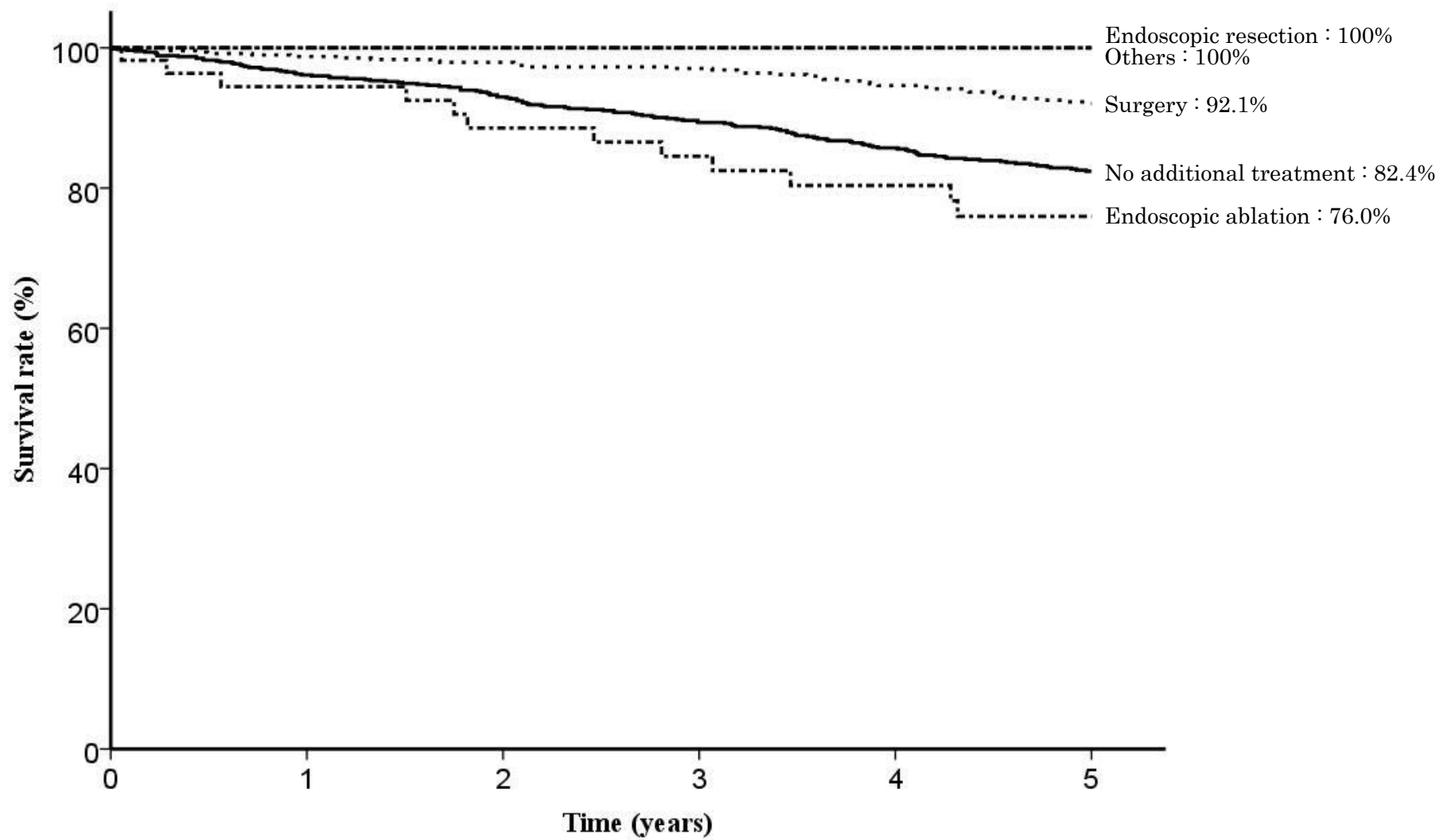


Fig. 22. Five year survival rates stratified by subsequent treatment for non-curative resection

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	6,747	7	1,536	98.3	96.3	93.9	91.7	89.4	0.4	4,604	16	2	3	2	4	1	191	252	136

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	20	0	4	100.0	100.0	100.0	100.0	100.0		16	0	0	0	0	0	0	0	0	0
40-59	774	0	156	99.7	98.4	97.4	96.6	96.3	0.7	593	1	0	0	0	1	0	11	6	6
60-79	4,794	2	998	98.4	97.0	94.9	93.2	90.9	0.4	3,418	11	2	1	2	3	1	140	139	79
80-	1,159	5	378	96.6	91.2	86.6	81.1	77.2	1.4	577	4	0	2	0	0	0	40	107	51

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	5,150	5	1,140	98.0	95.7	93.4	91.0	88.6	0.5	3,509	13	2	2	2	3	1	165	206	107
Female	1,597	2	396	99.1	98.0	95.6	93.9	92.0	0.7	1,095	3	0	1	0	1	0	26	46	29

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 (-)	6,612	7	1,510	98.3	96.3	94.0	91.8	89.5	0.4	4,511	16	2	3	2	4	1	186	245	132
Prior endoscopic treatment (+)	135	0	26	96.2	93.8	90.3	87.7	86.8	3.1	93	0	0	0	0	0	0	5	7	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	6,525	7	1,495	98.4	96.5	94.2	92.0	89.7	0.4	4,463	15	1	2	2	4	1	179	236	127
Remnant stomach	173	0	32	95.9	92.2	89.0	85.0	82.1	3.1	113	1	0	1	0	0	0	4	14	8
Gastric tube	49	0	9	97.8	83.8	76.8	74.3	71.8	6.9	28	0	1	0	0	0	0	8	2	1

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	1,302	2	307	98.1	95.4	93.3	91.4	89.2	0.9	876	5	0	1	0	1	0	39	43	30
Middle third	2,489	4	547	98.5	96.9	95.0	92.7	90.0	0.7	22,210	6	2	0	0	0	0	63	86	55
Lower third	2,945	1	682	98.1	96.1	93.2	91.0	88.9	0.6	1,988	5	0	1	2	3	1	89	123	51

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	2,823	6	644	97.9	96.2	94.1	92.0	89.8	0.6	1,934	8	1	1	1	2	1	59	117	55
Gre	1,221	0	288	98.3	96.2	93.3	91.0	88.4	1.0	814	0	1	0	0	0	0	46	44	28
Ant	1,209	1	255	98.3	96.3	93.5	91.6	89.6	0.9	846	4	0	0	0	2	0	40	40	22
Post	1,483	0	344	98.9	96.4	94.4	91.9	89.2	0.9	1,005	4	0	2	1	0	0	45	51	31

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	3,609	4	801	98.5	96.9	94.8	93.0	90.9	0.5	2,520	7	0	2	1	2	0	98	105	66
Elevated type	2,440	3	581	98.1	95.5	93.3	90.8	88.3	0.7	1,619	6	1	0	1	2	0	69	110	51
Mixed type	680	0	150	97.6	95.7	91.8	88.8	85.8	1.4	447	3	1	1	0	0	1	23	37	17
Others	17	0	4	100.0	86.7	86.7	86.7	80.0	10.3	10	0	0	0	0	0	0	1	0	2

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	6,498	6	1,499	98.4	96.4	94.0	91.9	89.6	0.4	4,429	16	1	3	2	4	1	178	236	129
EMR	248	1	37	96.2	94.0	91.7	86.7	83.9	2.5	175	0	1	0	0	0	0	12	16	7
Others	1	0	0	0.0	0.0	0.0	0.0	0.0		0	0	0	0	0	0	0	1	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	6,569	5	1,516	98.4	96.4	94.0	91.9	89.6	0.4	4,473	16	2	3	2	4	0	181	240	132
Piecemeal resection	175	2	20	93.6	91.8	91.1	86.7	84.2	2.9	123	0	0	0	0	0	1	10	12	3
Others	3	0	0	100.0	100.0	100.0	66.7	66.7	27.2	2	0	0	0	0	0	0	0	0	1

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	unknown	
Presence	14	0	1	92.9	92.9	92.9	92.9	92.9	6.9	13	0	0	0	0	0	0	0	0	0	1
Absence	6,733	7	1,535	98.3	96.3	93.9	91.7	89.4	0.4	4,592	16	2	3	2	4	1	191	252	135	

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	unknown
Presence	17	0	1	88.2	88.2	88.2	88.2	88.2	7.8	14	0	0	0	0	0	0	0	2	0
Absence	6,730	7	1,535	98.3	96.3	93.9	91.7	89.4	0.4	4,590	16	2	3	2	4	1	191	250	136

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	unknown
pap	198	1	47	96.3	94.6	91.7	86.8	83.6	2.9	123	2	0	0	0	2	0	6	14	4
tub1	5,246	4	1,219	98.6	96.6	94.2	92.1	89.6	0.5	3,565	9	1	1	2	1	0	145	201	99
tub2	1,025	2	224	97.4	95.4	93.6	91.2	89.7	1.0	710	5	0	1	0	1	1	28	30	25
por	132	0	20	95.9	95.1	93.3	91.6	89.8	2.8	100	0	0	0	0	0	0	5	2	5
sig	126	0	23	99.2	94.8	91.2	90.3	87.4	3.1	89	0	1	1	0	0	0	5	5	2
muc	5	0	2	100.0	100.0	100.0	100.0	100.0		3	0	0	0	0	0	0	0	0	0
Others	8	0	0	100.0	87.5	87.5	87.5	87.5	11.7	7	0	0	0	0	0	0	0	0	1
Inconclusive	7	0	1	100.0	100.0	66.7	66.7	66.7	19.2	4	0	0	0	0	0	0	2	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	unknown
M	5,647	6	1,303	98.5	96.6	94.2	92.3	90.2	0.4	3,874	9	1	1	0	0	0	149	204	106
SM1	513	1	108	97.3	94.7	92.7	89.0	87.1	1.6	347	1	0	1	0	1	0	20	23	12
SM2 or deeper than SM2	545	0	114	97.1	95.2	92.9	89.1	85.0	1.7	361	6	1	1	2	3	1	19	21	16
Others	18	0	7	100.0	100.0	100.0	100.0	100.0		11	0	0	0	0	0	0	0	0	0
Inconclusive	24	0	4	91.3	81.7	71.5	61.2	56.1	11.1	11	0	0	0	0	0	0	3	4	2

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(-)	6,420	6	1,461	98.5	96.5	94.2	92.1	89.9	0.4	4,411	11	1	3	0	3	0	181	228	121
ly(+)	305	1	73	94.1	91.9	88.0	84.0	79.7	2.5	179	5	1	0	2	1	1	9	21	13
Inconclusive	22	0	2	90.7	85.6	80.6	75.6	70.5	10.1	14	0	0	0	0	0	0	1	3	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(-)	6,543	7	1,491	98.4	96.4	94.1	91.9	89.7	0.4	4,481	12	2	3	1	3	1	181	240	128
v(+)	179	0	41	95.8	91.3	88.0	85.9	80.1	3.3	108	4	0	0	1	1	0	9	9	6
Inconclusive	25	0	4	91.5	86.9	82.3	77.8	73.2	9.4	15	0	0	0	0	0	0	1	3	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(-)	5,890	6	1,340	98.2	96.2	93.9	91.7	89.4	0.4	4,020	14	1	3	2	3	1	166	223	117
UL(+)	732	1	172	99.0	96.8	93.5	91.4	89.0	1.3	492	2	1	0	0	1	0	20	27	17
Inconclusive	123	0	22	98.3	97.3	95.5	92.6	91.7	2.7	92	0	0	0	0	0	0	5	2	2

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	6,237	5	1,437	98.4	96.4	94.1	92.1	89.8	0.4	4,261	16	0	3	2	4	0	168	221	125
HM1	221	1	46	97.1	95.1	90.9	86.6	83.2	2.7	143	0	1	0	0	0	0	7	18	6
HMX	289	1	53	96.7	94.4	92.0	88.3	85.8	2.2	200	0	1	0	0	0	1	16	13	5

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	6,441	7	1,480	98.4	96.5	94.1	92.1	89.8	0.4	4,405	14	0	3	1	4	0	174	231	129
VM1	182	0	34	95.4	89.9	88.6	83.4	79.3	3.2	115	2	1	0	1	0	1	10	15	3
VMX	124	0	22	96.5	92.9	90.1	86.2	83.3	3.6	84	0	1	0	0	0	0	7	6	4

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	6,053	5	1,405	98.5	96.6	94.2	92.3	90.0	0.4	4,138	14	0	3	1	4	0	158	209	121
Positive or inconclusive resected margins	694	2	131	96.5	93.6	90.9	86.8	84.0	1.5	466	2	2	0	1	0	1	33	43	15

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	3,341	2	778	98.4	96.4	93.9	92.0	90.0	0.6	2,281	7	0	0	0	0	0	88	121	66
Curative resection for expanded indication	1,990	2	476	99.0	97.1	95.2	93.2	90.9	0.7	1,363	3	0	1	0	0	0	50	58	39
Non-curative resection	1,416	3	282	97.1	94.7	92.1	89.0	86.0	1.0	960	6	2	2	2	4	1	53	73	31

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	842	2	187	96.1	93.0	89.3	85.7	82.4	1.4	529	3	1	2	1	1	0	38	55	25
Surgery	497	0	79	98.8	97.9	97.1	94.6	92.1	1.3	382	3	0	0	1	3	1	11	13	4
Endoscopic resection	12	0	1	100.0	100.0	100.0	100.0	100.0		11	0	0	0	0	0	0	0	0	0
Endoscopic ablation	58	1	12	94.5	88.6	84.5	80.4	76.0	6.1	34	0	1	0	0	0	0	4	5	2
Others	7	0	3	100.0	100.0	100.0	100.0	100.0		4	0	0	0	0	0	0	0	0	0