

# 胃がん学会全国登録解析結果報告 —2006年EMR/ESD症例—

## 1. 登録施設 計107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 斗南病院 北海道大学病院 恵佑会札幌病院 釧路労災病院 日鋼記念病院  
弘前大学大学院医学研究科 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  
福島県立医科大学 寿泉堂総合病院 福島労災病院

### 北陸・関東・甲信越

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 済生会新潟第二病院 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 福井赤十字病院 福井県済生会病院  
前橋赤十字病院 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  
友愛記念病院 国立がん研究センター東病院 北里大学東病院 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  
社会医療法人ジャパンメディカルアライアンス海老名総合病院 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 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  
国立国際医療研究センター 東京女子医科大学消化器病センター 杏林大学病院 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 山梨大学医学部附属病院

### 東海・近畿

聖隷浜松病院 浜松医科大学 静岡県立総合病院・消化器センター 愛知県がんセンター中央病院 住友病院 大阪府済生会中津病院  
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 大阪警察病院 大阪赤十字病院 市立吹田市民病院 大阪医科大学  
八尾市立病院 箕面市立病院 京都府立医科大学附属病院 京都大学医学部附属病院 天理よろづ相談所病院 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 姫路中央病院 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 川崎医科大学 水島協同病院 国立病院機構・福山医療センター 広島記念病院 広島市立広島市民病院  
広島市立安佐市民病院 広島大学病院 J A厚生連広島総合病院 呉医療センター・中国がんセンター 三豊総合病院 松山市民病院 徳島赤十字病院  
高知大学医学部附属病院

## 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 長崎大学病院 熊本地域医療センター 熊本大学 健康保険人吉総合病院 大分医療センター  
大分大学医学部 古賀総合病院 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**                      **4,855 例**

## 3. 対象症例

登録対象は2006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	70.1 ±9.142
	-39	14 (0.3%)
	40-59	659 (13.6%)
	60-79	3475 (71.6%)
	80-	707 (14.6%)
Sex	Male	3648 (75.1%)
	Female	1207 (24.9%)
Prior endoscopic treatment	-	4720 (97.2%)
	+	135 (2.8%)
Stomach condition	Normal stomach	4678 (96.4%)
	Remnant stomach	146 (3.0%)
	Gastric tube	31 (0.6%)
Tumor location	U	901 (18.6%)
	M	1884 (38.8%)
	L	2070 (42.6%)
Cross-sectional parts	Less	2058 (42.4%)
	Gre	841 (17.3%)
	Ant	937 (19.3%)
	Post	1017 (20.9%)
	Data unavailable	2 (0.0%)
Macroscopic type	Depressed type	2417 (49.8%)
	Elevated type	1908 (39.3%)
	Mixed type	494 (10.2%)
	Others	35 (0.7%)
	Data unavailable	1 (0.0%)
Method of endoscopic resection	ESD	4281 (88.2%)
	EMR	571 (11.8%)
	Others	3 (0.1%)
En-bloc or piecemeal resection	En-bloc resection	4499 (92.7%)
	Piecemeal resection	354 (7.3%)
	Others	2 (0.0%)
Bleeding requiring emergency surgery	Presence	11 (0.2%)
	Absence	4843 (99.8%)
	Data unavailable	1 (0.0%)
Perforation requiring emergency surgery	Presence	17 (0.4%)
	Absence	4838 (99.6%)
Histological type	pap	148 (3.0%)
	tub1	3877 (79.9%)
	tub2	658 (13.6%)
	por	70 (1.4%)
	sig	81 (1.7%)
	muc	7 (0.1%)
	Others	8 (0.2%)
	Inconclusive	6 (0.1%)

Depth of tumor invasion	M	4102 (84.5%)
	SM1	368 (7.6%)
	SM2 or deeper than SM2	355 (7.3%)
	Others	19 (0.4%)
	Inconclusive	10 (0.2%)
	Data unavailable	1 (0.0%)
Lymphatic invasion(ly)	-	4600 (94.7%)
	+	210 (4.3%)
	Inconclusive	43 (0.9%)
	Data unavailable	2 (0.0%)
Venous invasion(v)	-	4701 (96.8%)
	+	111 (2.3%)
	Inconclusive	42 (0.9%)
	Data unavailable	1 (0.0%)
UL	-	4305 (88.7%)
	+	477 (9.8%)
	Inconclusive	73 (1.5%)
Horizontal margin	HM0	4143 (85.3%)
	HM1	311 (6.4%)
	HMX	401 (8.3%)
Vertical margin	VM0	4582 (94.4%)
	VM1	152 (3.1%)
	VMX	121 (2.5%)
En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	4009 (82.6%)
	Positive or inconclusive resected margins	846 (17.4%)
Curability	Curative resection	2319 (47.8%)
	Curative resection for expanded indication	1268 (26.1%)
	Non-curative resection	1268 (26.1%)
Subsequent treatment for non-curative resection	No additional treatment	755 (61.1%)
	Surgery	338 (26.7%)
	Endoscopic resection	26 (2.1%)
	Endoscopic ablation	71 (5.6%)
	Others	6 (0.5%)
	Data unavailable	52 (4.1%)
<b>Total</b>		<b>4,855 (100.0%)</b>

Methods of endoscopic resection		ESD	EMR			ESD	EMR
Age	mean±SD	70.1 ±9.095	70.23 ±9.510	Depth of tumor invasion	M	3616 (84.5%)	484 (84.8%)
	-39	13 (0.3%)	1 (0.2%)		SM1	327 (7.6%)	40 (7.0%)
	40-59	578 (13.5%)	81 (14.2%)		SM2 or deeper than SM2	319 (7.5%)	36 (6.3%)
	60-79	3079 (71.9%)	393 (68.8%)		Others	10 (0.2%)	9 (1.6%)
	80-	611 (14.3%)	96 (16.8%)		Inconclusive	9 (0.2%)	1 (0.2%)
Sex	Male	3231 (75.5%)	415 (72.7%)		Data unavailable	0 (0.0%)	1 (0.2%)
	Female	1050 (24.5%)	156 (27.3%)	Lymphatic invasion(ly)	-	4067 (95.0%)	530 (92.8%)
Prior endoscopic treatment	-	4191 (97.9%)	526 (92.1%)		+	190 (4.4%)	20 (3.5%)
	+	90 (2.1%)	45 (7.9%)		Inconclusive	22 (0.5%)	21 (3.7%)
Stomach condition	Normal stomach	4134 (96.6%)	542 (94.9%)		Data unavailable	2 (0.0%)	0 (0.0%)
	Remnant stomach	120 (2.8%)	25 (4.4%)	Venous invasion(v)	-	4155 (97.1%)	543 (95.1%)
	Gastric tube	27 (0.6%)	4 (0.7%)		+	104 (2.4%)	7 (1.2%)
Tumor location	U	793 (18.5%)	108 (18.9%)		Inconclusive	21 (0.5%)	21 (3.7%)
	M	1670 (39.0%)	213 (37.3%)		Data unavailable	1 (0.0%)	0 (0.0%)
	L	1818 (42.5%)	250 (43.8%)	UL	-	3788 (88.5%)	514 (90.0%)
Cross-sectional parts	Less	1852 (43.3%)	206 (36.1%)		+	453 (10.6%)	24 (4.2%)
	Gre	709 (16.6%)	132 (23.1%)		Inconclusive	40 (0.9%)	33 (5.8%)
	Ant	824 (19.2%)	113 (19.8%)	Horizontal margin	HM0	3865 (90.3%)	276 (48.3%)
	Post	894 (20.9%)	120 (21.0%)		HM1	192 (4.5%)	118 (20.7%)
	Data unavailable	2 (0.0%)	0 (0.0%)		HMX	224 (5.2%)	177 (31.0%)
Macroscopic type	Depressed type	2185 (51.0%)	231 (40.5%)	Vertical margin	VM0	4082 (95.4%)	497 (87.0%)
	Elevated type	1624 (37.9%)	283 (49.6%)		VM1	131 (3.1%)	21 (3.7%)
	Mixed type	444 (10.4%)	49 (8.6%)		VMX	68 (1.6%)	53 (9.3%)
	Others	28 (0.7%)	7 (1.2%)	En-bloc resection with tumor-free margins	En-bloc resection with tumor-free margins	3741 (87.4%)	266 (46.6%)
	Data unavailable	0 (0.0%)	1 (0.2%)		Positive or inconclusive resected margins	540 (12.6%)	305 (53.4%)
En-bloc or piecemeal resection	En-bloc resection	4096 (95.7%)	401 (70.2%)	Curability	Curative resection	2102 (49.1%)	215 (37.7%)
	Piecemeal resection	185 (4.3%)	168 (29.4%)		Curative resection for expanded indication	1237 (28.9%)	31 (5.4%)
	Others	0 (0.0%)	2 (0.4%)		Non-curative resection	942 (22.0%)	325 (56.9%)
Bleeding requiring emergency surgery	Presence	9 (0.2%)	2 (0.4%)	Subsequent treatment for non-curative resection	No additional treatment	529 (56.2%)	245 (75.4%)
	Absence	4271 (99.8%)	569 (99.6%)		Surgery	304 (32.3%)	34 (10.5%)
	Data unavailable	1 (0.0%)	0 (0.0%)		Endoscopic resection	17 (1.8%)	9 (2.8%)
Perforation requiring emergency surgery	Presence	13 (0.3%)	4 (0.7%)		Endoscopic ablation	39 (4.1%)	32 (9.8%)
	Absence	4268 (99.7%)	567 (99.3%)		Others	6 (0.6%)	0 (0.0%)
Histological type	pap	122 (2.8%)	26 (4.6%)		Data unavailable	47 (5.0%)	5 (1.5%)
	tub1	3411 (79.7%)	465 (81.4%)	Total		4,281 (100.0%)	571 (100.0%)
	tub2	598 (14.0%)	58 (10.2%)				
	por	60 (1.4%)	10 (1.8%)				
	sig	76 (1.8%)	5 (0.9%)				
	muc	7 (0.2%)	0 (0.0%)				
	Others	3 (0.1%)	5 (0.9%)				
	Inconclusive	4 (0.1%)	2 (0.4%)				

## Survival curve of patients

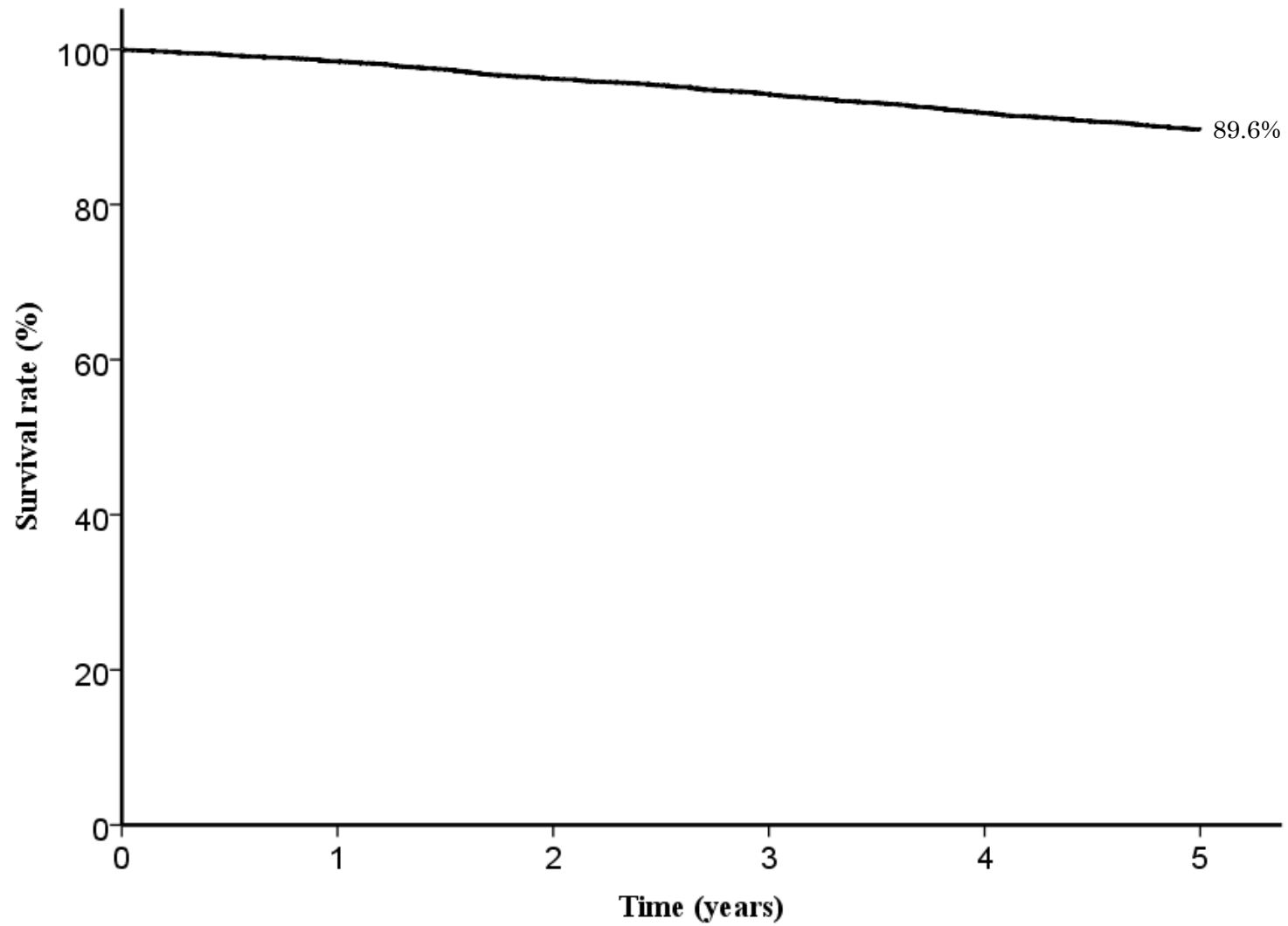


Fig. 1. Five year survival rates for all patients

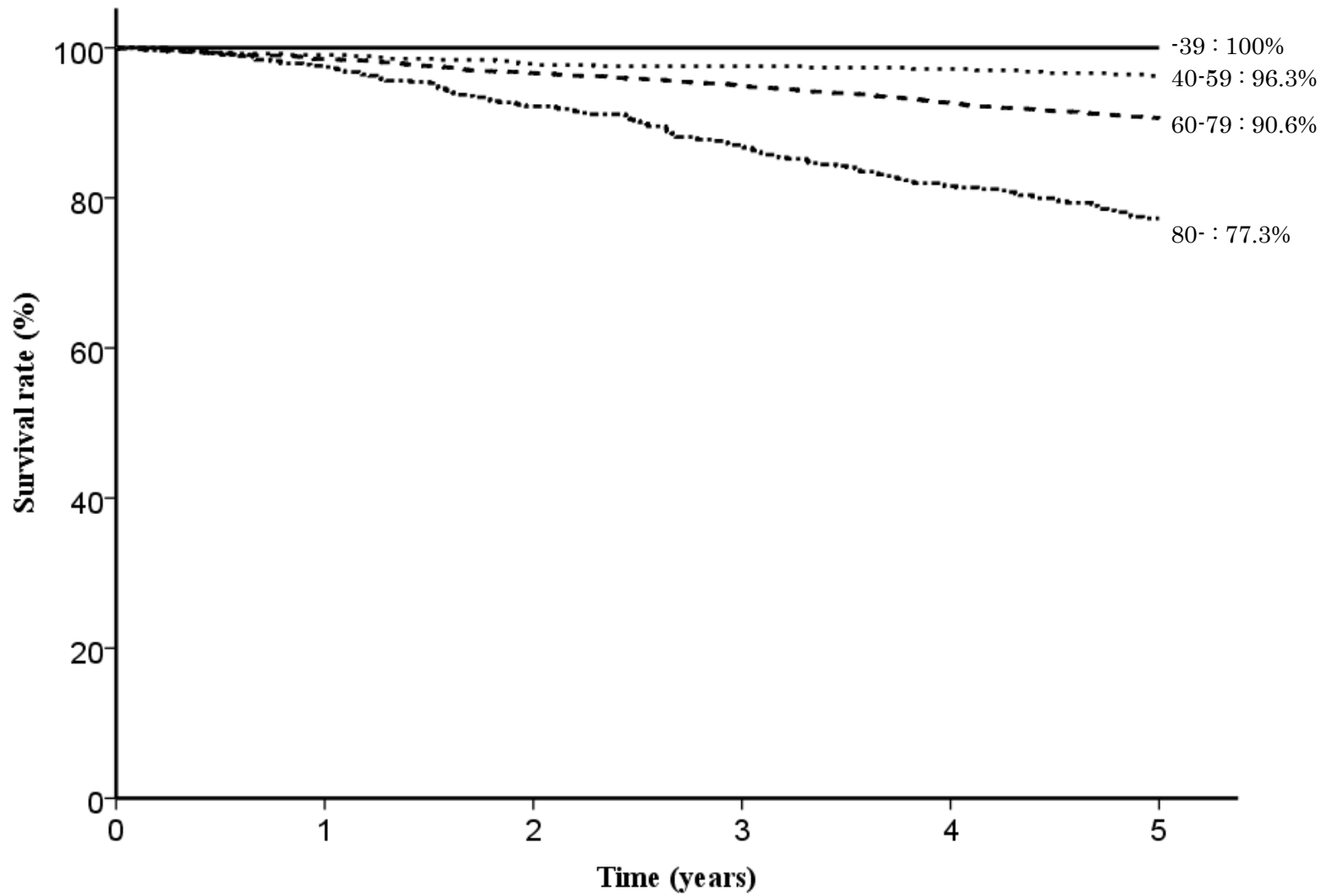


Fig. 2. Five year survival rates stratified by age

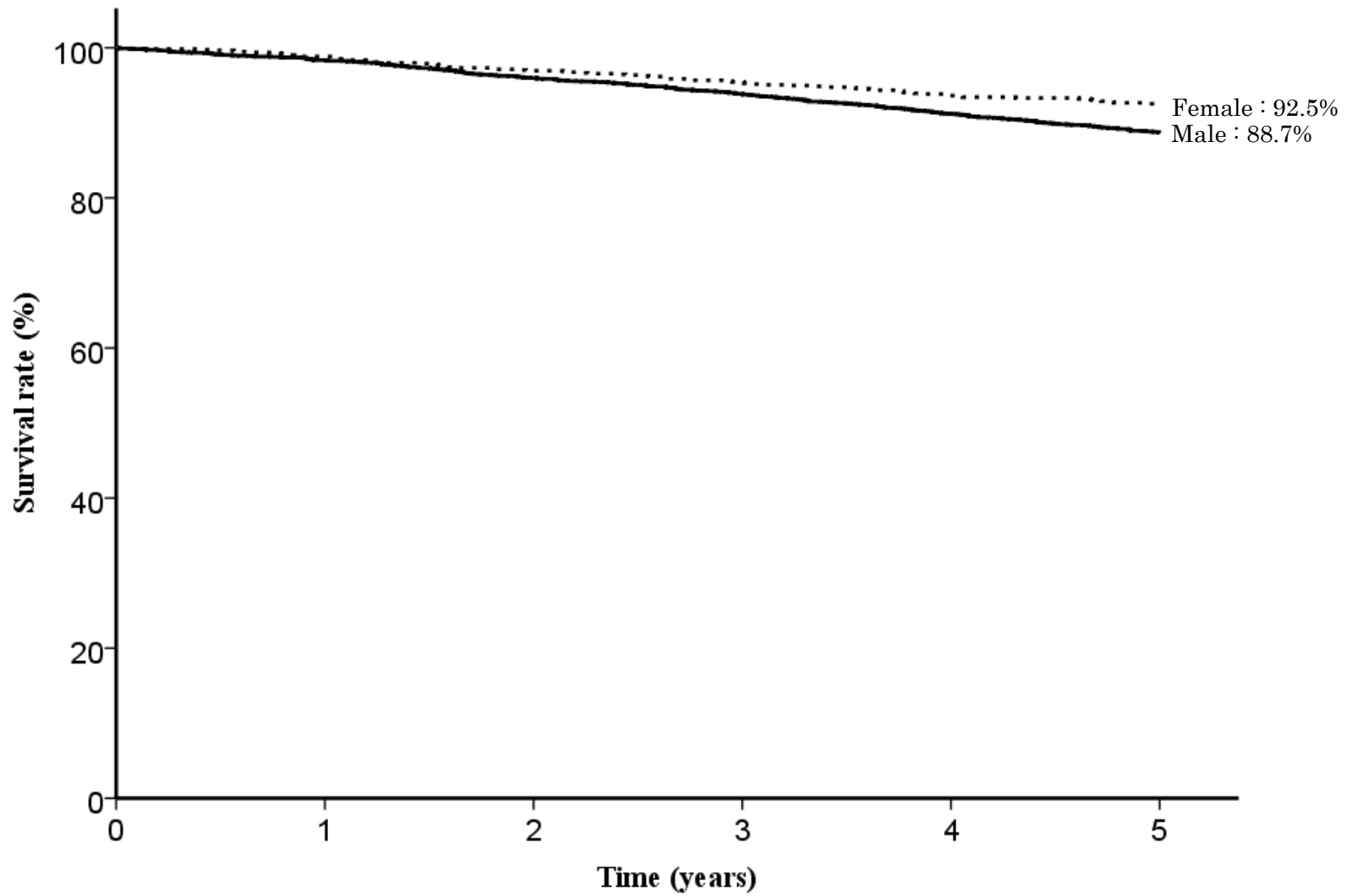


Fig. 3. Five year survival rates stratified by sex



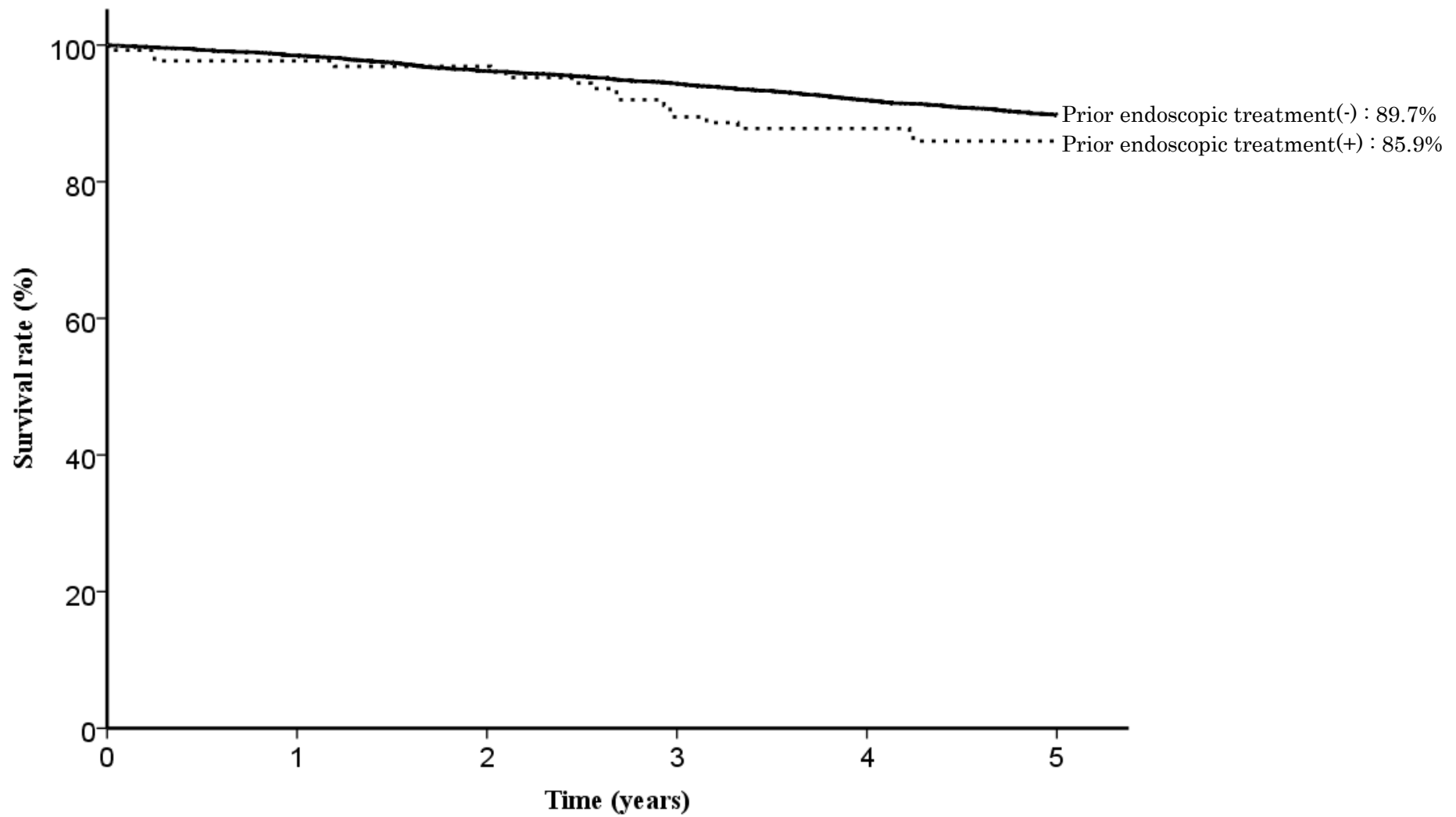


Fig. 4. Five year survival rates stratified by prior endoscopic treatment

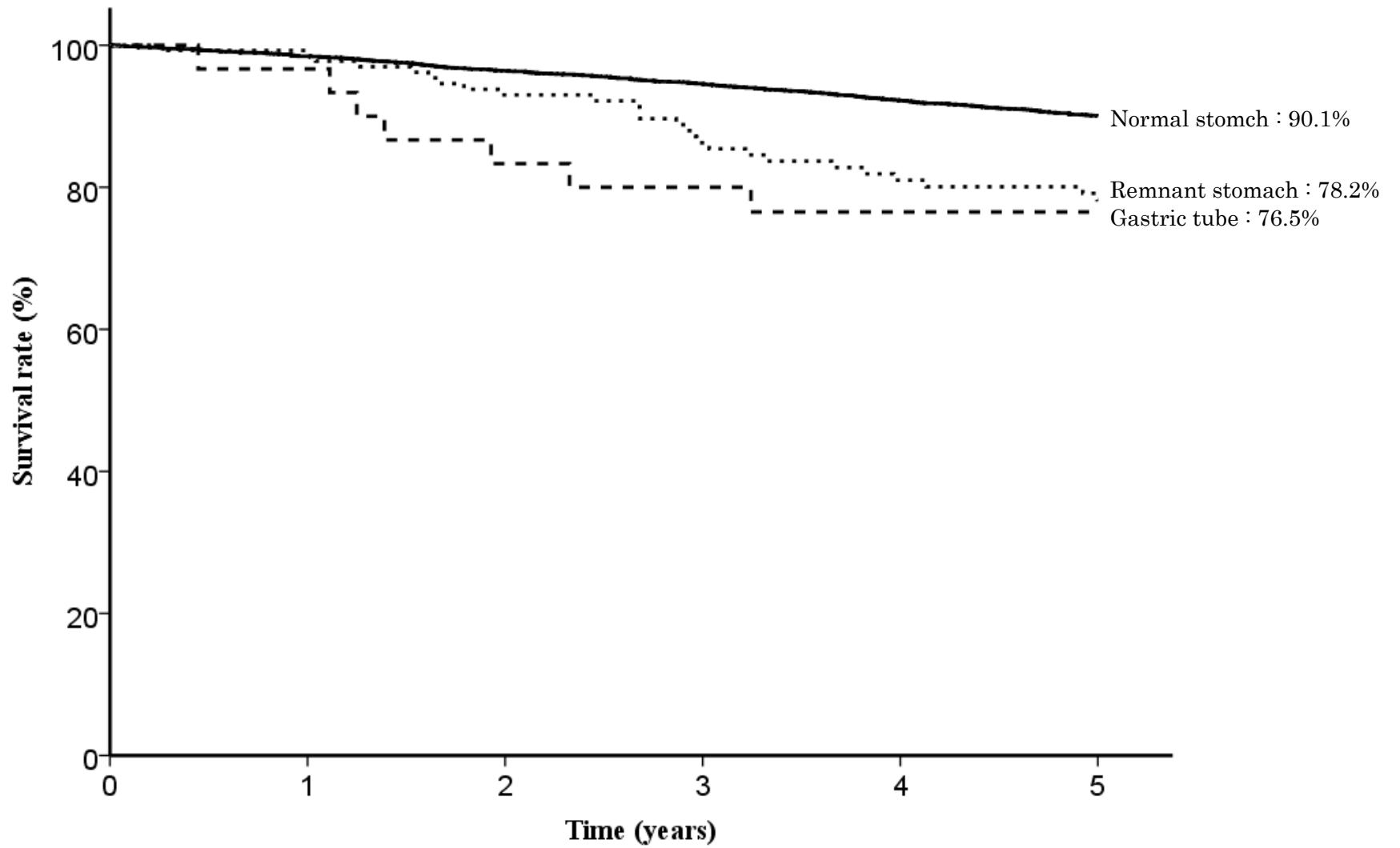


Fig. 5. Five year survival rates stratified by stomach condition

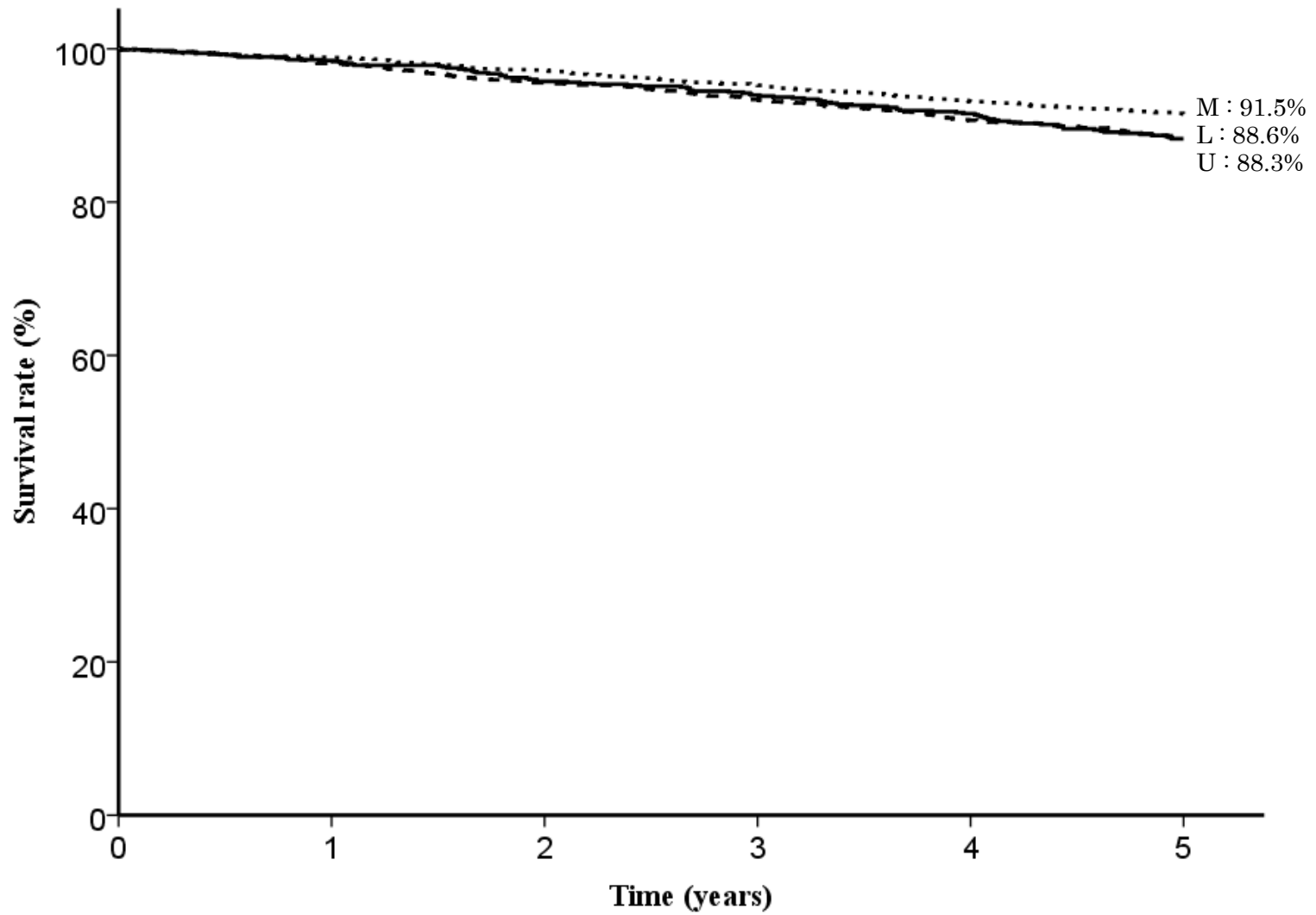


Fig. 6. Five year survival rates stratified by tumor location

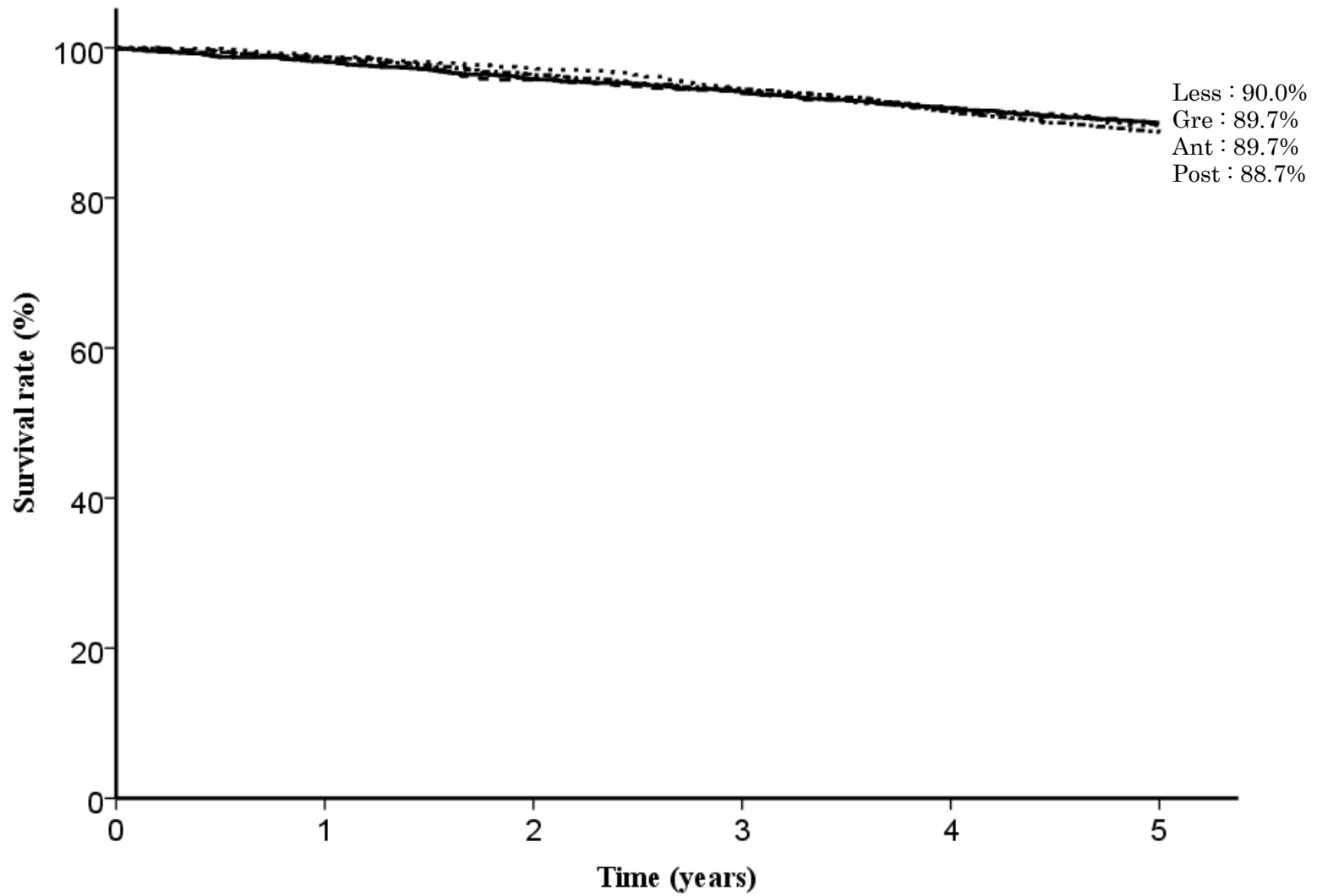


Fig. 7. Five year survival rates stratified by cross-sectional parts

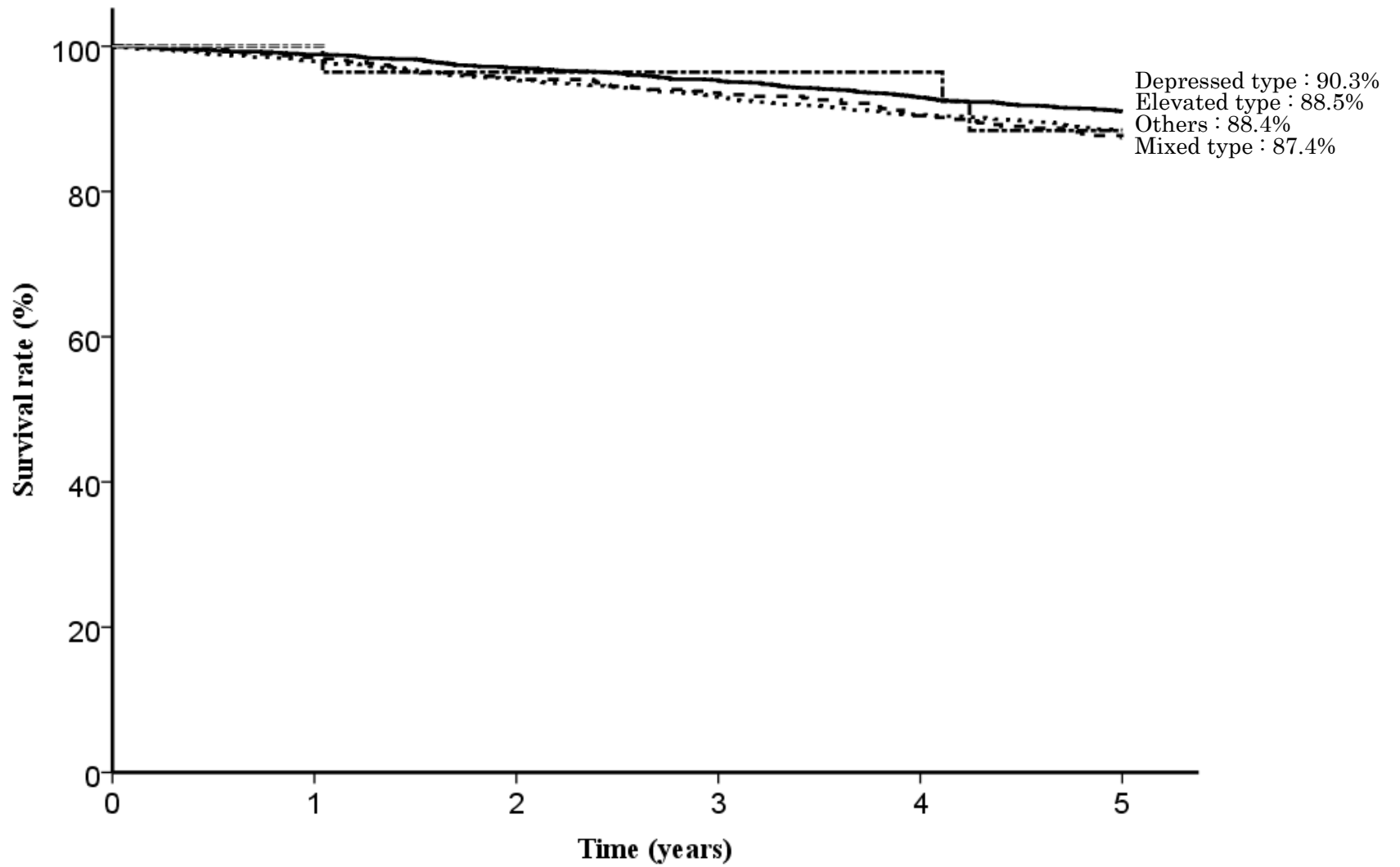


Fig. 8. Five year survival rates stratified by macroscopic type

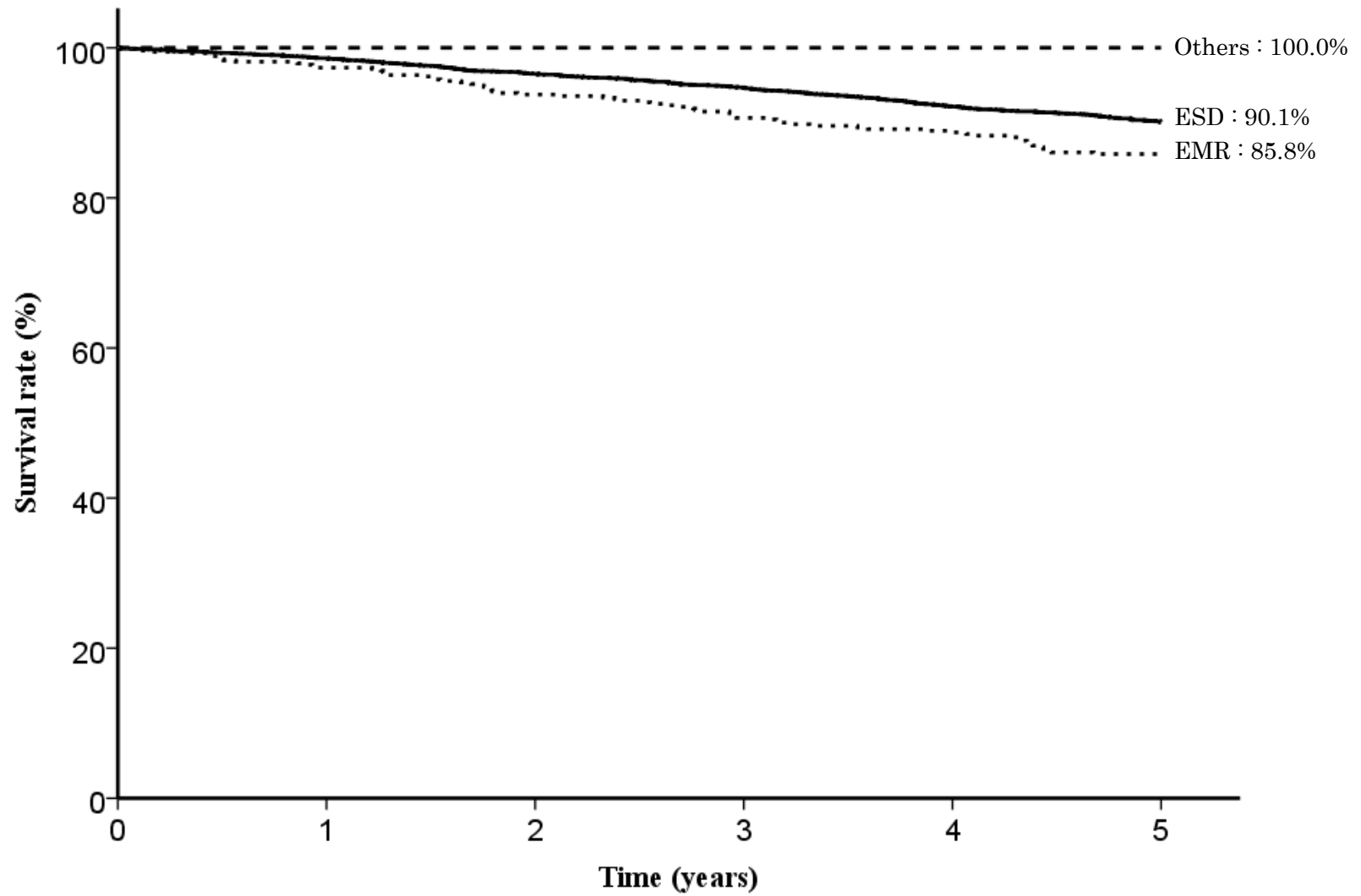


Fig. 9. Five year survival rates stratified by method of endoscopic resection

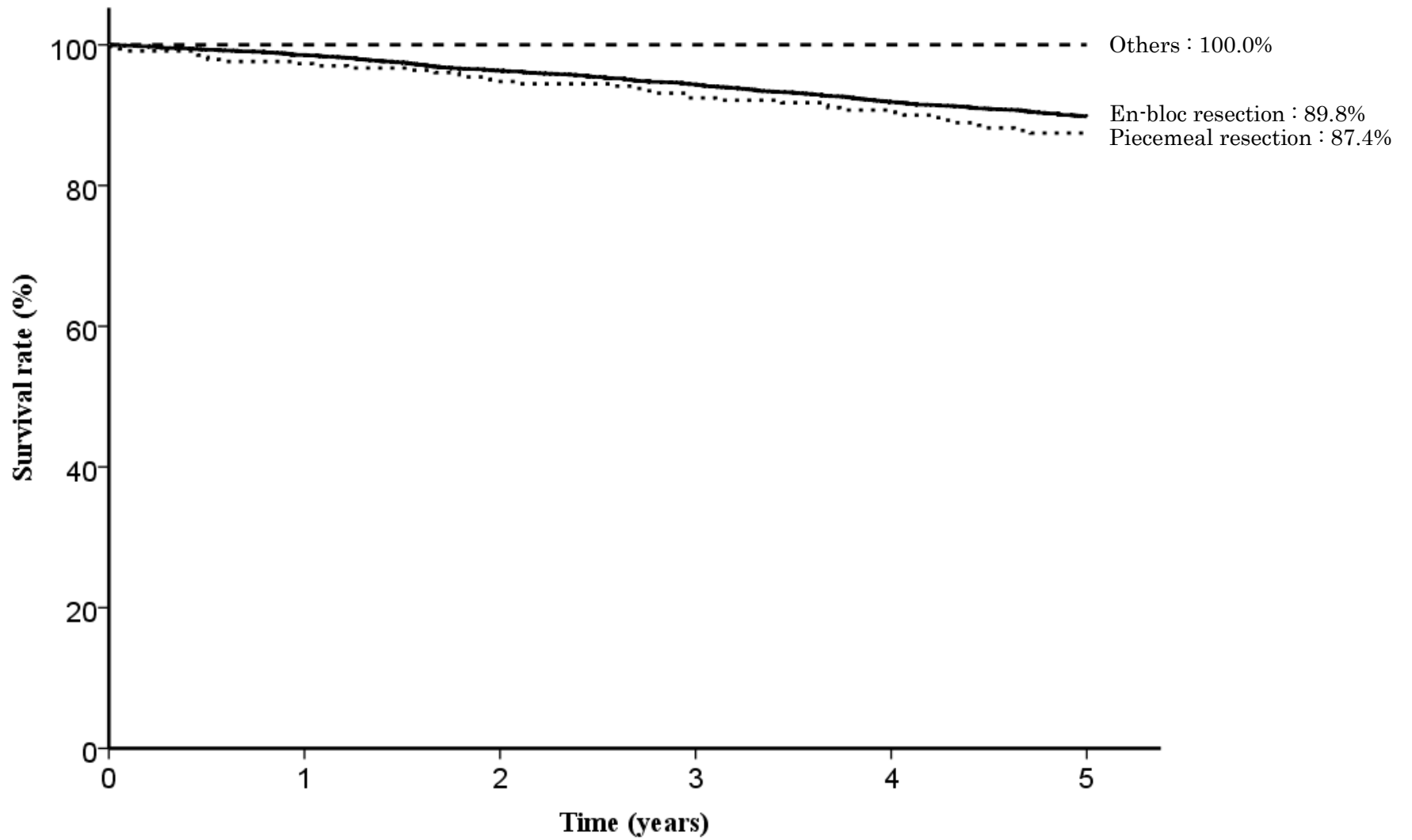


Fig. 10. Five year survival rates stratified by en-bloc or piecemeal resection

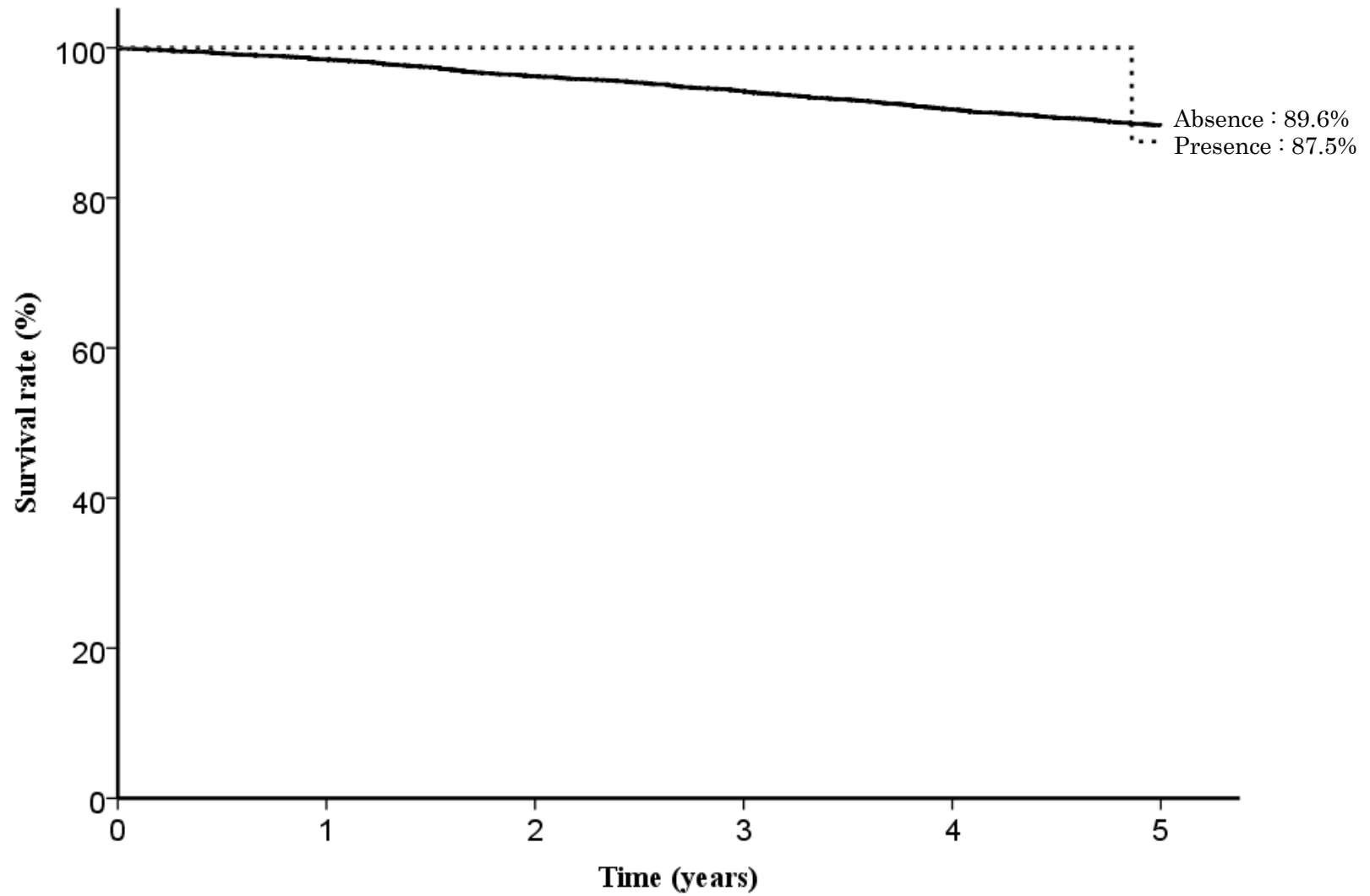


Fig. 11. Five year survival rates stratified by bleeding requiring emergency surgery



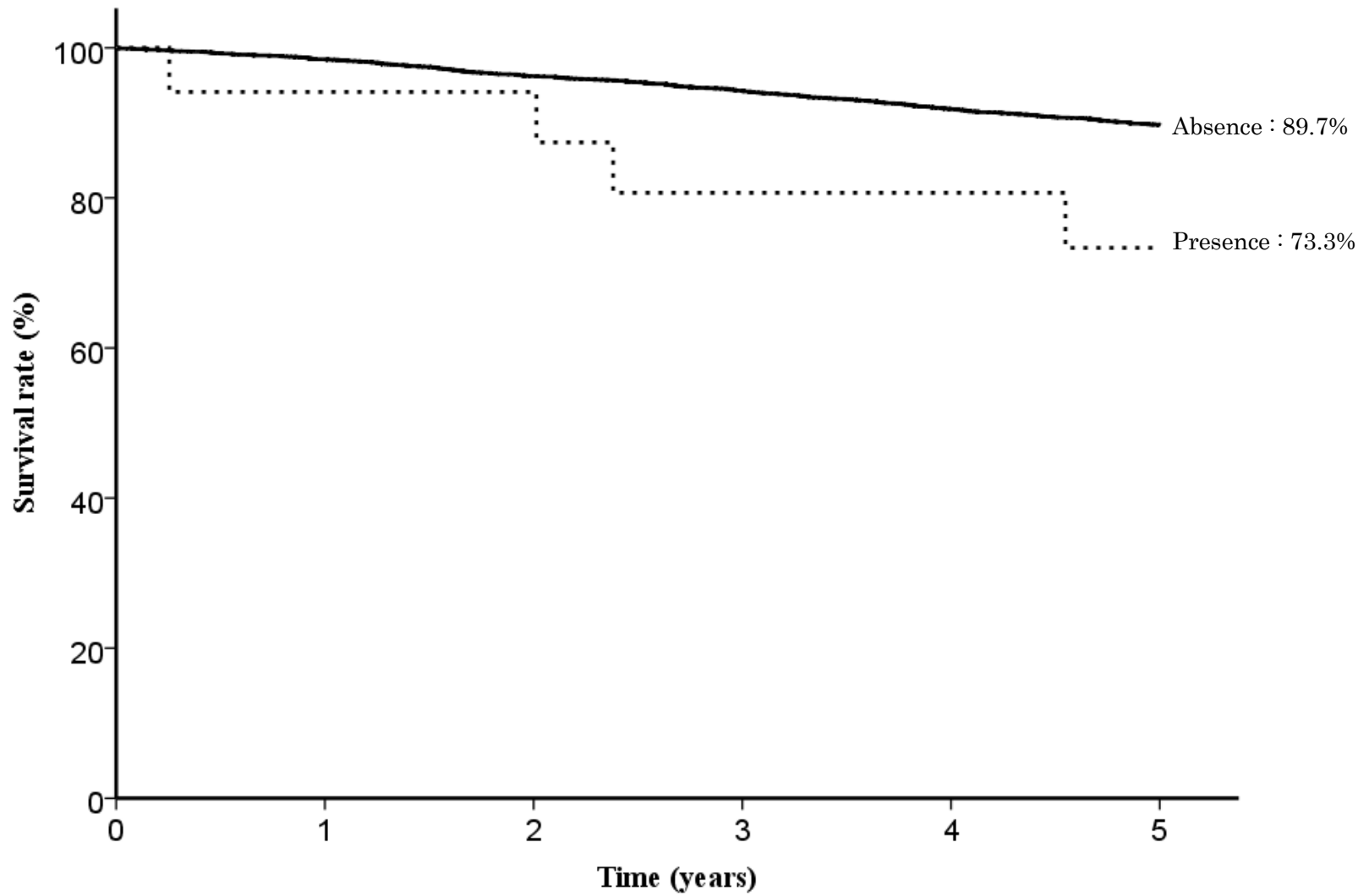


Fig. 12. Five year survival rates stratified by perforation requiring emergency surgery

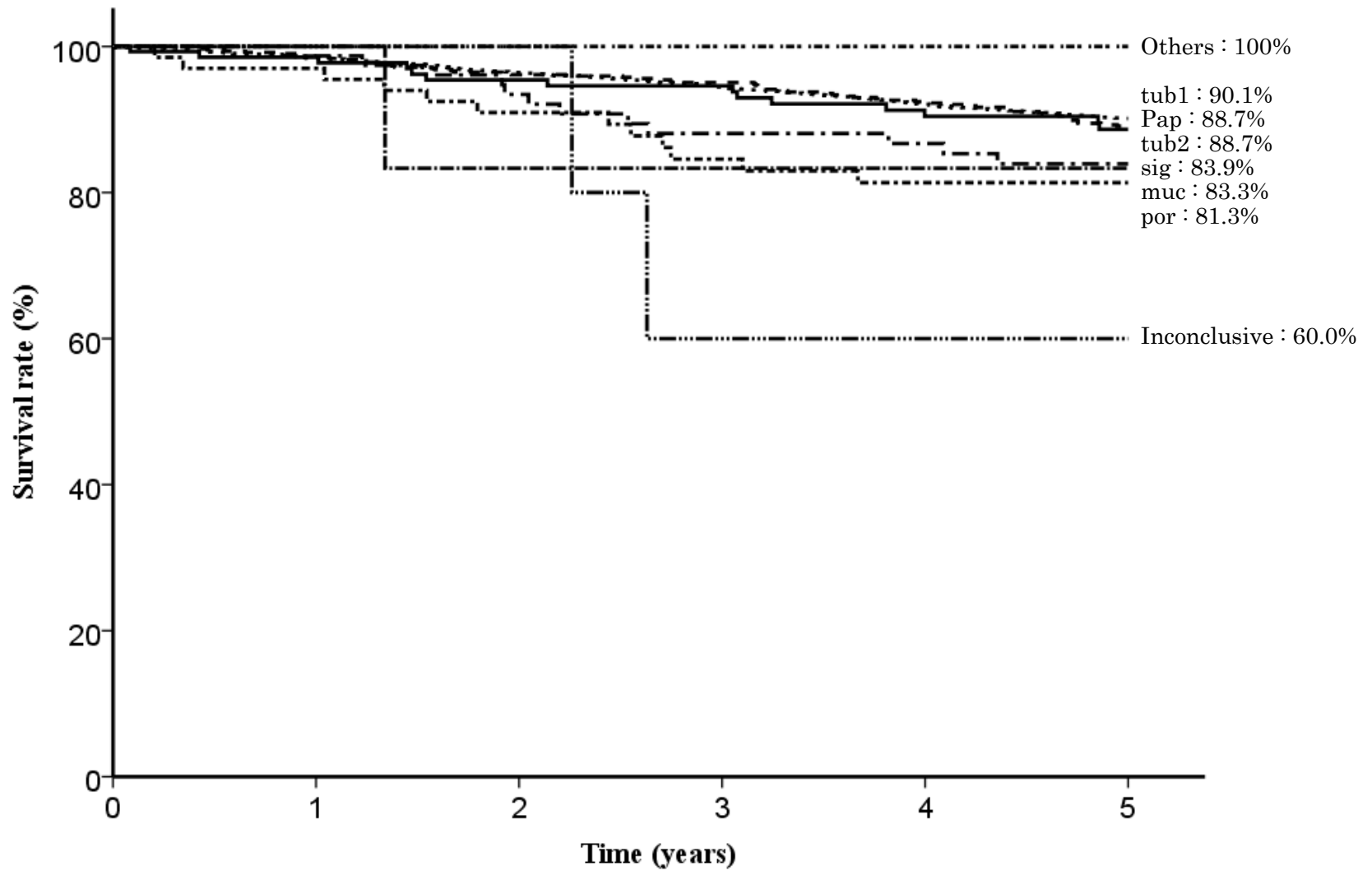


Fig. 13. Five year survival rates stratified by histological type

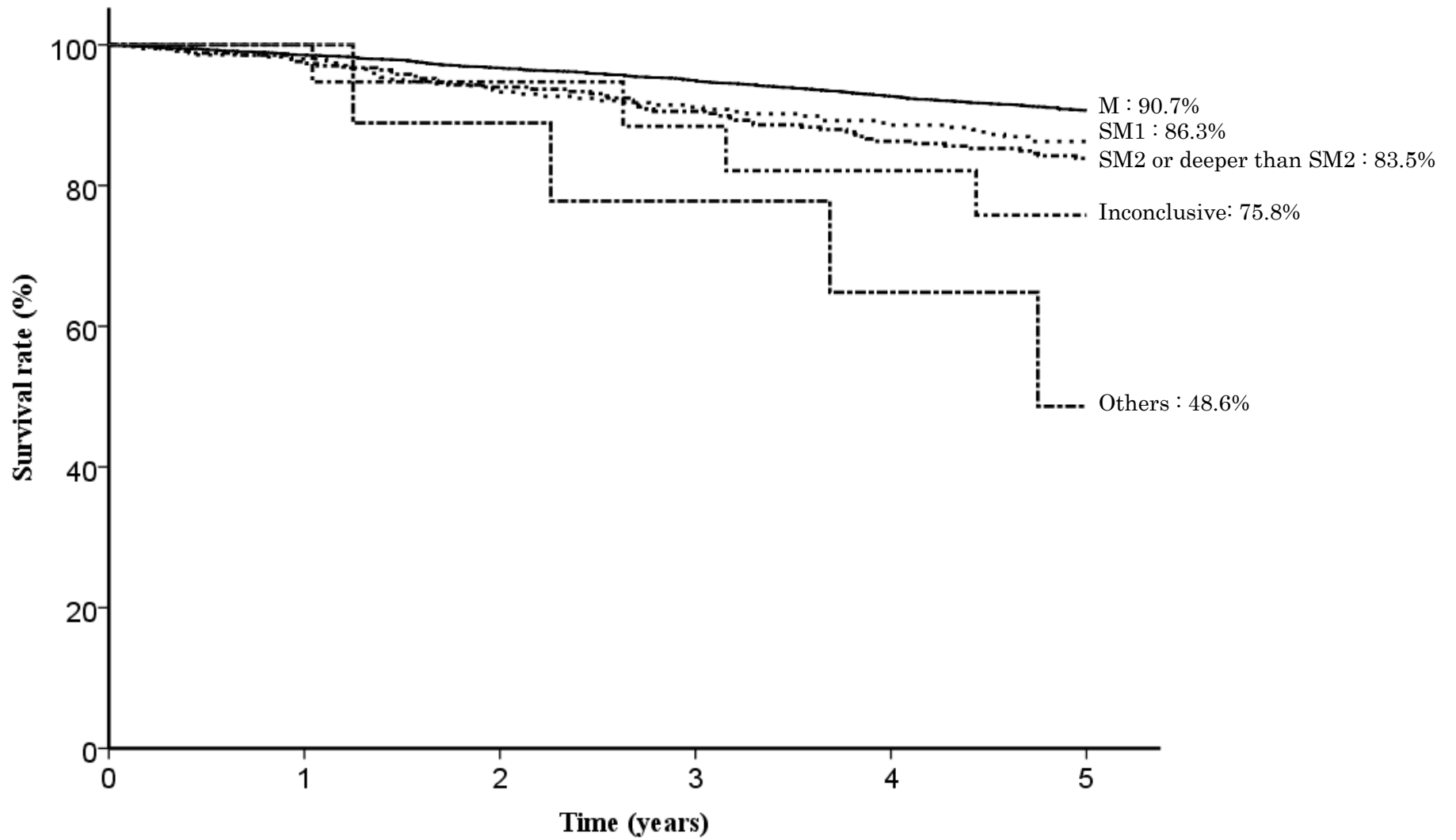


Fig. 14. Five year survival rates stratified by depth of tumor invasion

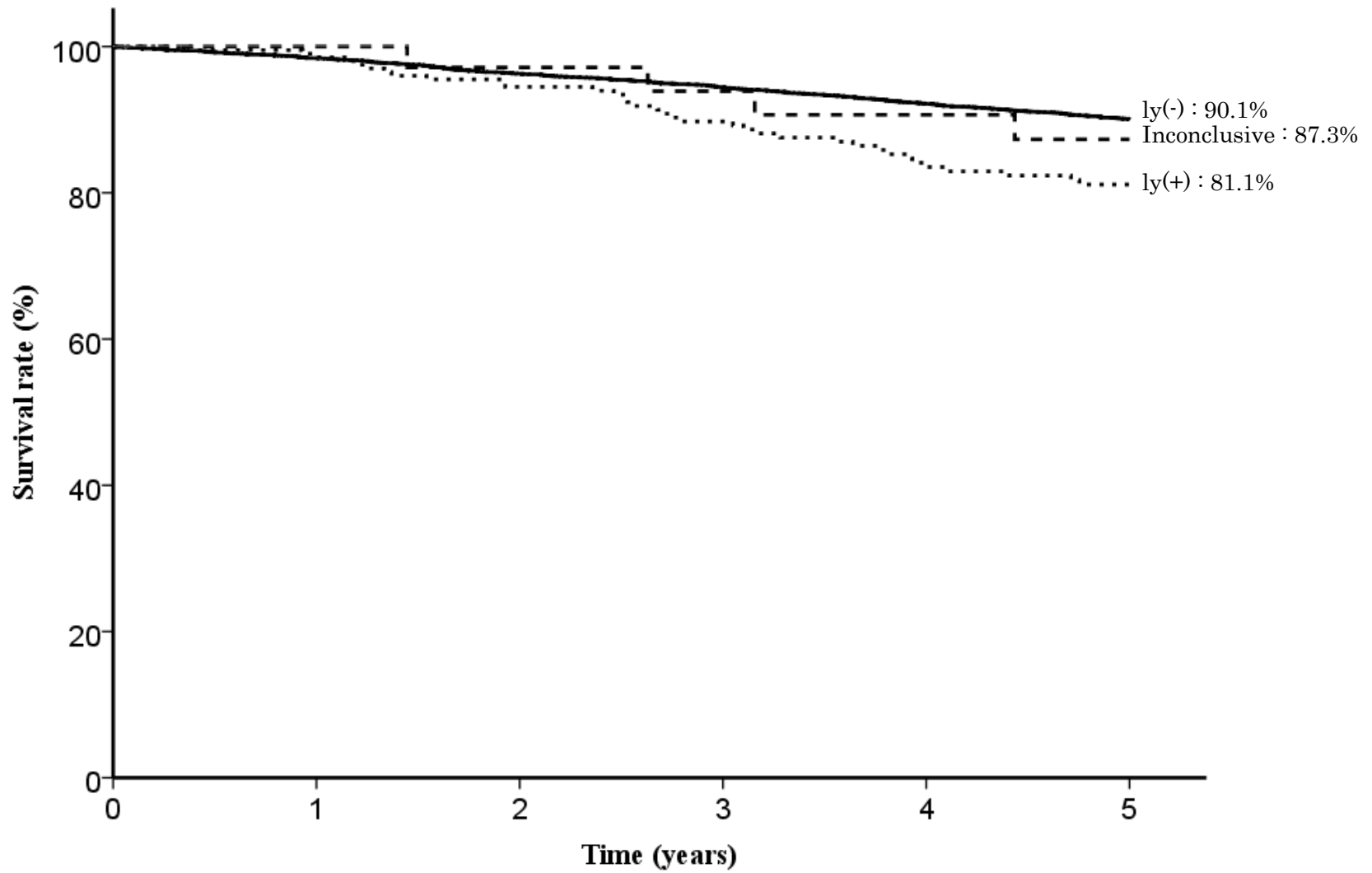


Fig. 15. Five year survival rates stratified by lymphatic invasion

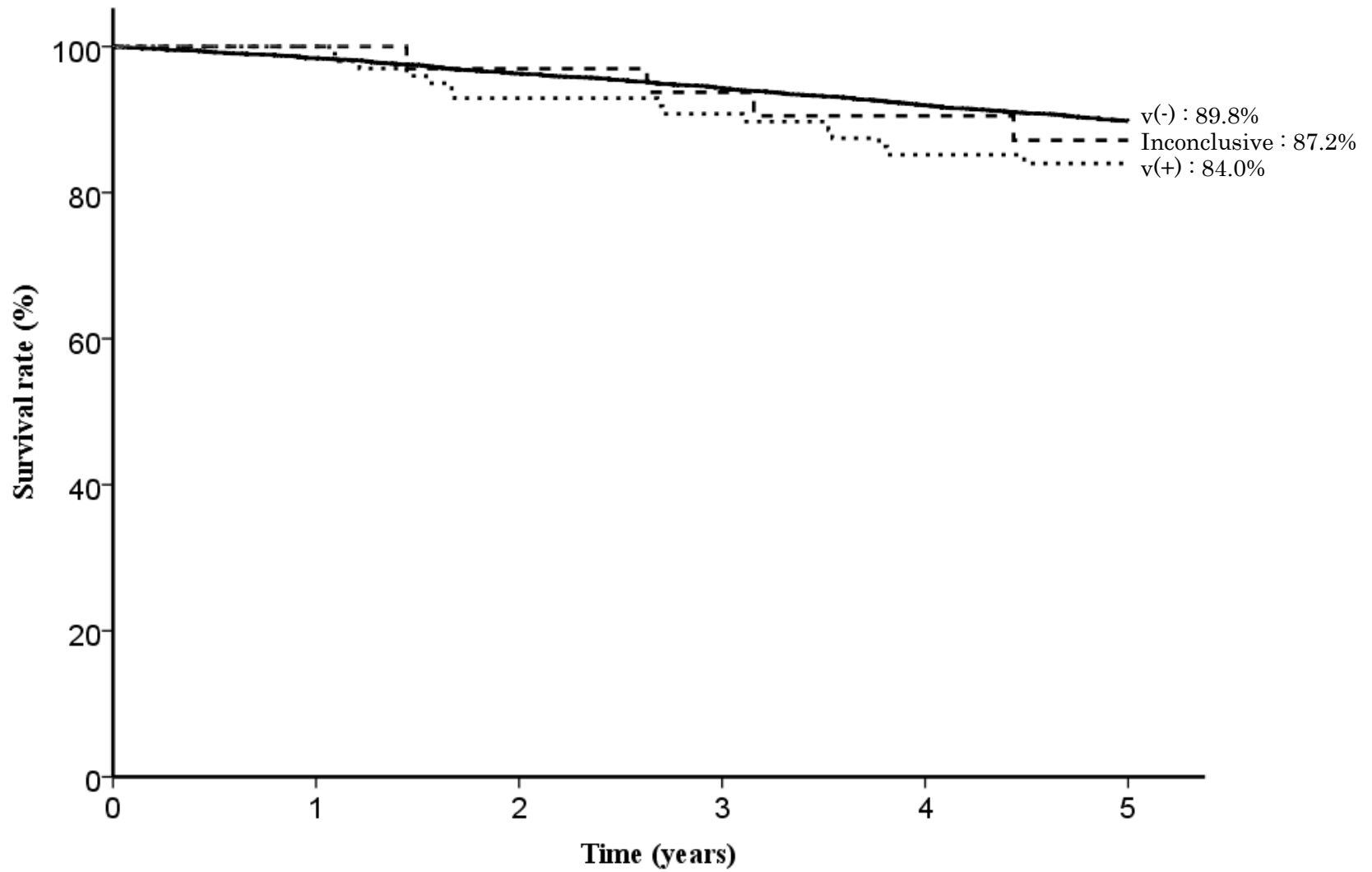


Fig. 16. Five year survival rates stratified by venous invasion

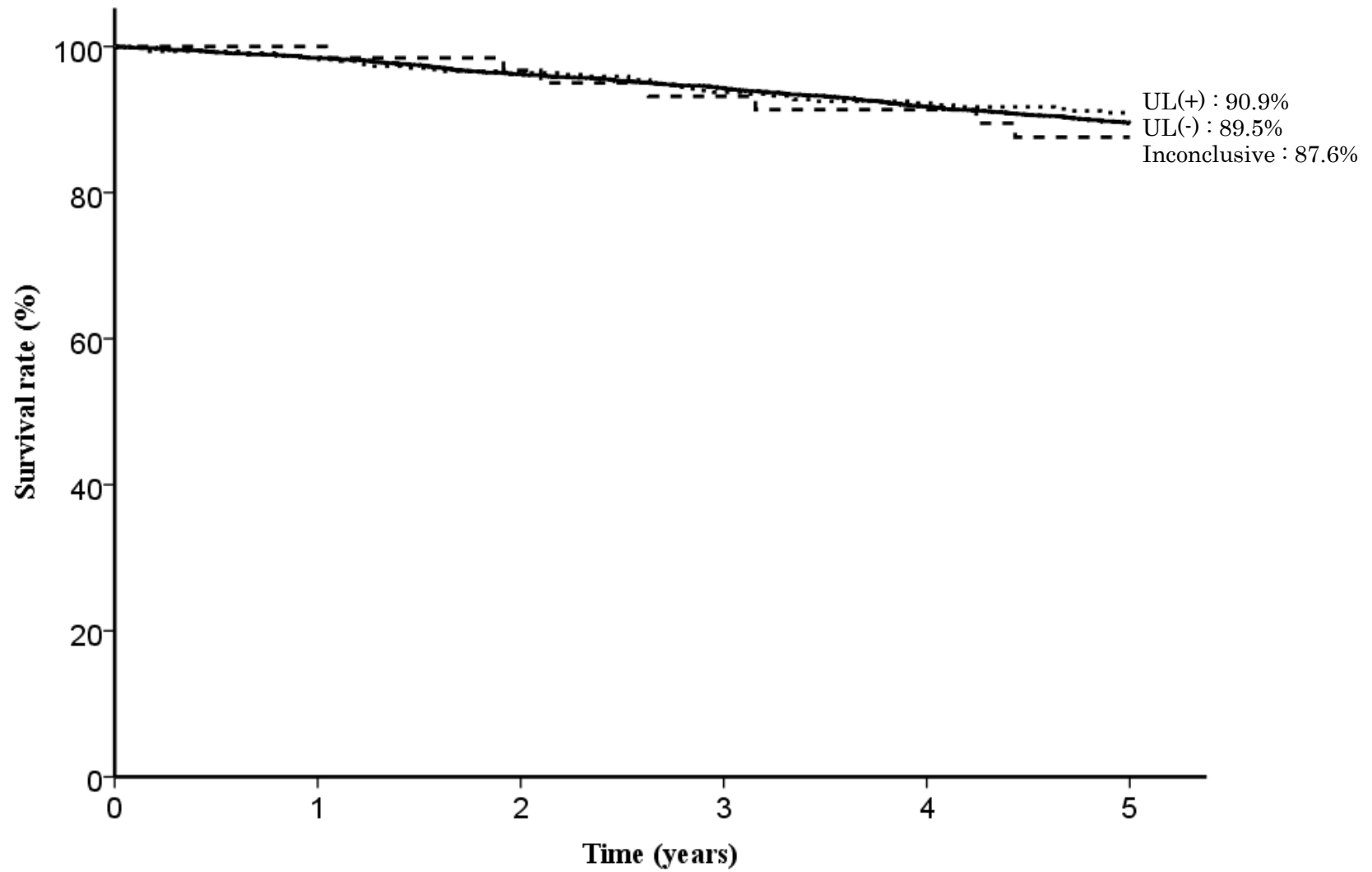


Fig. 17. Five year survival rates stratified by UL

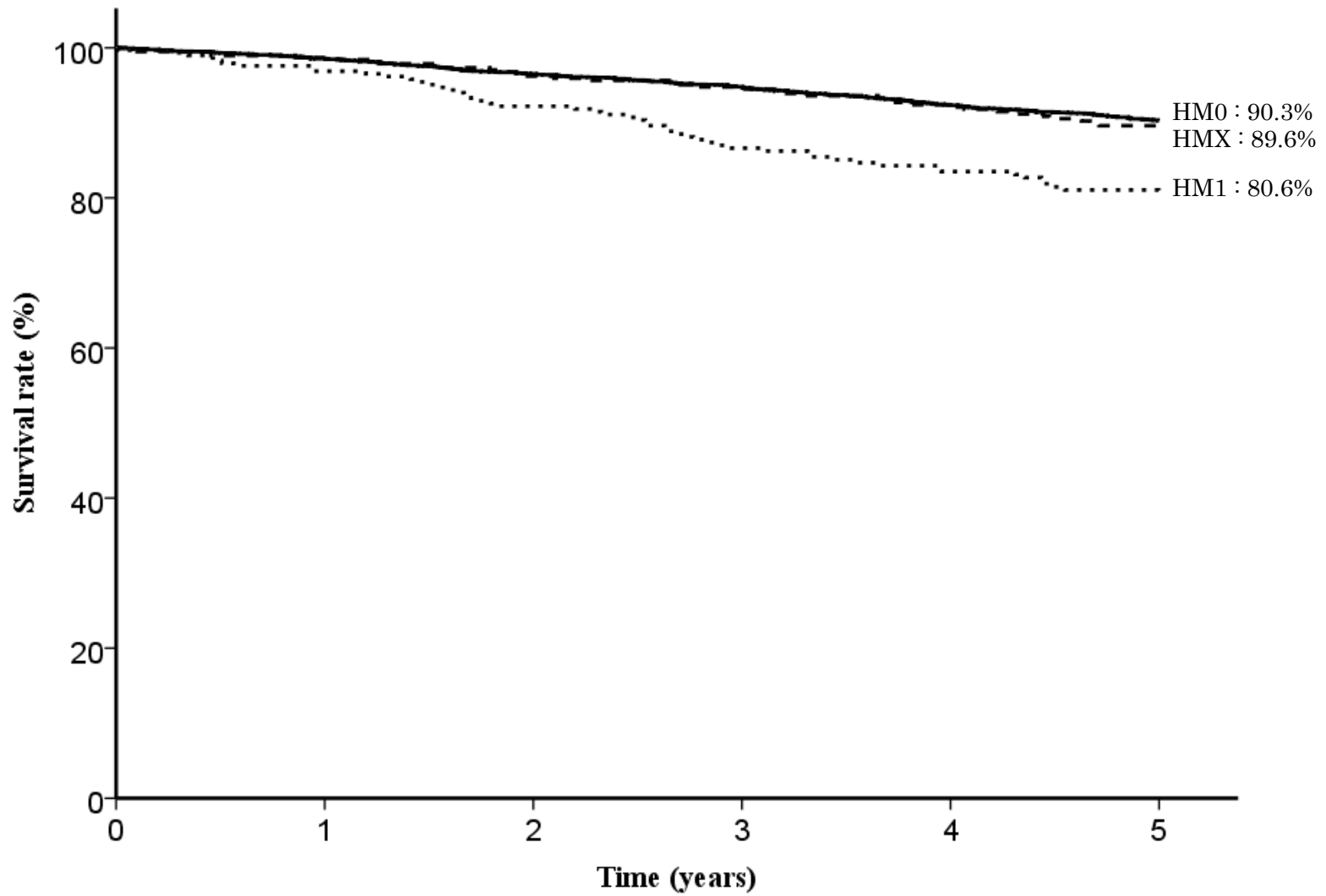


Fig. 18. Five year survival rates stratified by horizontal margin

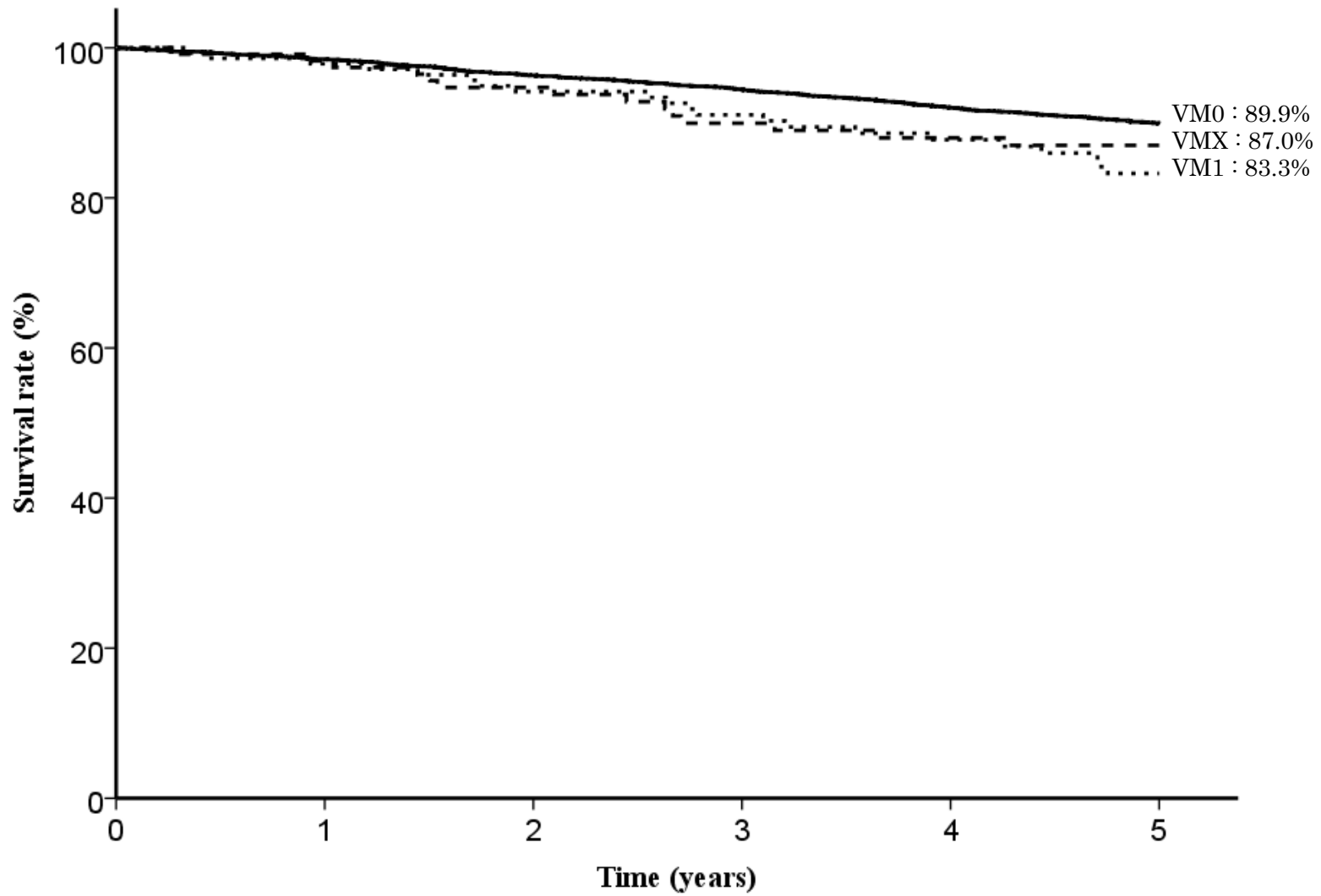


Fig. 19. Five year survival rates stratified by vertical margin



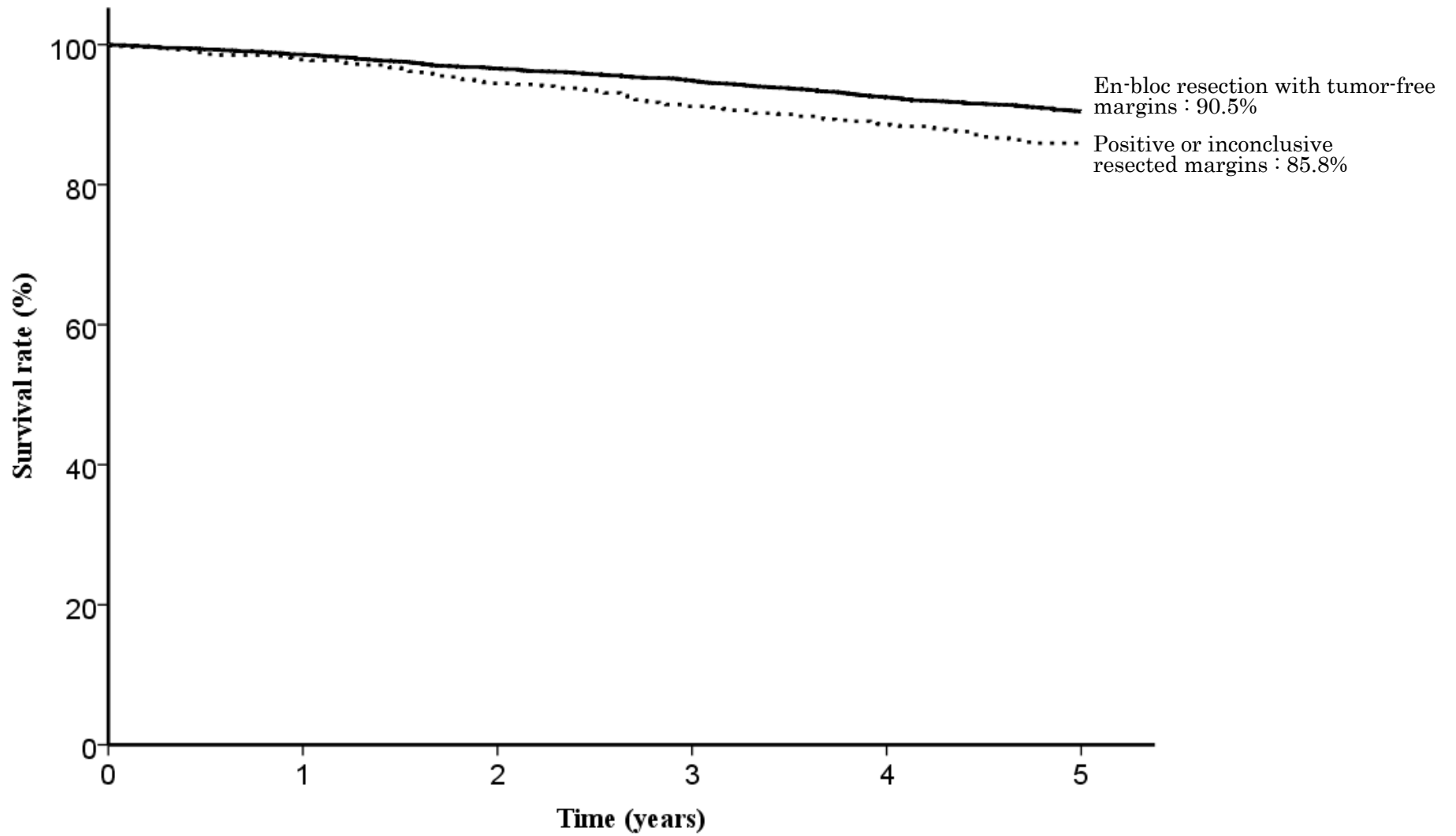


Fig. 20. Five year survival rates stratified by en-bloc resection with tumor-free margins

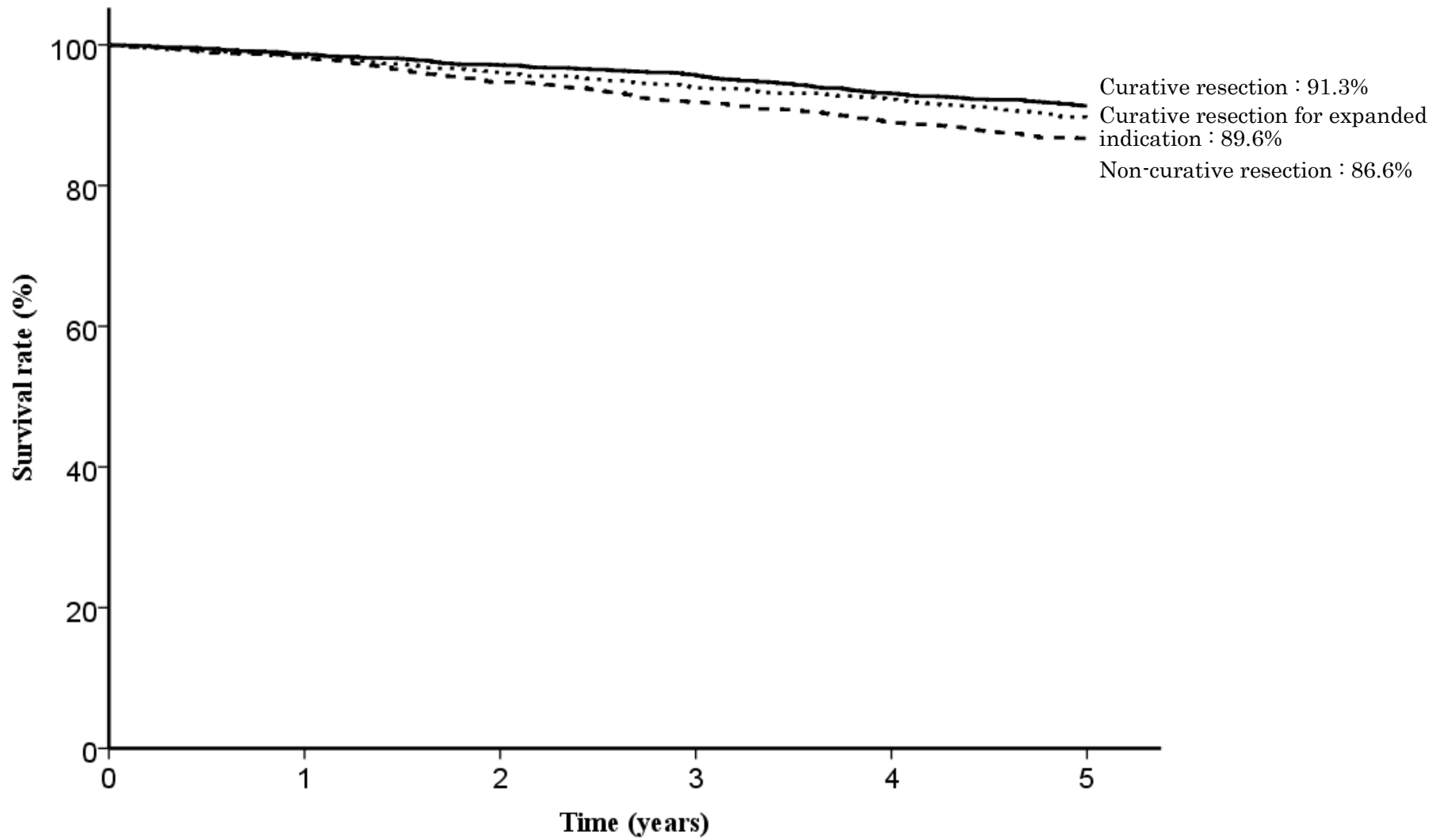


Fig. 21. Five year survival rates stratified by curability

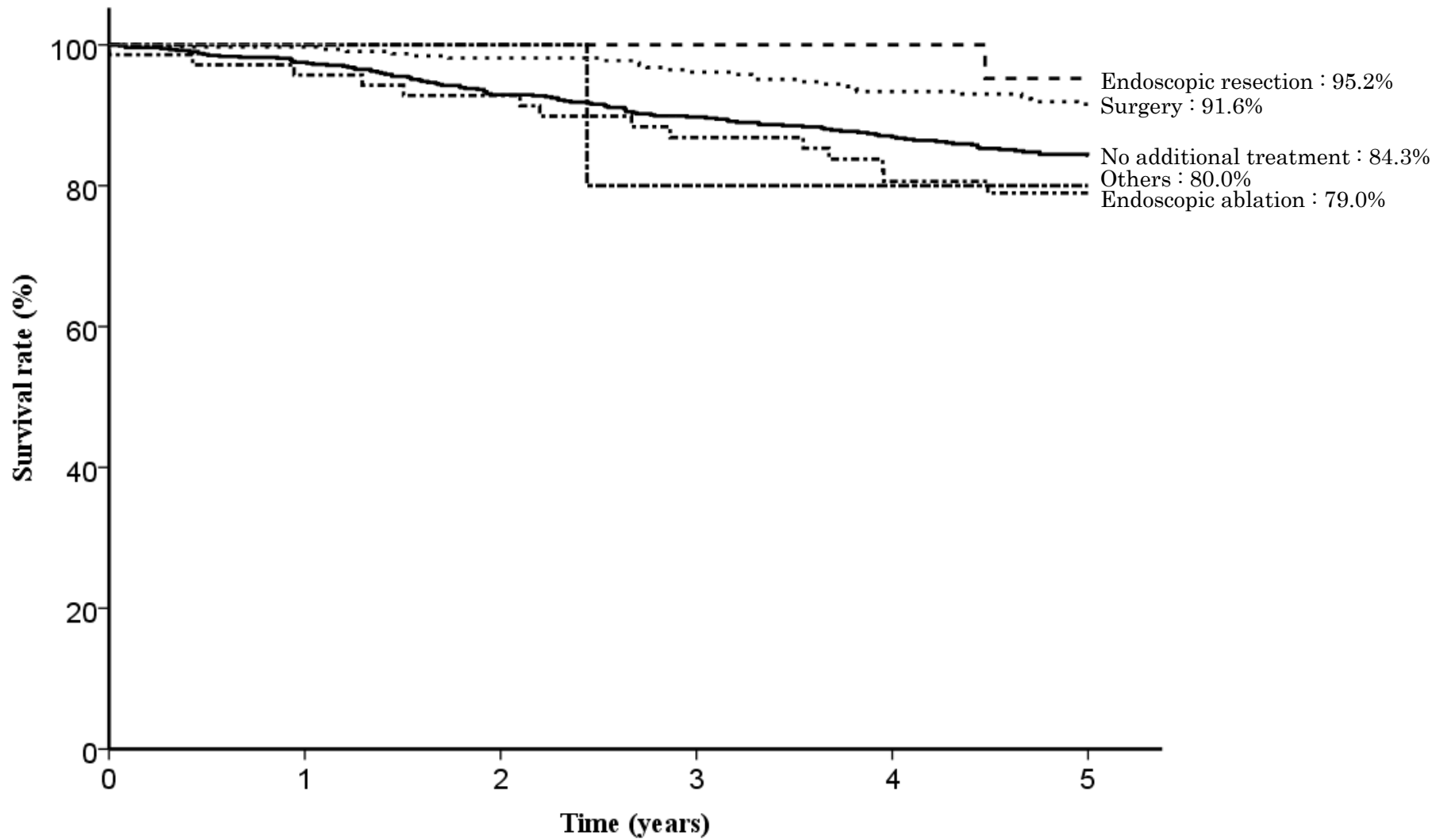


Fig. 22. Five year survival rates stratified by subsequent treatment for non-curative resection

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	4855	6	1069	98.5	96.2	94.2	91.8	89.6	0.5	3354	7	2	1	0	4	0	167	166	85

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	14	0	4	100.0	100.0	100.0	100.0	100.0		10	0	0	0	0	0	0	0	0	0
40-59	659	1	133	99.0	97.9	97.5	97.2	96.3	0.8	504	1	0	0	0	0	0	11	6	4
60-79	3475	5	716	98.5	96.6	94.9	92.6	90.6	0.5	2475	3	0	1	0	3	0	128	100	49
80-	707	0	216	97.6	92.2	87.0	81.6	77.3	1.8	365	3	2	0	0	1	0	28	60	32

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	3648	4	770	98.3	96.0	93.8	91.2	88.7	0.6	2522	6	2	1	0	3	0	143	131	70
Female	1207	2	299	98.8	96.9	95.5	93.6	92.5	0.8	832	1	0	0	0	1	0	24	35	15

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 (-)	4720	5	1040	98.5	96.2	94.3	91.9	89.7	0.5	3265	7	2	1	0	4	0	160	159	82
Prior endoscopic treatment (+)	135	1	29	97.7	96.9	89.5	87.8	85.9	3.2	89	0	0	0	0	0	0	7	7	3

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	4678	6	1031	98.5	96.4	94.5	92.2	90.1	0.5	3248	6	2	1	0	4	0	153	152	81
Remnant stomach	146	0	35	99.3	93.0	86.3	81.0	78.2	3.8	85	0	0	0	0	0	0	10	13	3
Gastric tube	31	0	3	96.7	83.3	80.0	76.5	76.5	7.8	21	1	0	0	0	0	0	4	1	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	901	1	204	98.5	95.7	94.0	91.5	88.3	1.2	607	2	0	0	0	1	0	36	37	14
Middle third	1884	2	422	98.9	97.2	95.2	93.1	91.5	0.7	1325	1	0	0	0	1	0	59	42	34
Lower third	2070	3	443	98.1	95.6	93.4	90.7	88.6	0.8	1422	4	2	1	0	2	0	72	87	37

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	2058	4	464	98.2	95.9	94.1	92.0	90.0	0.7	1418	3	0	0	0	1	0	61	73	38
Gre	841	0	169	98.7	97.3	94.4	91.9	89.7	1.1	596	1	1	0	0	0	0	32	27	15
Ant	937	1	215	98.5	95.7	94.0	91.6	89.7	1.1	640	1	1	1	0	0	0	37	31	11
Post	1017	1	221	98.8	96.4	94.5	91.4	88.7	1.1	698	2	0	0	0	3	0	37	35	21

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	2417	1	510	98.9	97.0	95.3	92.9	91.0	0.6	1720	3	0	1	0	0	0	80	68	35
Elevated type	1908	5	450	97.9	95.3	93.0	90.6	88.5	0.8	1270	3	1	0	0	3	0	65	80	36
Mixed type	494	0	99	98.5	95.6	93.6	90.4	87.4	1.6	341	1	1	0	0	1	0	22	17	12
Others	35	0	10	100.0	96.4	96.4	96.4	88.4	6.3	22	0	0	0	0	0	0	0	1	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	4281	5	941	98.6	96.5	94.7	92.2	90.1	0.5	2977	7	1	1	0	4	0	140	140	70
EMR	571	1	127	97.4	93.8	90.7	88.7	85.8	1.6	375	0	1	0	0	0	0	27	26	15
Others	3	0	1	100.0	100.0	100.0	100.0	100.0		3	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	4499	4	987	98.6	96.3	94.3	91.8	89.8	0.5	3118	6	2	1	0	4	0	152	151	78
Piecemeal resection	354	2	82	97.3	94.8	92.4	90.7	87.4	1.9	234	1	0	0	0	0	0	15	15	7
Others	2	0	0	100.0	100.0	100.0	100.0	100.0		2	0	0	0	0	0	0	0	0	0

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.	peri-toneal	liver rec	R	other cancer	other disease	un-known
Presence	11	0	3	100.0	100.0	100.0	100.0	87.5	11.7	7	0	0	0	0	0	0	0	1	0
Absence	4843	6	1066	98.5	96.2	94.2	91.7	89.6	0.5	3346	7	2	1	0	4	0	167	165	85

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.	peri-toneal	liver rec	R	other cancer	other disease	un-known
Presence	17	0	3	94.1	94.1	80.7	80.7	73.3	11.5	10	0	0	0	0	0	0	2	1	1
Absence	4838	6	1066	98.5	96.2	94.3	91.8	89.7	0.5	3344	7	2	1	0	4	0	165	165	84

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.	peri-toneal	liver rec	R	other cancer	other disease	un-known
pap	148	0	34	98.5	95.4	94.6	90.4	88.7	2.9	100	0	0	0	0	1	0	4	6	3
tub1	3877	6	851	98.4	96.4	94.4	92.1	90.1	0.5	2697	3	0	0	0	3	0	130	133	60
tub2	658	0	161	98.7	96.1	95.1	92.3	88.7	1.4	757	2	2	0	0	0	0	22	22	14
por	70	0	9	97.0	91.0	84.6	81.3	81.3	4.9	49	1	0	1	0	0	0	7	2	1
sig	81	0	10	98.7	93.4	88.1	86.7	83.9	4.3	59	1	0	0	0	0	0	4	3	4
muc	7	0	2	100.0	83.3	83.3	83.3	83.3	15.2	4	0	0	0	0	0	0	0	0	1
Others	8	0	0	100.0	100.0	100.0	100.0	100.0		8	0	0	0	0	0	0	0	0	0
Inconclusive	6	0	2	100.0	100.0	60.0	60.0	60.0	21.9	2	0	0	0	0	0	0	0	0	2

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.	peri-toneal	liver rec	R	other cancer	other disease	un-known
M	4102	6	932	98.6	96.7	94.9	92.7	90.7	0.5	2843	4	0	0	0	0	0	123	136	64
SM1	368	0	65	98.0	93.3	91.1	88.6	86.3	1.9	258	1	1	1	0	0	0	19	16	7
SM2 or deeper than SM2	355	0	66	97.6	94.0	90.5	86.3	83.5	2.1	237	2	1	0	0	4	0	23	13	9
Others	10	0	3	100.0	88.9	77.8	64.8	48.6	18.7	3	0	0	0	0	0	0	0	0	4
Inconclusive	19	0	3	100.0	94.7	88.4	82.1	75.8	10.6	12	0	0	0	0	0	0	2	1	1

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	unknown
ly(-)	4600	6	1012	98.4	96.3	94.4	92.2	90.1	0.5	3195	5	0	0	0	1	0	155	156	76
ly(+)	210	0	42	99.0	94.5	89.7	83.5	81.1	2.9	133	2	2	1	0	3	0	9	10	8
Inconclusive	43	0	14	100.0	97.1	93.9	90.7	87.3	6.0	25	0	0	0	0	0	0	3	0	1

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	unknown
v(-)	4701	6	1031	98.4	96.3	94.3	91.9	89.8	0.5	3257	5	2	1	0	2	0	159	161	83
v(+)	111	0	25	100.0	92.9	90.8	85.2	84.0	3.8	71	2	0	0	0	2	0	5	5	1
Inconclusive	42	0	13	100.0	97.0	93.7	90.5	87.2	6.0	25	0	0	0	0	0	0	3	0	1

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	unknown
UL(-)	4305	6	944	98.4	96.2	94.3	91.7	89.5	0.5	2974	6	2	1	0	4	0	148	149	77
UL(+)	477	0	101	98.4	96.4	93.7	92.2	90.9	1.4	338	1	0	0	0	0	0	16	16	5
Inconclusive	73	0	24	100.0	96.7	93.2	91.4	87.6	4.4	42	0	0	0	0	0	0	3	1	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	unknown
HM0	4143	4	918	98.6	96.5	94.8	92.3	90.3	0.5	2881	5	2	1	0	4	0	129	136	67
HM1	311	1	68	96.9	92.2	86.6	83.5	80.6	2.4	191	1	0	0	0	0	0	24	16	11
HMX	401	1	83	98.7	96.2	94.5	92.4	89.6	1.6	282	1	0	0	0	0	0	14	14	7

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	unknown
VM0	4582	6	1006	98.5	96.3	94.4	92.0	89.9	0.5	3179	5	0	1	0	2	0	149	160	80
VM1	152	0	39	97.9	94.2	91.1	87.7	83.3	3.4	92	1	2	0	0	1	0	11	3	3
VMX	121	0	24	98.3	94.7	90.0	88.0	87.0	3.3	83	1	0	0	0	1	0	7	3	2

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	4009	4	887	98.6	96.6	94.9	92.4	90.5	0.5	2794	3	0	1	0	2	0	123	134	65
Positive or inconclusive resected margins	846	2	182	97.9	94.5	91.2	88.6	85.8	1.3	560	4	2	0	0	2	0	44	32	20

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	2319	2	517	98.7	97.1	95.7	93.1	91.3	0.6	1630	2	0	0	0	0	0	63	76	31
Curative resection for expanded indication	1268	2	290	98.4	96.1	94.0	92.2	89.6	0.9	866	1	0	0	0	0	0	46	45	20
Non-curative resection	1268	2	262	98.2	94.7	91.8	89.0	86.6	1.0	858	4	2	1	0	4	0	58	45	34

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	775	1	169	97.5	92.9	89.8	86.9	84.3	1.4	501	2	2	1	0	2	0	45	30	23
Surgery	338	0	61	99.7	98.1	96.1	93.4	91.6	1.6	252	1	0	0	0	2	0	6	10	6
Endoscopic resection	26	0	5	100.0	100.0	100.0	100.0	95.2	4.6	20	0	0	0	0	0	0	0	1	0
Endoscopic ablation	71	1	9	95.7	92.8	86.8	80.6	79.0	5.0	48	0	0	0	0	0	0	7	4	3
Others	6	0	4	100.0	100.0	80.0	80.0	80.0	17.9	1	1	0	0	0	0	0	0	0	0