Comprehensive Registry of Esophageal Cancer in Japan

(1988~1994)

1st Edition

The Japanese Society for Esophageal Diseases

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Preface

This publication is a compendium of all presently available data of esophageal cancer cases throughout Japan for the 7 years from 1988 to 1994. The registration committee of the Japanese Society for Esophageal Diseases and National Cancer Center was in charge of the collection of the data, and 13,180 cases were registered from 166 institutions.

The epidemiology and clinical features of all 13,180 registered cases are analyzed in 18 tables in Chapter I. The operative findings and pathological results of 9,821 cases in which esophagectomy was performed are analyzed in terms of 25 items, shown by the table in Chapter II. In Chapter III, cumulative survival rates of patient with esophagectomy are shown in Figs. 1-18.

The background factors of I, 737 non-surgically treated cases (chemo- and/or radiotherapy) were examined in terms of 7 items in Chapter IV and the cumulative survival rates are shown in Figs, 19-34 in Chapter V.

Since diagnostic techniques have progressed during the period when these data were collected, superficial cancer (T1) cases came to occupy about 15-20%, and extended lymph node dissection (cervico-thoracic-abdominal 3-field dissection) was carried out widely. The improved results in cases with esophagectomy were shown.

Concerning the non-surgically treated cases, these are the first nation wide data showing the outcome of patients with chemo- and/or radiotherapy. Therefore, these are basic data, which are extremely important for future development of therapeutic strategy. The national registration committee is planning to procedure similar publications on an annual basis

June 21, 2000

The registration committee for esophageal cancer of the Japanese Society for Esophageal Diseases

Chief editor: Hiroko IDE M.D.

(Prof. of Surgery, Institute of Gastroenterology, Tokyo women's Medical University)

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IV. Clinical Factors in Patients with Chemotherapy and/or Radiation therapy

V. Overall Survival After Chemotherapy and/or Radiation therapy

Institutions registrating cases in 1988 - 1994

Inst.#	Institutions
001	Dept. of Surg. Sapporo National Hospital, Hokkaido Cancer Center
002	Dept. of Surg. Hakodate National Hospital
006	Dept. of Surg. Sendai National Hospital
009	Dept. of Surg. Kasumigaura National Hospital
010	Dept. of Surg. Tochigi National Hospital
020	Dept. of Surg. Narashino National Hospital
021	Dept. of Surg. Okura National Hospital
023	Dept. of Surg. International Medical Center Hospital
025	Tokyo Medical College, Hachioji Medical Center
051	Dept. of Surg. Osaka National Hospital
067	Dept. of Surg. Fukuyama National Hospital
075	Shikoku Cancer Center
085	Dept. of Surg. Kumamoto National Hospital
086	Dept. of Surg. Oita National Hospital
087	Dept. of Surg. Beppu National Hospital
089	Dept. of Surg. Miyakonojo National Hospital
091	Dept. of Surg. Ibusuki National Hospital
092	Dept. of Surg. National Cancer Center, Central Hospital
093	Dept. of Digestive Surg. Kyushu Cancer Center
095	National Cancer Center, East Hospital
101	First Dept. of Surg. Hokkaido Univ. School of Med.
102	Second Dept. of Surg. Hokkaido Univ. School of Med.
107	First Dept. of Internalmed. Hirosaki Univ. Sch. of Med.
108	First Dept. of Surg. Iwate Med. Univ. School of Med.
110	First Dept. of Surg. Tohoku Univ. School of Med.
111	Second Dept. of Surg. Tohoku Univ. School of Med.
112	First Dept. of Surg. Fukushima Medical School
117	Second Dept. of Surg. Chiba Univ. School of Med.
121	Dept. of Surg. Keio Univ. School of Med.
125	3rd Dept. of Surg. Nihon Univ. School of Med.
130	First Dept. of Surg. Tokyo Univ. School of Med.
135	Dept. of Surg. Tokyo Med. College Kasumigaura Hospital
137	Second Dept. of Surg. Jikei Univ. School of Med.
141	Second Dept. of Surg. Toho Univ. School of Med. Omori Hospital

Inst.#	Institutions
143	Second Dept. of Surg. Yokohama City Univ. School of Med.
144	First Dept. of Surg. Niigata Univ. School of Med.
151	Second Dept. of Surg. Gifu Univ. School of Med
153	Second Dept. of Surg. Nagoya Univ. School of Med.
155	Second Dept. of Surg. Nagoya City Univ. School of Med.
158	First Dept. of Surg. Kyoto Univ. School of Med.
160	First Dept. of Surg. Kyoto Prefectural Univ. of Med.
164	First Dept. of Surg. Osaka Univ. School of Med.
165	Second Dept. of Surg. Osaka Univ. School of Med.
166	First Dept. of Surg. Osaka City Univ. School of Med.
167	Second Dept. of Surg. Osaka City Univ. School of Med.
169	Dept. of General &Digestive Surg. Osaka Medical Collage
170	First Dept. of Surg. Kobe Univ. School of Med.
171	Second Dept. of Surg. Kobe Univ. School of Med.
172	First Dept. of Surg. Nara Medical Univ.
176	First Dept. of Surg. Tottori Univ. School of Med.
179	Second Dept. of Surg. Okayama Univ. School of Med.
181	Second Dept. of Surg. Hiroshima Univ. School of Med.
183	Second Dept. of Surg. Yamaguchi Univ. School of Med.
184	First Dept. of Surg. Tokushima Univ. School of Med.
187	Second Dept. of Surg. Kyusyu Univ. Faculty of Med.
188	First Dept. of Surg. Kurume Univ. School of Med.
190	First Dept. of Surg. Nagasaki Univ. School of Med.
191	Second Dept. of Surg. Nagasaki Univ. School of Med.
192	First Dept. of Surg. Kumamoto Univ. School of Med.
193	Second Dept. of Surg. Kumamoto Univ. School of Med.
194	First Dept. of Surg. Kagoshima Univ. School of Med.
198	Dept. of Surg Inst. of Medical School., Tokyo Univ.
200	Dept. of Surg. Reseach Inst. for Nuclear Med. & Biollogy Hiroshima Univ.
202	Dept. of Surg. Inst.of Gastroenterology Tokyo Women's Med. Univ.
203	Third Dept. of Surg. Tokyo Univ. School of Med.
210	Dept. of Digestive Surg, Kitasato Univ. East Hospital.
212	First Dept. of Surg. Teikyo Univ. School of Med

Inst.#	Institutions
215	Second Dept. of Surg. Kyorin Univ. School of Med.
216	First Dept. of Surg. St. Marianna Univ. School of Med.
220	Second Dept. of Surg. Saitama Medical Univ.
222	Dept. of Surg. Fujita Health Univ.School of Med.
223	Third Dept. of Surg. Fujita Health Univ. School of Med.
226	Second Dept. of Surg. Hyogo Medical Univ.
228	First Dept. of Surg. Fukuoka Univ. School of Med.
230	First Dept. of Surg. Asahikawa Medical Univ.
247	Second Dept. of Surg. Asahikawa Medical Univ.
248	First Dept. of Surg. Kobe Medical Univ.
249	First Dept. of Surg. Ryukyu Medical Univ.
251	Dept. of Surg. Toyama Medical and Pharmaceutical Univ.
252	First Dept. of Surg. Shimane Medical Univ.
254	Second Dept. of Surg. Univ. of Occupational & Environmental Health.
256	Second Dept. of Surg. National Defense Medical College.
414	Dept. of Surg. Muroran City General Hospital.
431	Dept. of Surg. Tonan Hospital
435	Nikkou Memorial Hospital
441	Dept. of Surg. Aomori City Hospital.
442	Dept. of Surg. Hachinohe City Hospital
448	Iwate Prefectural Central Hospital.
455	Dept. of Surg. Tohoku Laborers' Hospital
467	Dept. of Surg. Akita City General Hospital
408	Dept. of Surg. Hakodate City Hospital.
471	Dept. of Surg. Akita Union General Hospital.
474	Dept. of Surg. Hiraka General Hospital.
477	Dept. of Surg. Yamagata Prefectural Shinjo Hospital.
483	Fukushima Prefectural Aizu Sogo Hospital.
499	Dept. of Surg. Kiryu Public Welfare General Hospital.
500	Dept. of Surg. Isesaki City Hospital.
506	Social Insurance Saitama Central Hospital.
510	Dept. of Surg.Kawatetsu Chiba Hospital
519	Metropolitan Hiroo Hospital
524	Dept. of Surg. Musashino Red Cross Hospital.

Inst.#	Institutions
530	Dept. of Surg.Tokyo Seamen's Insurance Hospital
532	Dept. of Digestive Surg.Toranomon Hospital
554	Dept. of Surg. Kanto Laborers' Hospital.
558	Dept. of Surg. Odawara City Hospital.
565	Dept. of Surg. Yokohama-minami Mutual Aid Hospital.
573	Dept. of Surg. NKK Hospital.
576	Dept. of Surg. Niigata Cancer Center.
577	Dept. of Surg. Niigata Prefectural Shibata Hospital.
591	Kouseiren Takaoka Hospital
595	Dept. of Surg. Fukui prefectural Hospital
602	Dept. of Surg. Showa Inan General Hospital.
604	Dept. of Surg. Nagano Red Cross Hospital.
605	Dept. of Surg. Saku General Hospital.
632	Dept. of Surg. Chubu Rosai Hospital.
634	Dept. of Thoracic Surg.Aichi Cancer Center.
646	Dept. of Surg. Nagoya Red Cross 1st Hospital
649	Dept. of Surg. Anjo-kosei Hospital.
662	Dept. of Surg. Yokkaichi City Hospital.
674	Nagahama Municipal Hospital.
678	Dept. of Surg. Kyoto City Hospital.
685	Dept. of Surg. Osaka Rosai Hospital.
712	Dept. of Surg. Otemae Hospital
715	Dept. of Surg. Nissei Hospital
720	Dept. of Surg. Kansaidenryoku Hospital.
726	Dept. of Surg. Kobe Rosai Hospital.
730	Dept. of Surg. Hyogo Prefectural Kakogawa Hospital.
733	Dept. of Surg. Toyooka Public Hospital.
734	Dept. of Surg. Nishinomiya City Center Hospital.
735	Dept. of Surg. Itami City Hospital.
736	Dept. of Surg.Takasago Community Hospital.
739	Kinki Central Hospital
747	Dept. of Abd. Surg. Tenri Hospital
748	Dept. of Surg. Wakayama-rosai Hospital.
753	Dept. of Surg. Tottori Prefectural Center Hospital.

Inst.#	Institutions
758	Dept. of Surg. Matsue City Hospital.
762	Dept. of Surg. Okayama -rosai Hospital
765	Dept. of Surg. Okayama Mutual Aid General Hospital
767	Dept. of Surg.Kurashiki Center Hospital.
773	First Dept. of Surg. Hiroshima Prefectural Hospital.
776	Dept. of Surg. Onomichi General Hospital.
780	Dept. of Surg. Shimonoseki City Center Hospital.
782	Dept. of Surg. Shimonoseki-kosei Hospital
793	Dept. of Surg. Ehime Prefectural Center Hospital.
797	Dept. of Surg. Sumitomo-bessi Hospital
798	Dept. of Surg. Kochi Prefectural Center Hospital.
799	Dept. of Surg. Kochi City Community Hospital
805	Dept. of Surg. Kitakyusyu City Medical Center
807	Dept. of Surg. Kitakyusyu Yahata City Hospital
809	Dept. of Surg. Omuta City Hospital.
823	Dept. of Surg. Saga Prefectural Koseikan Hospital.
833	Dept. of Surg. Social Insurance Sasebo Hospital.
841	Dept. of Surg. Miyazaki Prefectural Hospital.
848	Osaka Adult Disease Center.
854	Dept. of Surg. Omiya General Hospital.
863	Dept. of Surg. Social Insurance Tonann General Hospital.
865	First Dept. of Surg. Kanagawa Cancer Center.
866	Dept. of Radiol. Hyogo Adult Disease Center
875	Dept. of Abd. Surg.Saitama Cancer Center.
876	Dept. of Surg. Metropolitan Komagome Hospital
888	Dept. of Surg. Izumi City Hospital.
890	Keiyukai-Sapporo Hospital
894	Dept. of Radiolog. Tochigi Cancer Center.
895	Dept. of Digestive Med. Tokyo Metroporitan Cancer Detection Center.
896	Dept. of Surg. Yokohama-sakae Mutual Aid Hospital
898	Dept. of Surg. Ohota-Nishinouchi Hospital.

Clinical Factors in Cases Treated from 1988 throgh 1994

1) Age and gender

Age	Cases (%)	Male	Female
- 29	7 (0.1%)	6	1
30 - 39	78 (0.6%)	61	17
40 - 49	883 (6.7%)	769	114
50 - 59	3,377 (25.6%)	2,978	399
60 - 69	5,218 (39.6%)	4,661	557
70 - 79	2,926 (22.2%)	2,421	505
80 -	587 (4.5%)	459	128
Unknown	104 (0.8%)	103	1
Total	13,180 (100%)	11,458 (86.9%)	1,722 (13.1%)

2) Area of residence

Area	No. of cases (%)	Area	No. of cases (%)
Total	**13180 (100%)**	Miyazaki	116 (0.9%)
		Nagano	181 (1.4%)
Aichi	461 (3.5%)	Nagasaki	180 (1.4%)
Akita	294 (2.2%)	Nara	180 (1.4%)
Aomori	159 (1.2%)	Niigata	399 (3.0%)
Chiba	532 (4.0%)	Oita	163 (1.2%)
Ehime	138 (1.0%)	Okayama	83 (0.6%)
Fukui	44 (0.3%)	Okinawa	28 (0.05%)
Fukuoka	623 (4.7%)	Osaka	659 (5.0%)
Fukushima	196 (1.5%)	Saga	120 (0.9%)
Gifu	115 (0.9%)	Saitama	597 (4.5%)
Gunma	175 (1.3%)	Shiga	54 (0.4%)
Hiroshima	172 (1.3%)	Shimane	85 (0.6%)
Hokkaido	1,189 (9.0%)	Shizuoka	148 (1.1%)
Hyogo	710 (5.4%)	Tochigi	185 (1.4%)
Ibaraki	171 (1.3%)	Tokushima	15 (0.1%)
Ishikawa	24 (0.2%)	Tokyo	2,100 (15.9%)
Iwate	221 (1.7%)	Tottori	88 (0.7%)
Kagawa	10 (0.1%)	Toyama	122 (0.9%)
Kagoshima	285 (2.2%)	Wakayama	41 (0.3%)
Kanagawa	762 (5.8%)	Yamagata	81 (0.6%)
Kouchi	43 (0.3%)	Yamaguchi	173 (1.3%)
Kumamoto	153 (1.2%)	Yamanashi	73 (0.6%)
Kyoto	195 (1.5%)	Others	6 (0.05%)
Mie	118 (0.9%)	Unknown	76 (0.6%)
Miyagi	437 (3.3%)		

3) Occupation

Occupation	Cases (%)
None	4,144 (31.4%)
Professional	874 (6.6%)
Management	843 (6.4%)
Office worker	2,050 (15.6%)
Sales worker	818 (6.2%)
Farm/Forestry/Marine product	942 (7.1%)
Mining and Quarrying	27 (0.2%)
Transport and communication	324 (2.5%)
Industrial technician	600 (4.6%)
General worker	817 (6.2%)
Service industry	375 (2.8%)
Unclassified	131 (1.0%)
Unknown	1,235 (9.4%)
Total	13,180 (100%)

4) Basis of diagnosis

Basis of diagnosis	Non-operated cases (%)	Operated cases (%)
Symptom	135 (18.6%)	
Esophagography	637 (25.3%)	2,535 (23.8%)
Endoscopy	950 (37.7%)	7,575 (71.0%)
Biopsy	1458 (57.9%)	5,183 (48.6%)
Smear	17 (0.06%)	
Surgery	41 (1.6%)	879 (8.2%)
Pathology	5 (0.02%)	4,666 (43.8%)
Autopsy	23 (0.09%)	15 (0.2%)
Others	12 (0.05%)	25 (0.4%)
Unknown	31 (0.1%)	90 (0.8%)
Total	2,515	10,665

5) Primary and Non-primary cases

Primary / Non-primary	Cases (%)	Treatments		
		Surgery	No surgery	Unknown
		Resected cases / Non-resected cases		
Primary cases	12,794 **(97.1%)**	10,455 (9,690 / 765)	2,313	26
Non-primary cases	303 **(2.3%)**	178 (125 / 53)	108	17
Unknown	83 **(0.6%)**	32 (26 / 6)	47	4
Total	13,180 **(100%)**	10,665 (9,841 / 824)	2,468	47

6) Familial history of carcinoma

Familial history of carcinoma	Cases (%)
No	7,757 (58.9%)
Yes	3,673 (27.9%)
unknown	1,750 (13.3%)
Total	13,180 (100%)

7) Symptoms

Chief complaint	Cases (%)			
	cTis-cT1		cT2-cT4	
None	1,371	(40.9%)	444	(5.1%)
Chest pain	228	(6.8%)	647	(7.4%)
Sense of stricture	557	(16.6%)	3,661	(41.7%)
Unusual Sensation	256	(7.6%)	377	(4.3%)
Dysphagia	285	(8.5%)	2,480	(28.2%)
Nausea/Vomiting	78	(2.3%)	209	(2.4%)
Appetite loss	67	(2.0%)	141	(1.6%)
Weight loss	59	(0.8%)	60	(0.7%)
Others	430	(12.8%)	655	(7.5%)
Unknown	49	(1.5%)	108	(1.2%)
Total	3,350	(100%)	8,782	(100%)

8) Multiple primary cancer

Multiple cancer	Cases (%)	
None	11,136	(84.5%)
Double	1,014	(7.7%)
Metachronous double	811	(6.2%)
Multiple	100	(0.8%)
Unknown	119	(0.9%)
Total	13,180	(100 %)

9) Multiple primary cancer - Organs

Organs	Sinchronous	Heterochronous	Multiple	Cases (%)
Pharynx	97 (9.4%)	85 (10.0%)	21 (11.9%)	203 (9.9%)
Oral cavity/Gum/Tongue	32 (3.1%)	95 (11.2%)	19 (10.7%)	146 (7.1%)
Thyroid	45 (4.4%)	11 (1.3%)	4 (2.3%)	60 (2.9%)
Parotid	1 (0.1%)	1 (0.1%)	0 (0.0%)	2 (0.1%)
Larynx/Maxillary	28 (2.7%)	67 (7.9%)	16 (9.0%)	111 (5.4%)
Lung/Trachea/Bronchus	47 (4.6%)	48 (5.6%)	14 (7.9%)	109 (5.3%)
Breast	0 (0.0%)	30 (3.5%)	2 (1.1%)	32 (1.6%)
Skin	2 (0.2%)	5 (0.6%)	0 (0.0%)	7 (0.3%)
Remnant esophagus	2 (0.2%)	7 (0.8%)	0 (0.0%)	9 (0.4%)
Stomach	542 (52.6%)	291 (34.2%)	56 (31.6%)	889 (43.2%)
Pancreas	17 (1.6%)	0 (0.0%)	2 (1.1%)	19 (0.6%)
Liver	36 (3.5%)	12 (1.4%)	4 (2.3%)	52 (2.5%)
Common bile duct/Gallbladder	8 (0.8%)	1 (0.1%)	1 (0.6%)	10 (0.5%)
Colon/Rectum	102 (9.9%)	93 (10.9%)	29 (16.4%)	224 (10.9%)
Kidney	9 (0.9%)	9 (1.1%)	4 (2.3%)	22 (1.1%)
Adrenal	1 (0.1%)	0 (0.0%)	0 (0.0%)	1 (0.0%)
Urinary bladder	6 (0.6%)	18 (2.1%)	2 (1.1%)	26 (1.3%)
Uterus/Ovarium	0 (0.0%)	14 (1.6%)	1 (0.6%)	15 (0.7%)
Prostate	3 (0.3%)	3 (0.4%)	0 (0.0%)	6 (0.3%)
Testis	2 (0.2%)	1 (0.1%)	1 (0.6%)	4 (0.2%)
Leukemia	4 (0.4%)	0 (0.0%)	0 (0.0%)	4 (0.2%)
Sarcoma	1 (0.1%)	13 (1.5%)	0 (0.0%)	14 (0.7%)
Malignant lymphoma	6 (0.6%)	2 (0.2%)	1 (0.6%)	9 (0.4%)
Others	4 (0.4%)	11 (1.3%)	0 (0.0%)	15 (0.7%)
Unknown	36 (3.5%)	35 (4.1%)	0 (0.0%)	71 (3.4%)
Lesions	1,031 (100%)	852 (100%)	177 (100%)	2,060 (100%)
Cases	1004	804	177	1898

10) Location of the tumor

Location	Cases (%)	
None	15	(0.1%)
Pharynx	113	(0.9%)
Cervical esophagus	624	(4.7%)
Upper thoracic esophagus	1,483	(11.3%)
Middle thoracic esophagus	7,203	(54.7%)
Lower thoracic esophagus	2,901	(22.0%)
Abdominal esophagus	617	(4.7%)
EG Junction	98	(0.7%)
Cardia	18	(0.1%)
Not recorded	108	(0.8%)
Total	13,180	(100%)

11) Longitudinal tumor length

Length	Cases (%)	
Not examined	161	(1.2%)
~1.0 cm	281	(2.1%)
1.1~2.0 cm	845	(6.4%)
2.1~3.0 cm	1,239	(9.4%)
3.1~5.0 cm	3,210	(24.4%)
5.1~7.0 cm	3,225	(24.5%)
7.1~10.0 cm	2,404	(18.2%)
10.1~15.0 cm	840	(6.4%)
15.1 cm~	136	(1.0%)
Not recorded	839	(6.4%)
Total	13,180	(100%)

12) Radiologic features

1988-1992

Types		Cases	(%)
Not examined		93	(1.0%)
Superficial	Slightly elevated	827	(9.1%)
	Flat	291	(3.2%)
	Slightly depressed	562	(6.2%)
Tumorous type		1,297	(14.3%)
Serrated type		2,140	(23.6%)
Funnel type		571	(6.3%)
Spiral type		2,835	(31.2%)
Unclasified		462	(5.1%)
Total		9,078	(100%)

1993-1994

Types*	Cases	(%)
Not examined	70	(1.7%)
O- I	186	(4.5%)
O-IIa	175	(4.3%)
O-IIb	83	(2.0%)
O-IIc	434	(10.6%)
O-III	47	(1.1%)
1	287	(7.0%)
2	1,125	(27.4%)
3	1,129	(27.5%)
4	106	(2.6%)
5	26	(0.6%)
Unclassified	67	(1.6%)
Unknown	367	(8.9%)
Total	4,102	(100 %)

*

O- I : superficical and protruding type
O- IIa : superficial and slight elevated type
O- IIb : superficial and flat type
O- IIc : superficial and slightly depressed
O- III : superficial and distinctly depressed

1 :protruding type
2 : ulcerative and localized type
3 : ulcerative and infiltrating type
4 : diffusely infiltrating type
5 : miscellaneous type

13) Endoscopic features

1988-1992

Types	Cases	(%)
Not examined	76	(0.8%)
Superficial – Slightly elevated	829	(9.1%)
Superficial – Flat	408	(4.5%)
Superficial – Slightly depressed	646	(7.1%)
Elevated type	1,410	(15.5%)
Depressed type	3,354	(36.9%)
Stenotic type	2,002	(22.1%)
Unclassified	353	(3.9%)
Total	9,078	(100%)

1993-1994

Types*	Cases	(%)
Not examined	21	(0.5%)
O- I	201	(4.9%)
O- IIa	180	(4.4%)
O- IIb	133	(3.2%)
O- IIc	553	(13.5%)
O- III	44	(1.1%)
1	290	(7.1%)
2	1,152	(28.1%)
3	1,104	(26.9%)
4	92	(2.2%)
5	31	(0.8%)
Unclassified	76	(1.9%)
Unknown	225	(5.5%)
Total	4,102	(100 %)

*

O- I : superficical and protruding type
O- IIa : superficial and slight elevated type
O- IIb : superficial and flat type
O- IIc : superficial and slightly depressed
O- III : superficial and distinctly depressed

1 :protruding type
2 : ulcerative and localized type
3 : ulcerative and infiltrating type
4 : diffusely infiltrating type
5 : miscellaneous type

14) Main Treatment

Treatment	Treatment			
	cTis/cT1 (%)		cT2/cT3/cT4 (%)	
None	58	(1.7%)	167	(1.9%)
Palliative operation (Bypass/Gastrostomy)	25	(0.7%)	415	(4.7%)
Noncurative resection	394	(11.8%)	2,740	(31.2%)
Curative resection	2,441	(72.9%)	3,868	(44.0%)
Radiation	128	(3.8%)	696	(7.9%)
Chemotherapy	33	(1.0%)	191	(2.2%)
Chemoradiotherapy	54	(1.6%)	625	(7.1%)
Endoscopic mucosal resection (EMR)	141	(4.2%)		
Others	63	(1.9%)	48	(0.5%)
Unknown	13	(0.4%)	32	(0.4%)
Total	12,132		(100%)	

15) Radiation therapy

Irradiation	Cases	(%)
None	7,225	(54.8%)
Radical dose	1,052	(8.0%)
Palliative dose	810	(6.1%)
Preoperative	1,104	(8.4%)
Intraoperative	95	(0.7%)
Postoperative	2,155	(16.4%)
Pre- & Postop.	240	(1.8%)
At recurrence	277	(2.1%)
Others	167	(1.3%)
Unknown	146	(1.1%)
Total	13,180	(100%)

16) Chemotherapy

Chemotherapy	Cases	(%)
None	7,489	(56.8%)
Alone	1,014	(7.7%)
Preoperative	968	(7.3%)
Intraoperative	54	(0.4%)
Postoperative	2,851	(21.6%)
Pre & postop.	294	(2.2%)
Intra & Postop.	54	(0.4%)
Periop.	7	(0.1%)
At recurrence	191	(1.4%)
Others	213	(1.6%)
Unknown	213	(1.6%)
Total	13,180	(100%)

17) Surgical procedures & operative death

Surgical procedures	Cases	Death	(%)
Laparotomy/Thoracotomy	130	1	(0.8%)
Anastomosis/Bypass	271	11	(4.1%)
Stoma	129	3	(2.3%)
Noncurative resection without reconstruction	35	7	(20.0%)
Noncurative resection with reconstruction	3,187	138	(4.3%)
Curative resection without reconstruction	59	3	(5.1%)
Curative resection with reconstruction	6,554	149	(2.3%)
Endoscopic mucosal resection (EMR)	141	0	(0.0%)
Total	10,506	312	(2.9%)

Clinical and Pathological Factors in Cases of Esophagectomy

18) Surgical approaches for esophagectomy

Location \ Approach	Trans cervical	Rt. thoracic	Lt. thoracic	Rt. thoraco-abdominal	Lt. thoraco-abdominal	Trans abdominal	Extra-pleural	Trans hiatar	Unknown	Total	(%)
Pharynx	47			5				41		93	(0.9%)
Cervical esophagus	141	9	1	110	2	1	3	185	5	457	(4.7%)
Upper thoracic esophagus	8	29	2	818	16	2	3	77	13	968	(9.9%)
Middle thoracic esophagus	5	114	24	4,585	85	15	3	429	37	5,297	(53.9%)
Lower thoracic esophagus		44	29	1,826	184	32	6	223	14	2,358	(24.0%)
Abdominal esophagus		9	20	232	160	47	20	43	3	534	(5.4%)
EG junction		1	2	22	31	17	2	5	1	81	(0.8%)
Cardia				4	6	7		1		18	(0.2%)
Unknown	1			9		1		1	3	15	(0.2%)
Total (%)	202 (2.1%)	206 (2.1%)	78 (0.8%)	7,611 (77.5%)	484 (4.9%)	122 (2.1%)	37 (0.4%)	1,105 (10.2%)	76 (0.8%)	9,821 (100%)	

19) Extent of esophagectomy

Location \ Extent	Ce	CeI E	I E	E	Ea	Others	Unknown	Total (%)
Pharynx Cervical esophagus	115	341	29			45	20	550 (5.6%)
Upper and middle thoracic esophagus	1	309	5,869	3	3	18	62	6,265 (63.8%)
Lower thoracic esophagus		65	2,156	106	2	9	22	2,358 (24.0%)
Abdominal esophagus EG junction		9	372	164	60	8	2	615 (6.3%)
Cardia			4	4	6	3	1	18 (0.2%)
Unknown		3	8			2	2	15 (0.2%)
Total	116	727	8,438	277	71	77	115	9,821
(%)	1.2%	7.4%	85.9%	2.8 %	0.7%	0.8%	1.2%	100 %

Ce: cervical esophagus, I: upper and middle thoracic esophagus, E: lower thoracic esophagus, Ea: abdominal esophagus,

20) Combined resection

	Organs resected in addition to the esophagectomy									Total (%)
	Pharynx	Trachea	Lung	Pericardium	Diaphragm	Stomach	Spleen	Others	Unknown	
1 organ	221 (9.0%)	32 (1.3%)	143 (5.8%)	79 (3.2%)	86 (3.5%)	360 (14.6%)	178 (7.2%)	599 (24.3%)	107 (4.3%)	1805 (73.3%)
Tow or more organs	●	●								98 (4.0%)
	●	●	●							2 (0.1%)
	●	●		●				●		1 (0.04%)
	●	●					●			1 (0.04%)
	●	●						●		50 (2.0%)
	●		●							1 (0.04%)
	●		●					●		1 (0.04%)
	●				●					1 (0.04%)
	●					●				6 (0.2%)
	●					●	●			1 (0.04%)
	●						●			1 (0.04%)
	●						●	●		3 (0.1%)
	●							●		87 (3.5%)
		●	●							2 (0.1%)
		●	●	●						2 (0.1%)
		●				●				2 (0.1%)
		●					●	●		1 (0.04%)
		●						●		14 (0.6%)
			●	●						31 (1.3%)
			●	●	●					4 (0.2%)
			●	●			●			1 (0.04%)
			●	●				●		7 (0.3%)
			●		●					10 (0.4%)
			●		●	●				5 (0.2%)
			●		●		●	●		1 (0.04%)
			●		●			●		3 (0.1%)
			●			●				4 (0.2%)
			●				●			3 (0.1%)
			●					●		19 (0.8%)
				●	●					5 (0.2%)
				●				●		16 (0.6%)
				●		●	●			1 (0.04%)
				●		●		●		1 (0.04%)
				●			●			1 (0.04%)
					●	●				11 (0.4%)
					●	●	●			10 (0.4%)
					●	●		●		6 (0.2%)
					●	●	●	●		1 (0.04%)
					●		●			10 (0.4%)
					●		●	●		9 (0.4%)
					●			●		19 (0.8%)
						●	●			69 (2.8%)
						●	●	●		39 (1.6%)
						●		●		38 (1.5%)
							●	●		60 (2.4%)
								●		1 (0.04%)
Total (%)										2464 (100%)

21) Reconstruction route

Location \ Route	None	Ante-thoracic	Retro-sternal	Rt. intra-thoracic	Lt. intra-thoracic	Posterior mediastinal	Intra-Abdominal	Cervical	Others	Unknown	Total (%)
Pharynx Cervical esophagus	6	20	62	8		318		126	5	8	550 (5.6%)
Upper and middle thoracic esophagus	38	1,245	3,182	378	20	1,345	1		7	47	6,265 (63.8%)
Lower thoracic esophagus	8	354	1,014	307	124	526	10		1	13	2,358 (24.0%)
Abdominal esophagus EG junction	4	40	129	85	164	131	53		4	4	615 (6.3%)
Cardia		1	3	1	8	1	4				18 (0.2%)
Unknown		1	6	3		3				2	15 (0.2%)
Total	56	1,661	4,396	782	316	2,324	68	126	18	74	9,821
(%)	0.6%	16.9%	44.7%	8.0%	3.2%	23.6%	0.7%	1.3%	0.2%	0.8%	100%

22) Organs for esophageal replacement

Location \ Organs	None	Whole stomach	Gastric tube	Jejunum	Free jejunum	Colon	Free colon	Skin	Others	Unknown	Total (%)
Pharynx Cervical esophagus	6	108(1)	255(3)	5	111	27	139(1)	3	20	3	550 (5.6%)
Upper and middle thoracic esophagus	34	301	5,308 (9){4}	79 (1){1}	11	446 (3){1}	21(1)	1	15	48	6,265 (63.8%)
Lower thoracic esophagus	7	138	1,879(1) [1]{2}	123	5	172	9		3	14	2,358 (24.0%)
Abdominal esophagus EG junction	3	36	350[1]	195	7	26			2	4	615 (6.3%)
Cardia			6	10		1			1		18 (0.2%)
Unknown		1	11	1					1	2	15 (0.2%)
Total	50	584	7,809	413	134	672	43	4	43	84	9,821
(%)	0.5%	5.9%	79.5%	4.2%	1.4%	6.8%	0.4%	0.04%	0.4%	0.9%	100%

() : + free jejunal graft , [] : +, pedicle jejunum , {} : +others

23) Depth of tumor invasion
(Clinical)

	cT1-cT2	cT3	cT4	Unknown	Total	(%)
Pharynx Cervical esophagus	150	151	243	6	550	(5.6%)
Upper and middle thoracic esophagus	2,669	2,328	1,226	42	6,265	(63.8%)
Lower thoracic esophagus	939	1,113	295	11	2,358	(24.0%)
Abdominal esophagus EG junction	234	293	82	6	615	(6.3%)
Cardia	5	9	4		18	(0.2%)
Unknown	7	5	1	2	15	(0.2%)
Total	4,004	3,899	1,851	67	9,821	
(%)	40.8%	39.7%	18.8%	0.7%	100%	

24) Depth of tumor invasion
(Pathological)

pTis-pT2	pT3	pT4	Unknown	Total	(%)
139	180	215	16	550	(5.6%)
2,849	2,483	849	84	6,265	(63.8%)
927	1,204	206	21	2,358	(24.0%)
197	362	48	8	615	(6.3%)
4	11	3		18	(0.2%)
8	3	1	3	15	(0.2%)
4,124	4,243	1,322	132	9,821	
42.0%	43.2%	13.5%	1.3%	100%	

Tis: carcinoma in situ.
T1: invasion to the lamina propria, muscularis mucosa and submucosa.
T2: invasion to the muscularis propria.
T3: invasion to the adventitia.
T4: invasion to neighbouring organs.

25) Organs with direct tumor invasion

	Organs									Subtotal	
	Trachea	Lung	Aorta	Vein	Pericardium	Diaphragm	Stomach	Others	Unknown		
1 organ	3 (21.5%)	108 (7.3%)	173 (11.7%)	8 (0.5%)	75 (5.1%)	75 (5.1%)	10 (0.7%)	221 (14.9%)	98 (6.6%)	1,086 (73.4%)	
Tow or more organs	●	●								23	(1.6%)
	●	●	●							4	(0.3%)
	●	●			●					3	(0.2%)
	●	●						●		1	(0.1%)
	●		●							71	(4.8%)
	●		●		●					6	(0.4%)
	●		●					●		6	(0.4%)
	●			●						3	(0.2%)
	●			●	●					1	(0.1%)
	●				●					17	(1.1%)
	●				●		●			1	(0.1%)
	●				●			●		12	(0.8%)
	●							●		56	(3.8%)
		●	●							24	(1.6%)
		●	●		●					6	(0.4%)
		●	●			●				1	(0.1%)
		●	●					●		3	(0.2%)
		●		●	●					1	(0.1%)
		●		●		●				1	(0.1%)
		●			●					27	(1.8%)
		●			●	●				3	(0.2%)
		●			●			●		2	(0.1%)
		●				●				7	(0.5%)
		●				●	●			1	(0.1%)
		●				●		●		1	(0.1%)
		●					●			1	(0.1%)
		●						●		11	(0.7%)
			●	●						1	(0.1%)
			●	●	●					1	(0.1%)
			●		●					13	(0.9%)
			●		●	●				2	(0.1%)
			●		●			●		3	(0.2%)
			●					●		22	(1.5%)
			●			●				3	(0.2%)
			●					●		12	(0.8%)
				●	●					1	(0.1%)
					●	●				5	(0.3%)
					●	●	●			2	(0.1%)
					●			●		11	(0.7%)
						●	●			3	(0.2%)
						●	●	●		2	(0.1%)
						●		●		15	(1.0%)
							●	●		5	(0.3%)
	Total (%)									1480	(100%)

26) Lymph node metastasis diagnosed clinically

Location \ Metastasis	Unknown	cN(-)	cN(+)	cN1(+)	cN2(+)	cN3(+)	cN4(+)	Total	(%)
Pharynx and Cervical esophagus	18	155	377	79	171	107	20	550	(8.1%)
Upper and middle thoracic esophagus	127	2,276	3,862	500	1,605	1,048	709	6,265	(63.8%)
Lower thoracic esophagus	38	716	1,604	203	733	304	364	2,358	(24.0%)
Abdominal esophagus EG junction	6	181	428	125	201	40	62	615	(6.3%)
Cardia		2	16	5	6	3	2	18	(0.3%)
Unknown	2	7	6	1	2	2	10	15	(0.5%)
Total	191	3,337	6,293	913	2,718	1,505	1,157	9,821	
(%)	1.9%	34.0%	64.1%	9.3%	27.7%	15.3%	11.8%	100%	

27) Lymph node metastasis diagnosed pathologically

Location \ Metastasis	Unknown	pN(-)	pN(+)	pN1(+)	pN2(+)	pN3(+)	pN4(+)	Total	(%)
Pharynx Cervical esophagus	32	195	323	61	142	109	11	550	(8.1%)
Upper and middle thoracic esophagus	221	2,592	3,452	376	1,396	1,003	677	6,265	(63.8%)
Lower thoracic esophagus	56	792	1,510	135	870	311	349	2,358	(24.0%)
Abdominal esophagus EG junction	20	243	352	96	159	46	55	615	(6.3%)
Cardia	2	3	13	4	7	1	1	18	(0.3%)
Unknown	2	9	4		2	2		15	(0.5%)
Total	333	3,834	5,654	672	2,417	1,472	1,093	9,821	
(%)	3.4%	39.0%	57.6%	6.8%	24.6%	15.0%	11.1%	100%	

28) Organ metastasis

Location \ Metastasis	(Clinical) cM0	cM1	Unknown	(Pathological) pM0	pM1	Unknown	Total	(%)
Pharynx and Cervical esophagus	527	12	11	468	11	71	550	(8.1%)
Upper and middle thoracic esophagus	6,094	132	39	5,429	104	732	6,265	(63.8%)
Lower thoracic esophagus	2,252	90	15	2,015	63	280	2,358	(24.0%)
Abdominal esophagus EG junction	585	29	2	493	19	103	615	(6.3%)
Cardia	18			14		4	18	(0.3%)
Unknown	13		2	10		5	15	(0.5%)
Total	9,489	263	69	8,429	197	1,195	9,821	
(%)	96.6%	2.7%	0.7%	85.8%	2.0%	12.2%	100%	

29) Pleural metastasis

Location \ Metastasis	(Clinical) PL 0	PL 1	Unknown	(Pathological) pl 0	pl 1	Unknown	Total	(%)
Pharynx and Cervical esophagus	489	3	58	445	2	103	550	(8.1%)
Upper and middle thoracic esophagus	6,098	57	110	5,457	40	768	6,265	(63.8%)
Lower thoracic esophagus	2,296	13	52	2,066	11	291	2,358	(24.0%)
Abdominal esophagus EG junction	594	7	11	495	3	107	615	(6.3%)
Cardia	17		1	15		3	18	(0.3%)
Unknown	13		2	10		5	15	(0.5%)
Total	9,507	80	234	8,488	56	1,277	9,821	
(%)	96.8%	0.8%	2.4%	86.4%	0.6%	13.0%	100%	

30) Staging

Stage / Location	(Clinical) I	II	III	IV	Unknown	(Pathological) 0	I	II	III	IV	Unknown	Total	(%)
Pharynx and Cervical esophagus	81	34	122	303	10	48	32	44	123	281	22	550	(8.1%)
Upper and middle thoracic esophagus	1,683	448	1,598	2452	84	1,230	487	452	1,626	2,298	172	6,265	(63.8%)
Lower thoracic esophagus	532	207	773	818	28	354	159	192	821	787	45	2,358	(24.0%)
Abdominal esophagus EG junction	138	92	211	163	11	89	45	108	216	140	17	615	(6.3%)
Cardia	42	1	8	7	0	0	1	3	9	4	1	18	(0.3%)
Unknown	5	1	2	4	3	5	2	0	1	3	4	15	(0.5%)
Total	2,441	783	2,714	3747	136	1,726	726	799	2,796	3,513	261	9,821	
(%)	24.9%	8.0%	27.6%	38.2%	1.4%	17.6%	7.4%	8.1%	28.5%	35.8%	2.7%	100%	

31) Curability

Grade / Location	(Clinical) C0	CI	CII	CIII	Unknown	(Pathological) C0	CI	CII	CIII	Unknown	Total	(%)
Pharynx and Cervical esophagus	176	117	96	145	16	151	112	81	181	25	550	(8.1%)
Upper and middle thoracic esophagus	1,444	1,192	850	2,696	83	1,261	1,258	825	2,740	181	6,265	(63.8%)
Lower thoracic esophagus	345	532	443	995	23	349	540	410	1,009	50	2,358	(24.0%)
Abdominal esophagus E G junction	119	94	117	274	166	94	90	109	304	18	615	(6.3%)
Cardia	4	3	7	4	0	3	3	6	5	1	18	(0.3%)
Unknown	2	2	2	6	3	2	0	2	8	3	15	(0.5%)
Total	2,090	1,940	1,515	4,120	156	1,860	2,003	1,433	4,247	278	9,821	
(%)	21.3%	19.8%	15.4%	42.0%	1.6%	18.9%	20.4%	14.6%	43.2%	2.8%	100%	

C0: absolute non curative, CI: relative non curative, CII: relative curative, CIII: absolute curative

32) Histologic types

Histologic types		Cases	(%)
Not examined		12	(0.1%)
SCC	SCC	531	(5.4%)
	Well diff.	2,566	(26.1%)
	Moderately diff	4,599	(46.8%)
	Poorly diff.	1507	(15.3%)
Adenocarcinoma		137	(1.4%)
Adenosquamous cell carcinama		64	(0.7%)
Undifferentiated		101	(1.0%)
Others	Carcinosarcoma	48	(0.5%)
	Basal cell ca.	43	(0.4%)
	Adenoid cystic ca.	24	(0.2%)
	Mucoepidermoid ca.	20	(0.2%)
	Others	46	(0.5%)
Unclassified		17	(0.2%)
Unknown		106	(1.1%)
Total		9,821	(100%)

33) Residual cancer cells at the transected stump (Pathological)

p d	Cases (%)
p(-) d(-)	8,896 (90.6%)
p(+) d(-)	471 (4.8%)
p(-) d(+)	64 (0.7%)
p(+) d (+)	24 (0.2%)
Unknown	366 (3.7%)
Total	9,821 (100%)

34) Residual cancer cells in the cut surface of the esophageal wall of the resected spacemen (Pathological) 1993 ~1994

ew	Cases (%)
(-)	2,181 (72.1%)
(+)	370 (12.2%)
Unknown	472 (15.6%)
Total	3,023 (100%)

p: proximal esophageal stump, d:distal stump, ew:cut surface of the esophageal wall

35) Intraepithelial spread (ie)

ie	Case	(%)
ie (-)	5,128	(52.2%)
ie (+)	3,570	(36.4%)
Unknown	1,123	(11.4%)
Tatal	9,821	(100%)

36) Skip metastasis in the esophageal wall

Skip metastasis	Cases	(%)
(-)	8,056	(82.0%)
(+)	1,086	(11.1%)
Unknown	679	(6.9%)
Tatal	9,821	(100%)

37) Lymphatic vessel invasion (ly)

ly	Case	(%)
ly (-)	3,161	(32.2%)
ly (+)	6,235	(63.5%)
Unknown	425	(4.3%)
Tatal	9,821	(100%)

38) Blood vessel invasion (v)

v	Case	(%)
v **(-)**	5,353	(54.5%)
v (+)	3,995	(40.7%)
Unknown	473	(4.8%)
Tatal	9,821	(100%)

39) Multiple primary cancer

Multiple	Cases	(%)
(-)	8,216	(83.7%)
(+)	1,024	(10.4%)
Unknown	581	(5.9%)
Total	9,821	(100%)

41) Infiltrative growth pattern (inf)

inf	Cases	(%)
Slight	961	(9.8%)
Moderate	3,678	(37.5%)
Severe	875	(8.9%)
Unknown	4,307	(43.9%)
Total	9,821	(100%)

40) Coexisting lesions

Lesions	Cases	(%)
None	8,799	(89.6%)
Metastasis from other cancer	21	(0.2%)
Myoma	202	(2.1%)
Sarcoma	3	(0.03%)
Melanoma	2	(0.02%)
Mixed tumor	4	(0.04%)
Others	324	(3.3%)
Unknown	466	(4.7%)
Total	9,821	(100%)

42) Pathological effects of radiation therapy and/or chemotherapy

Grade	Cases	(%)
Not examined	597	(21.8%)
Grade 0-1	722	(26.4%)
Grade 2	490	(17.9%)
Grade 3	148	(5.4%)
Unknown	782	(28.6%)
Total	2,739	(100%)

43) Pathological regrowth after radiation therapy and/or chemotherapy

Regrowth	Cases	(%)
(-)	835	(30.5%)
(+)	323	(11.8%)
Unknown	1,581	(57.7%)
Total	2,739	(100%)

Overall Survival After Esophagectomy

Fig.1 Overall survival of 9,143 patients treated by esophagectomy between 1988 and 1994

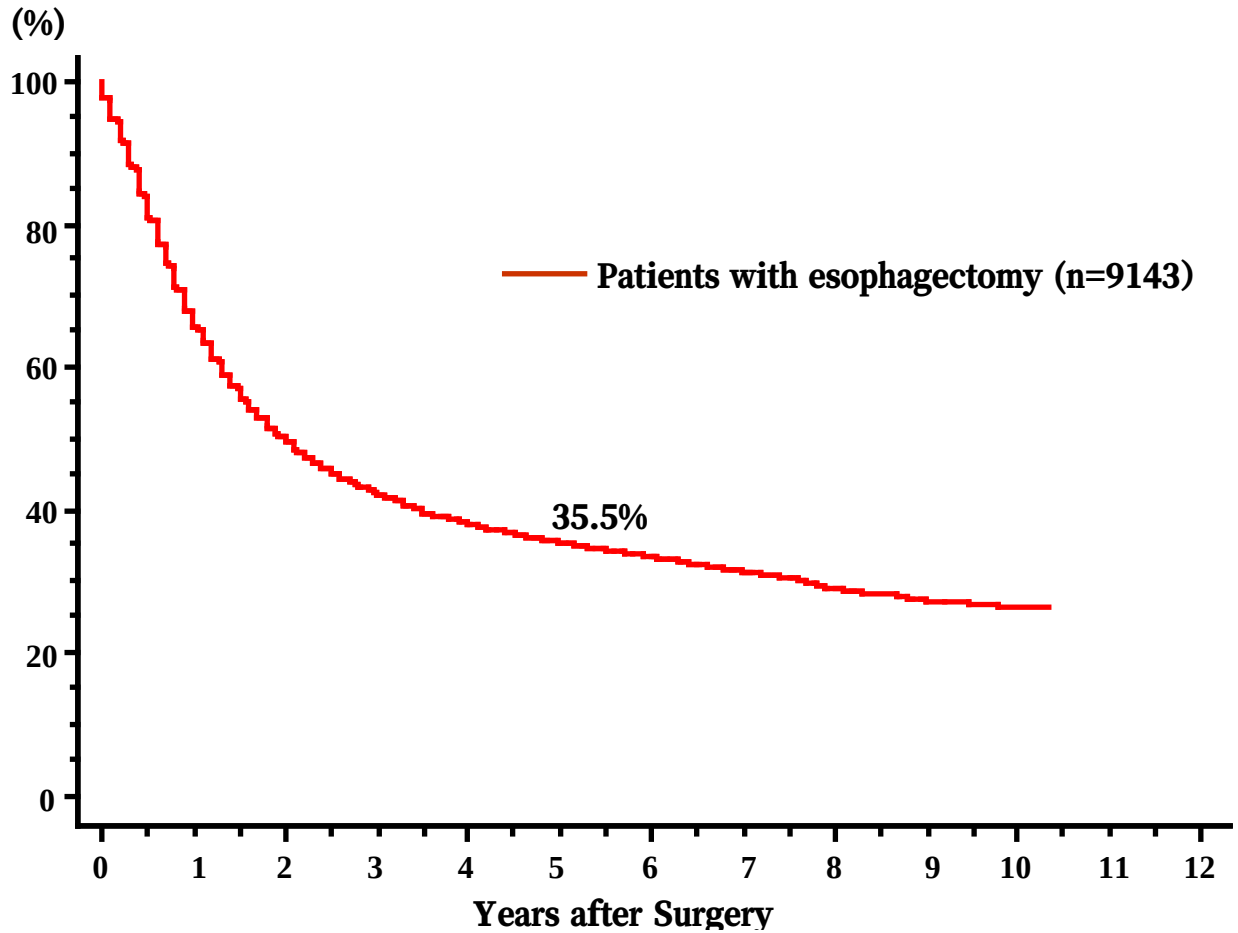


Fig. 2 Survival of patients treated by esophagectomy in relation to gender

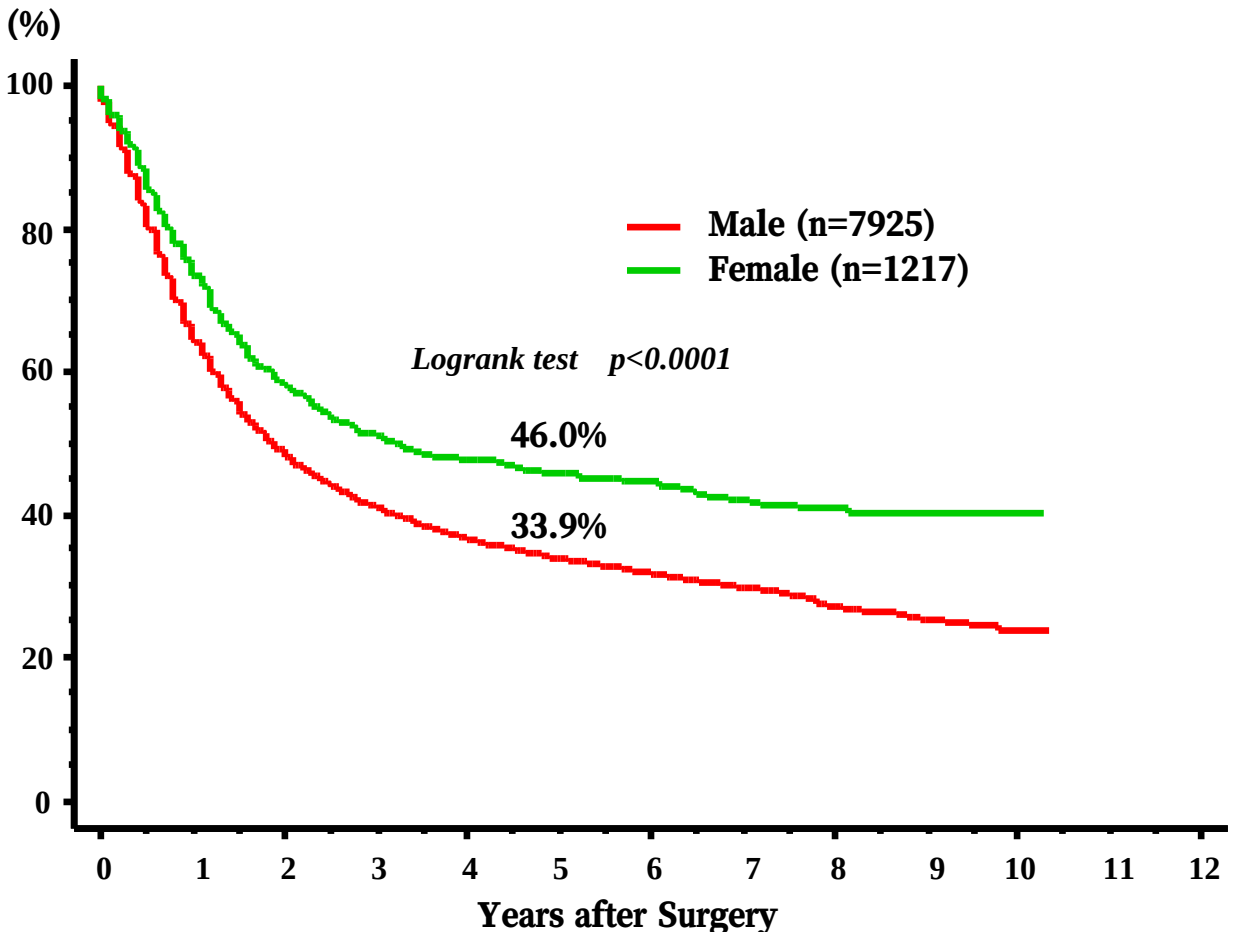


Fig. 3 Survival of patients treated by esophagectomy in relation to tumor location (1)

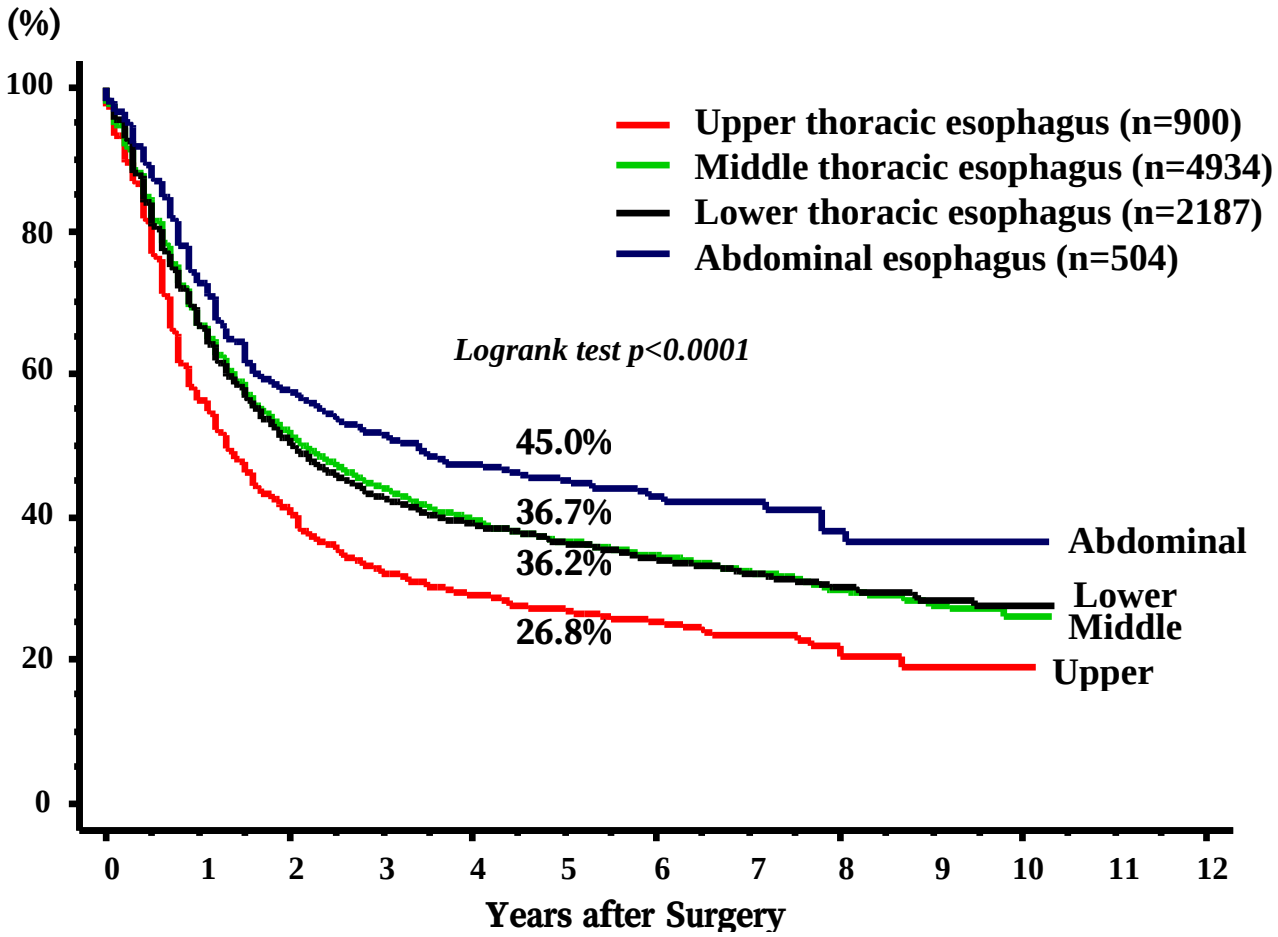


Fig. 4 Survival of patients treated by esophagectomy in relation to tumor location (2)

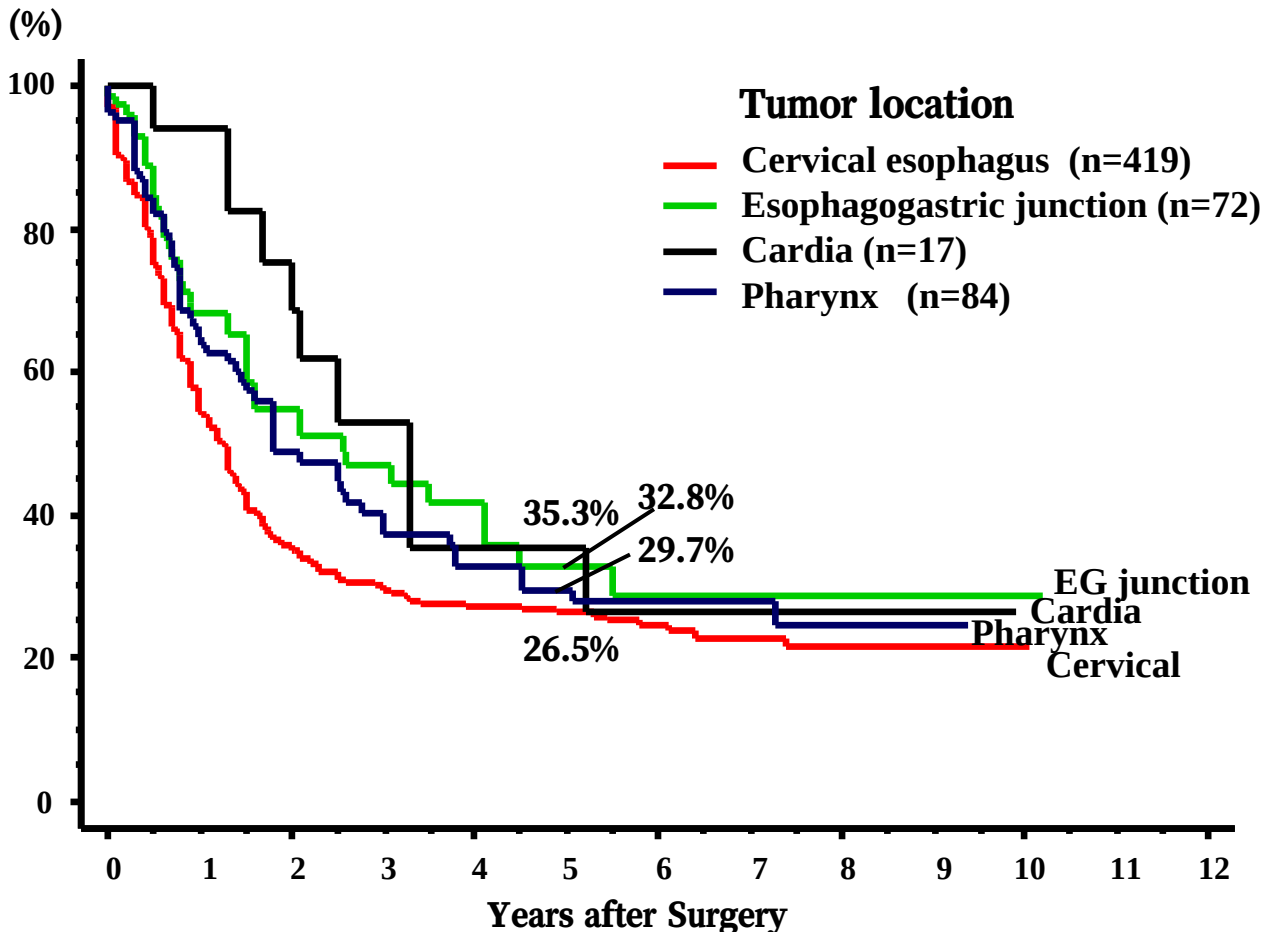


Fig.5 Survival of patients treated by esophagectomy in relation to pathological curability

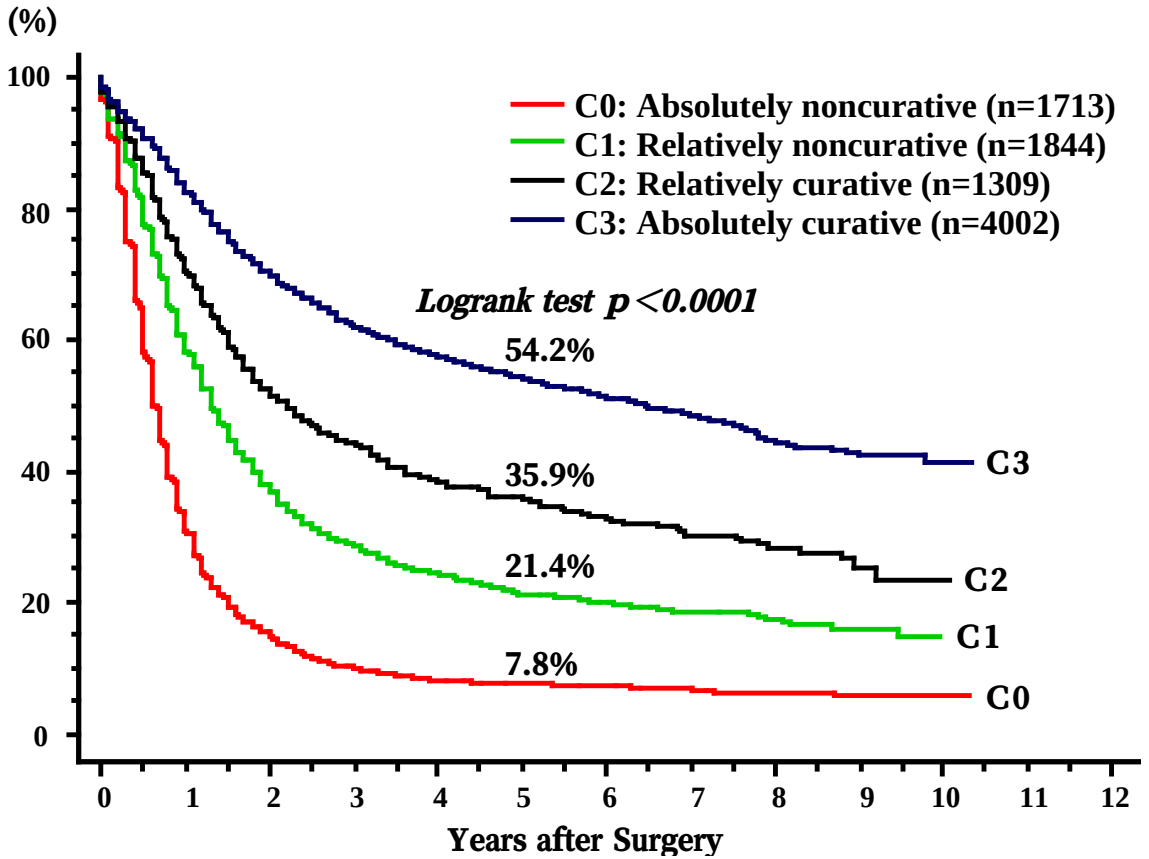


Fig. 6 Survival of patients treated by esophagectomy in relation to histologic type

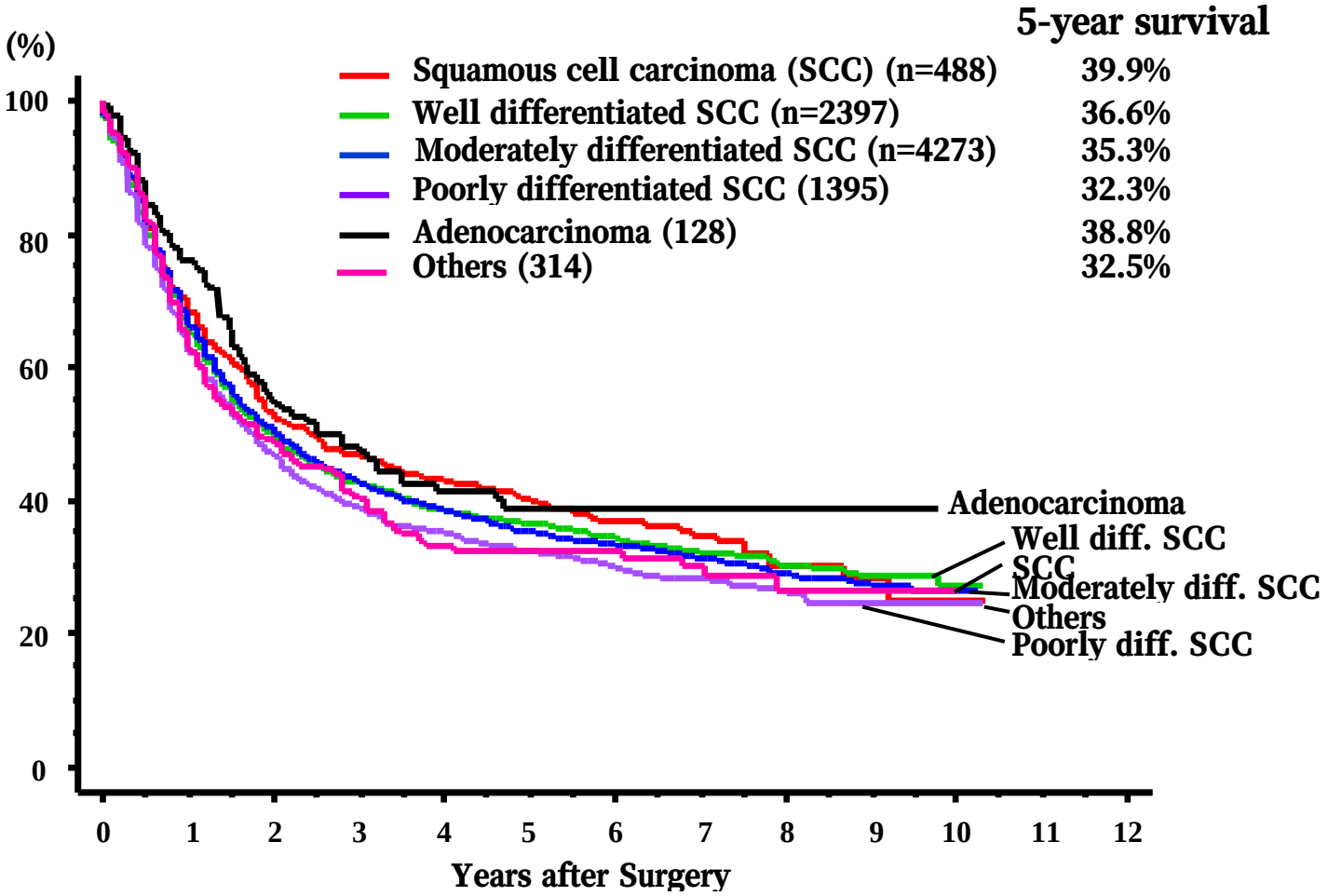


Fig. 7 Survival of patients treated by esophagectomy in relation to depth of tumor invasion

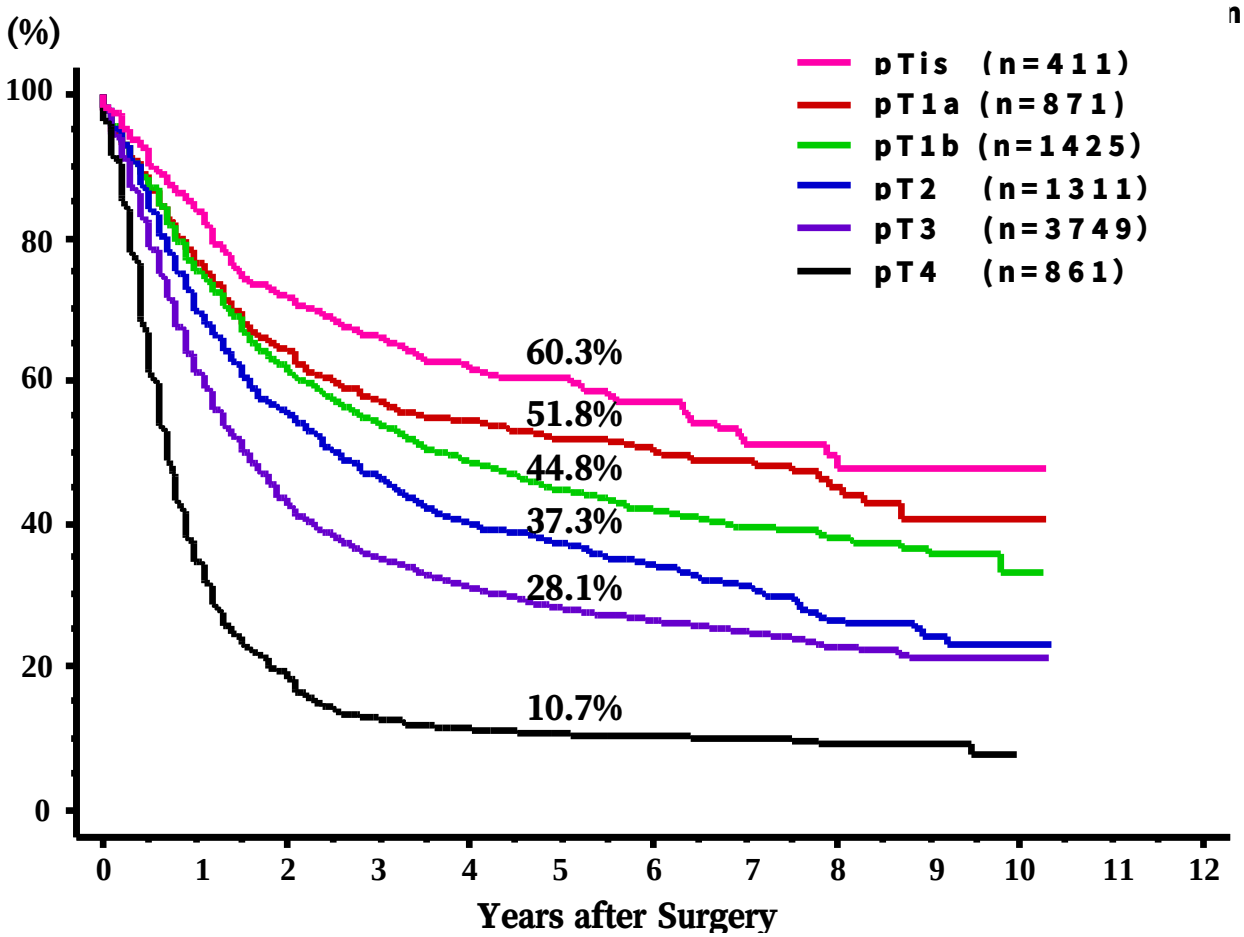


Fig. 8 Survival of patients treated by esophagectomy in relation to lymph node metastasis

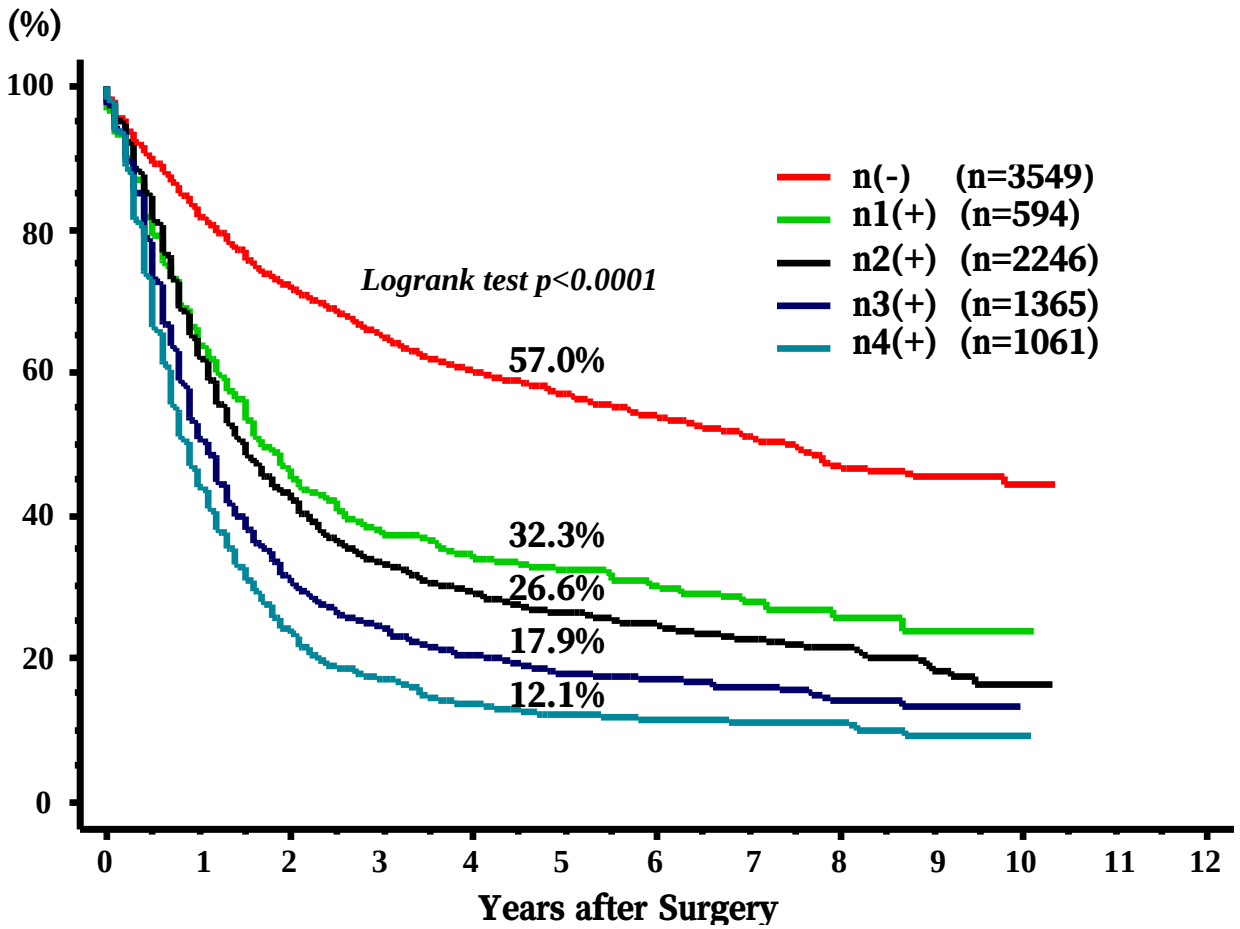


Fig. 9 Survival of patients treated by esophagectomy in relation to pathological stage

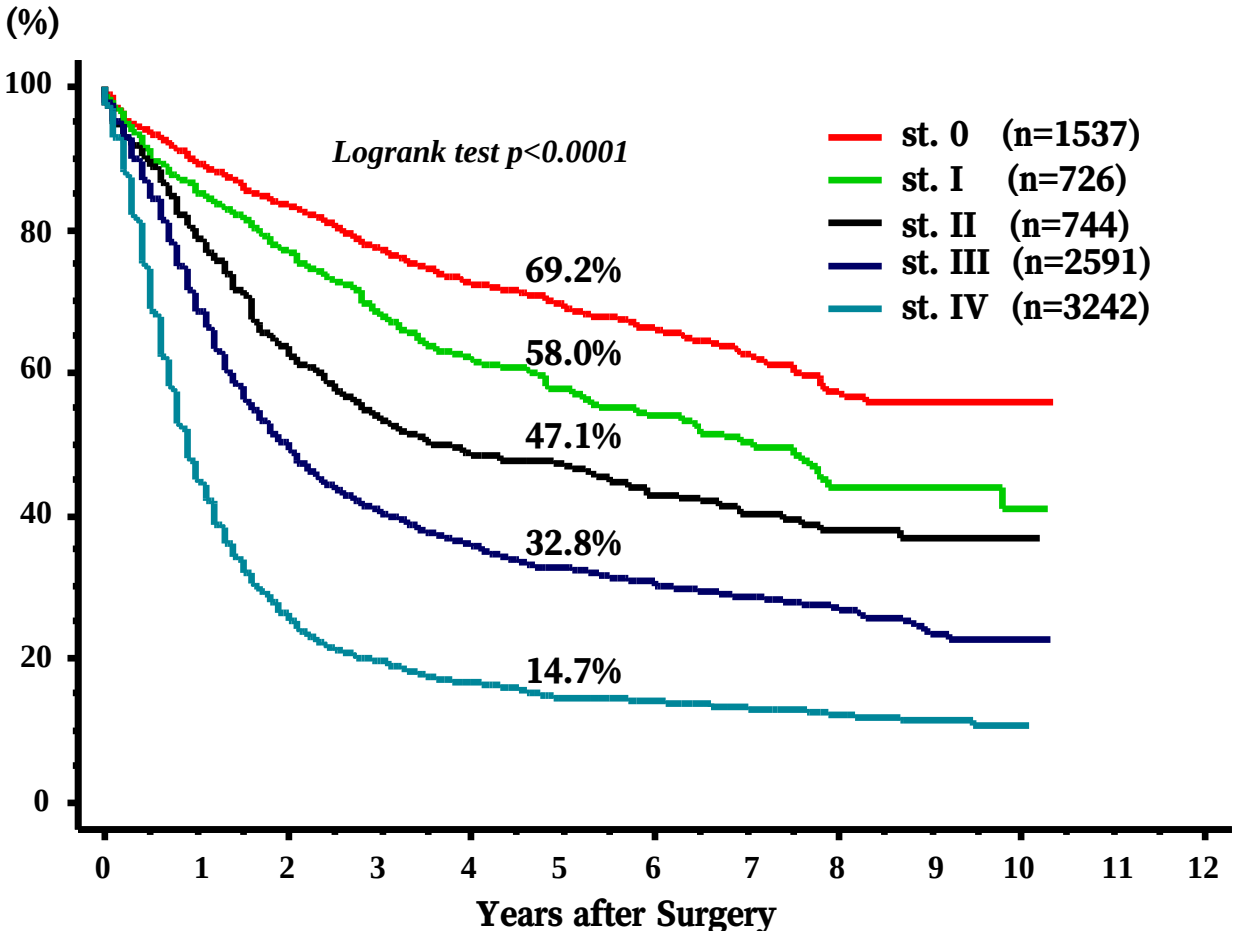
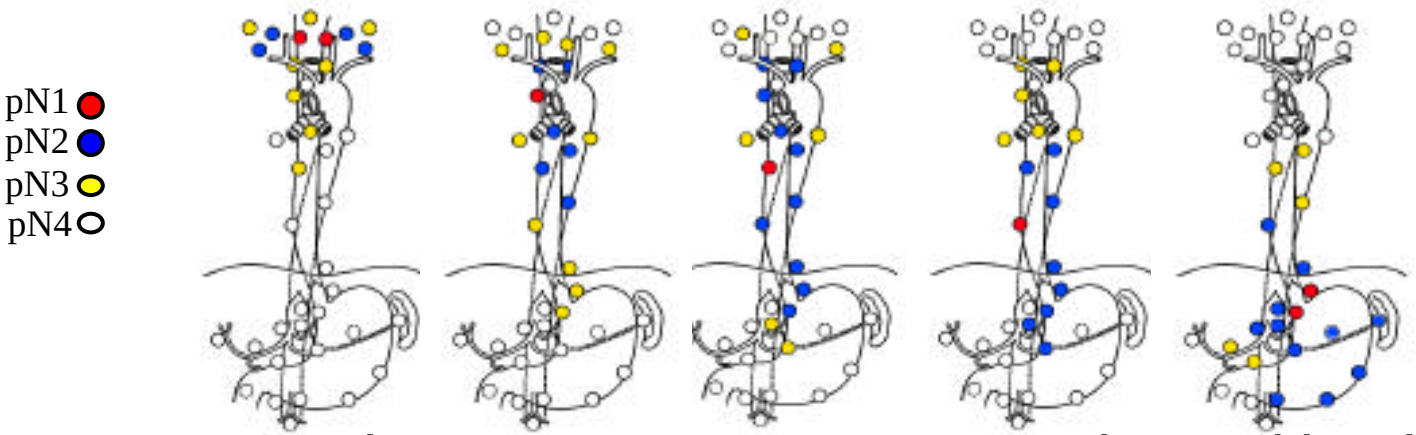


Fig.11　N-category in the Japanese classification



44) Pathological stage according to the Japanese classification

stage	T-category	N-category	Organ metastasis	Pleural dissemination
0	pTis,pT1a,pT1b	pN0	pM0	pPL0
I	pT2	pN0	pM0	pPL0
II	pT3	pN1	pM0	pPL0
III	pT3	pN2	pM0	pPL0
IV	pT4	pN3-4	pM1	pPL1

Fig. 11 Survival of patients treated by esophagectomy in relation to lymphatic vessel invasion

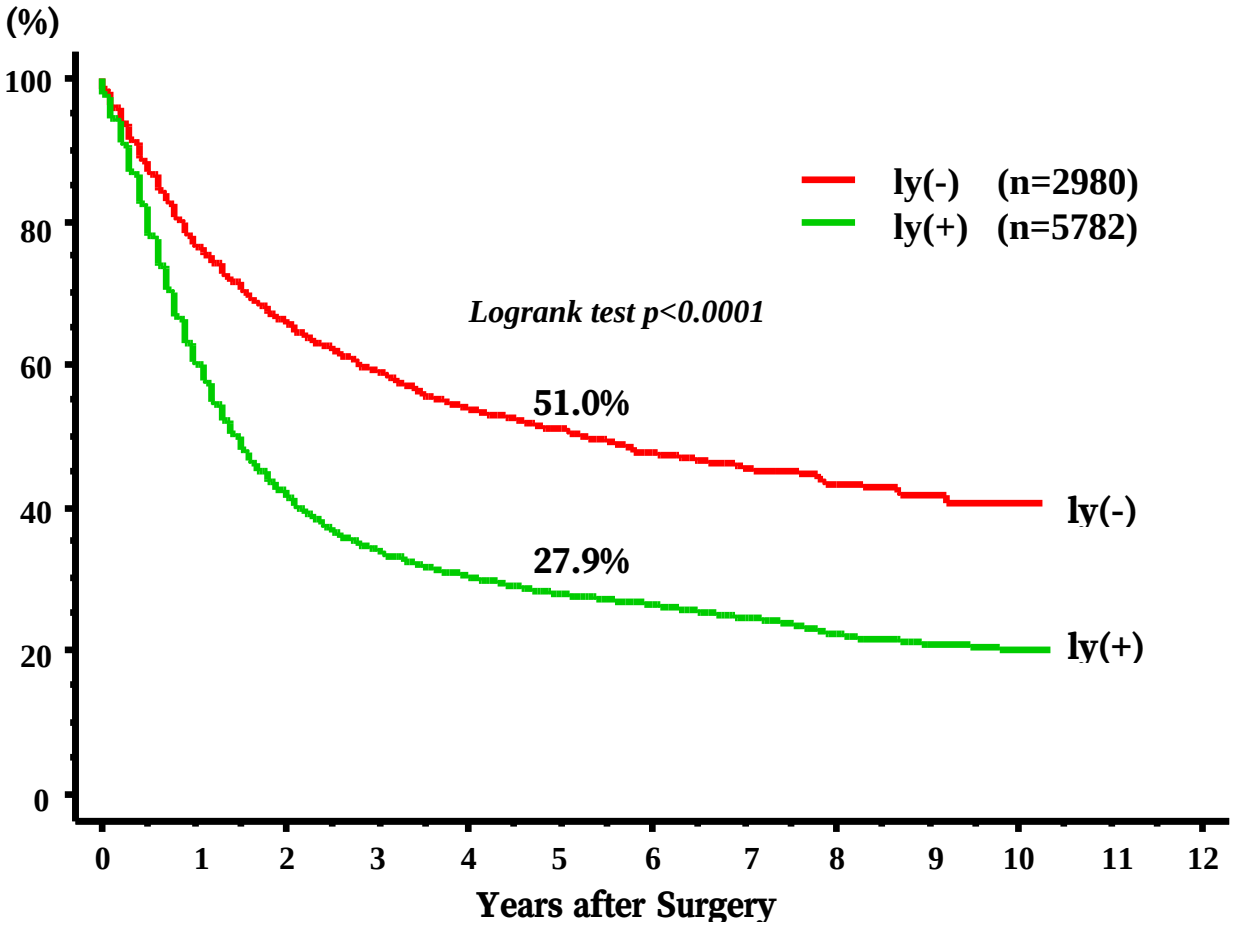


Fig. 12 Survival of patients treated by esophagectomy in relation to blood vessel invasion

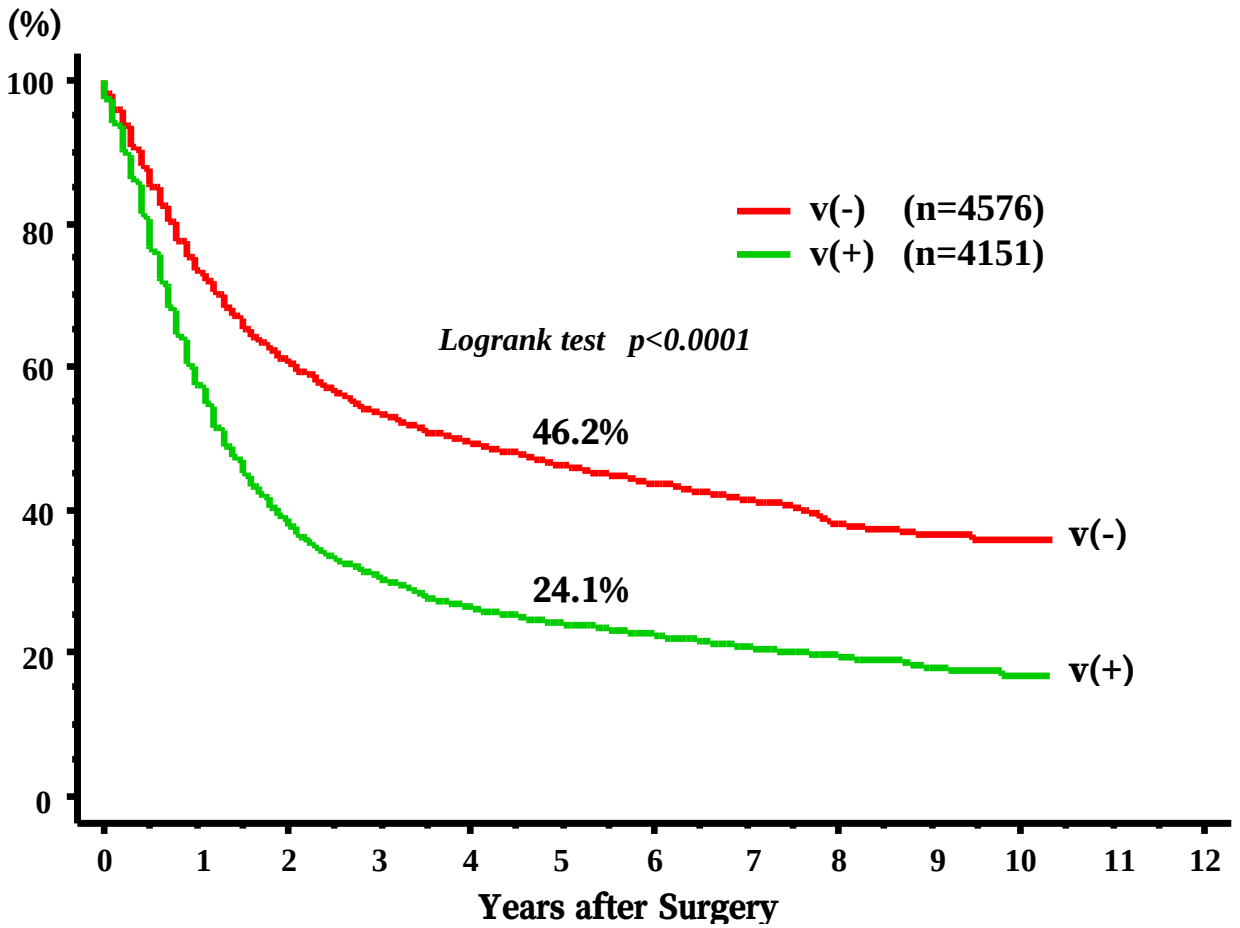


Fig.13 Survival of patients treated by esophagectomy in relation to skip metastasis in the esophageal wall

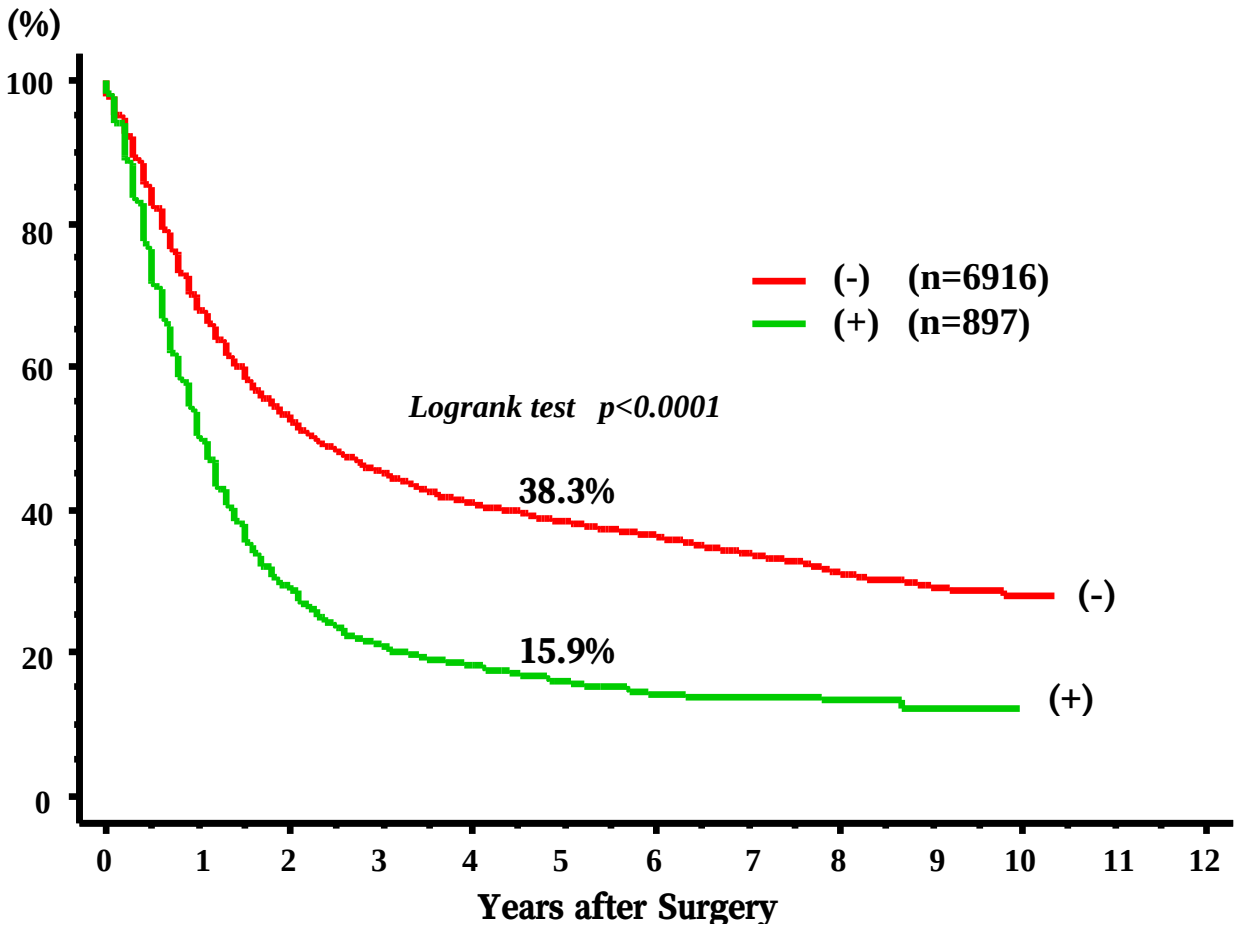


Fig. 14 Survival of patients treated by esophagectomy in relation to number of metastatic nodes

(1993, 1994 cases)

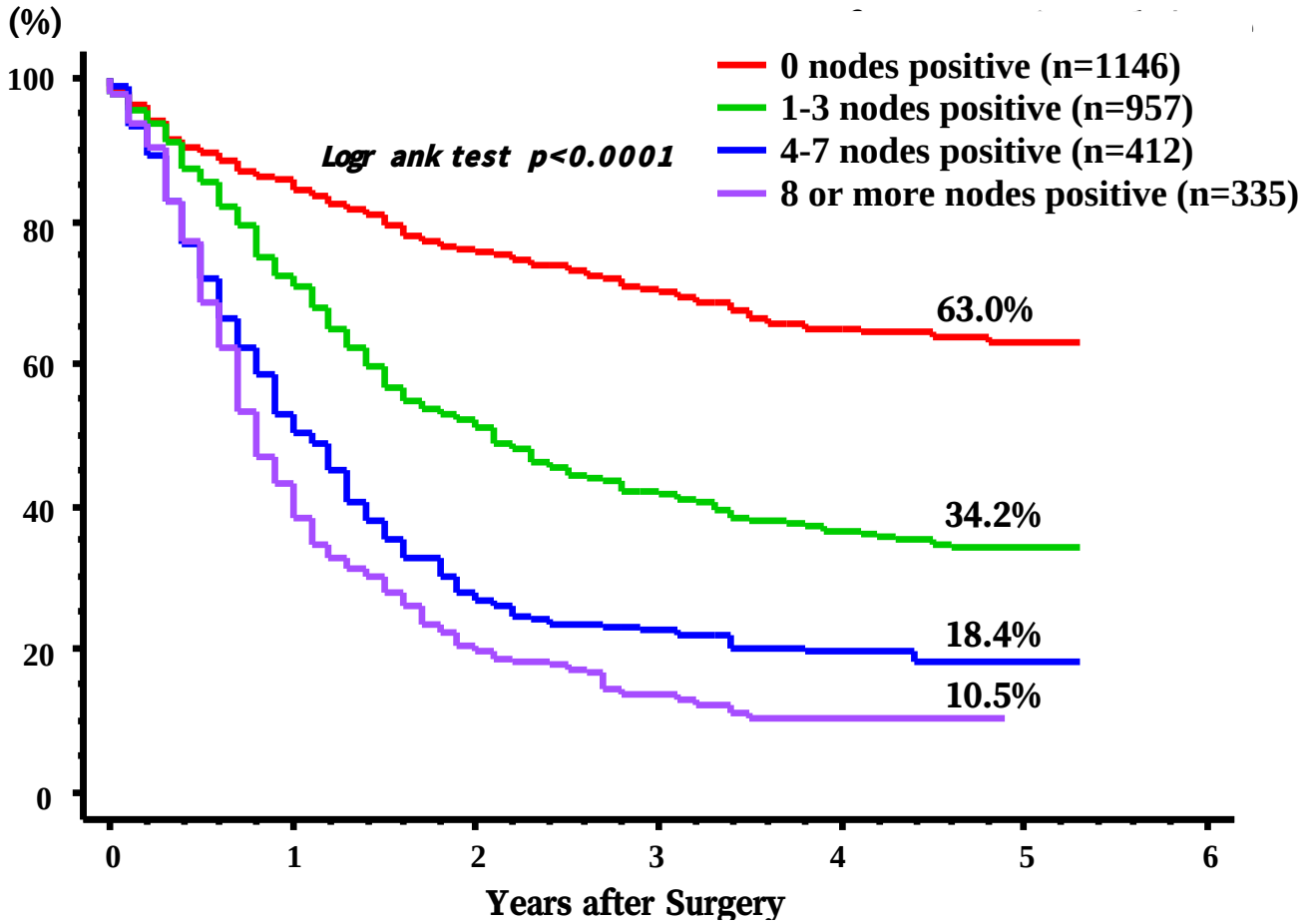


Fig. 15 Survival of patients treated by esophagectomy in relation to pT (UICC-TNM classification)

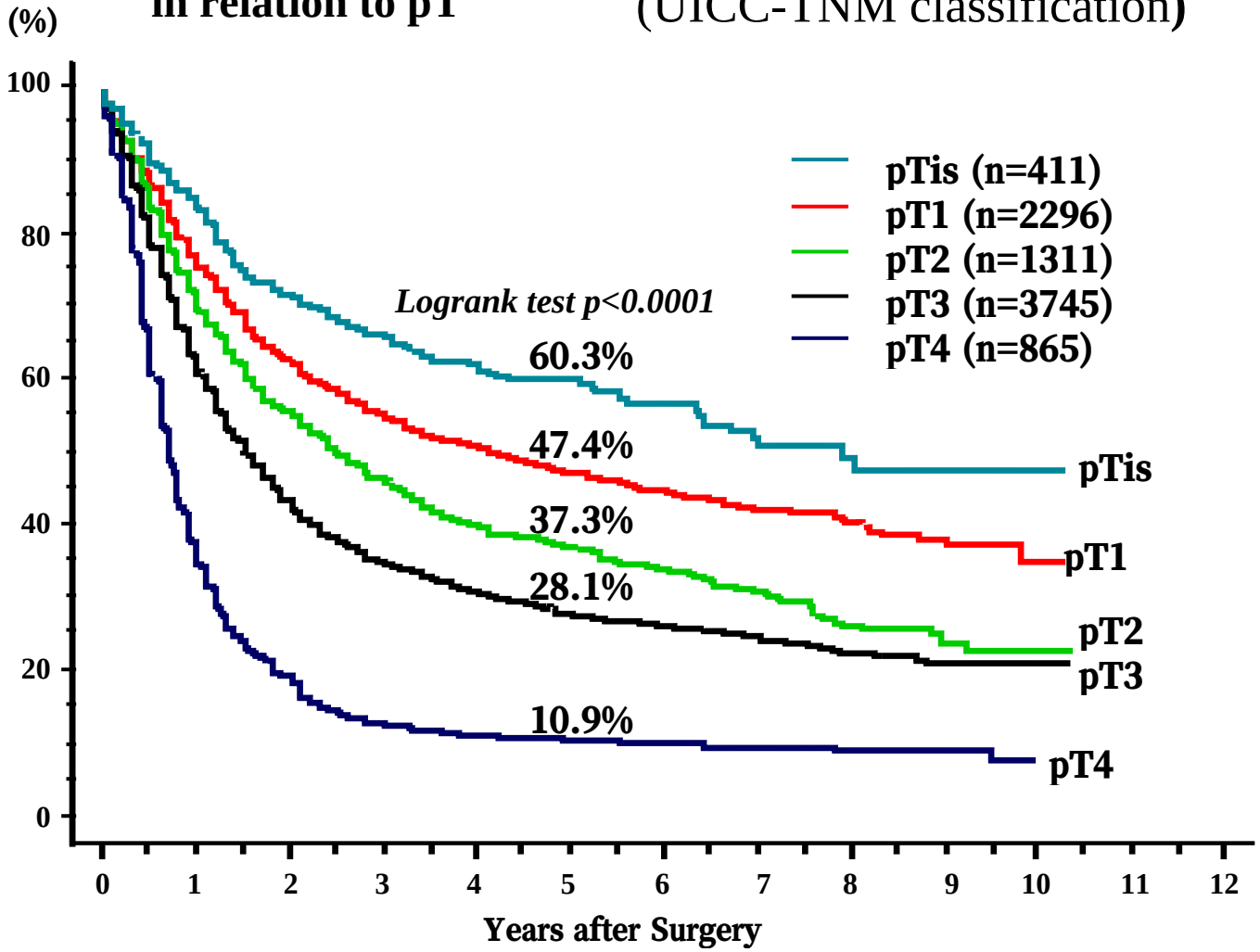


Fig. 16 Survival of patients treated by esophagectomy in relation to pN (UICC-TNM classification)

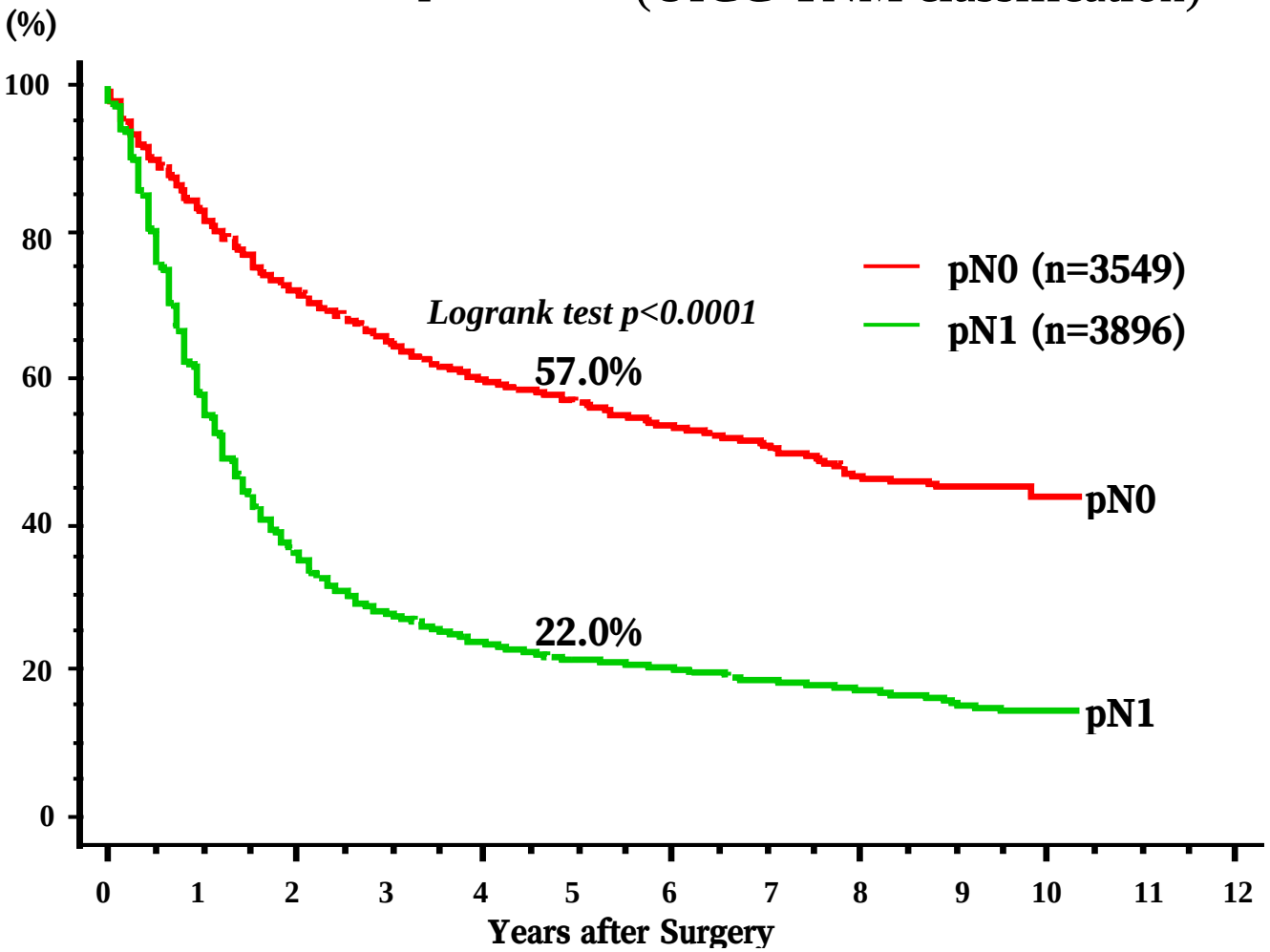


Fig. 17 Survival of patients treated by esophagectomy in relation to pM (UICC-TNM classification)

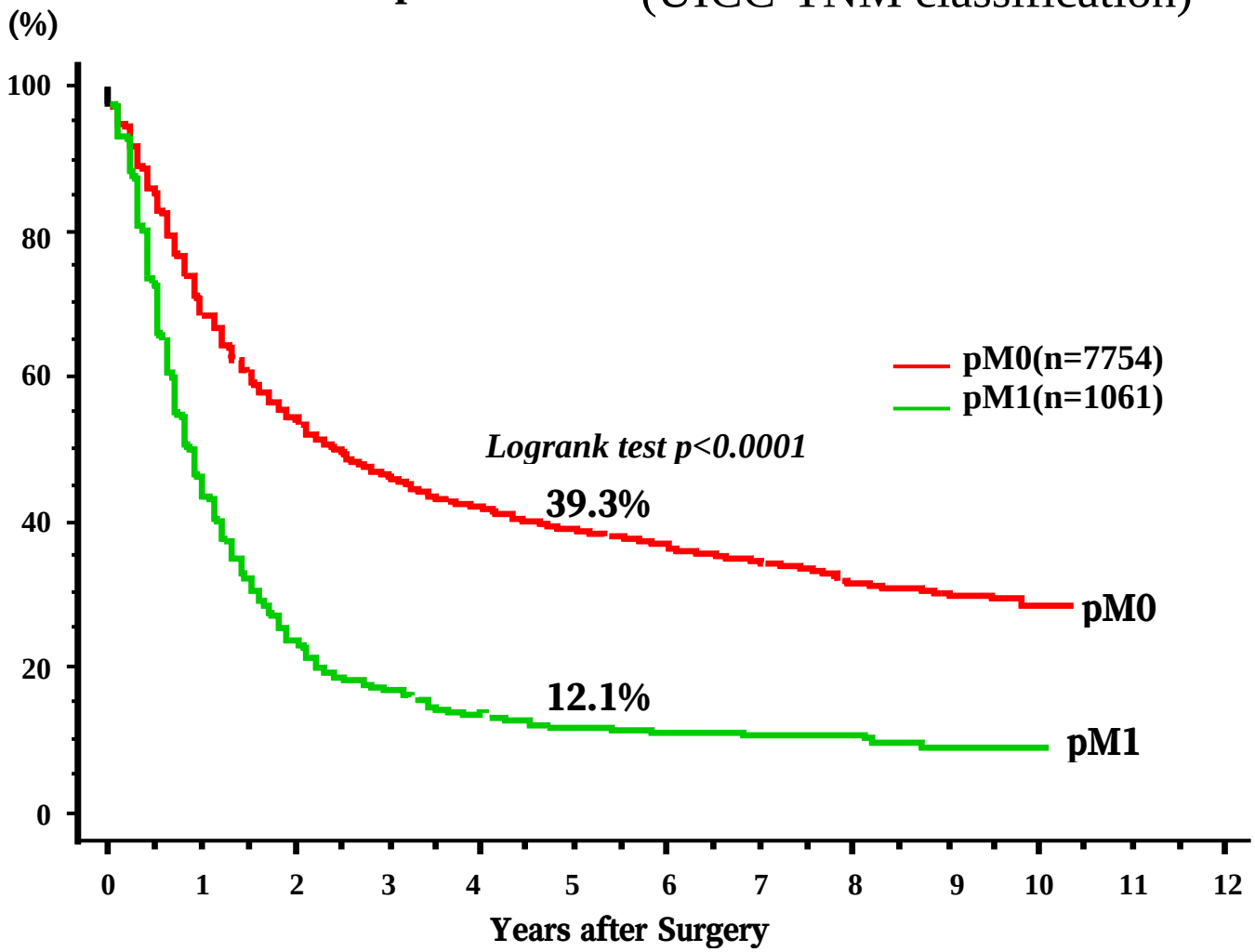
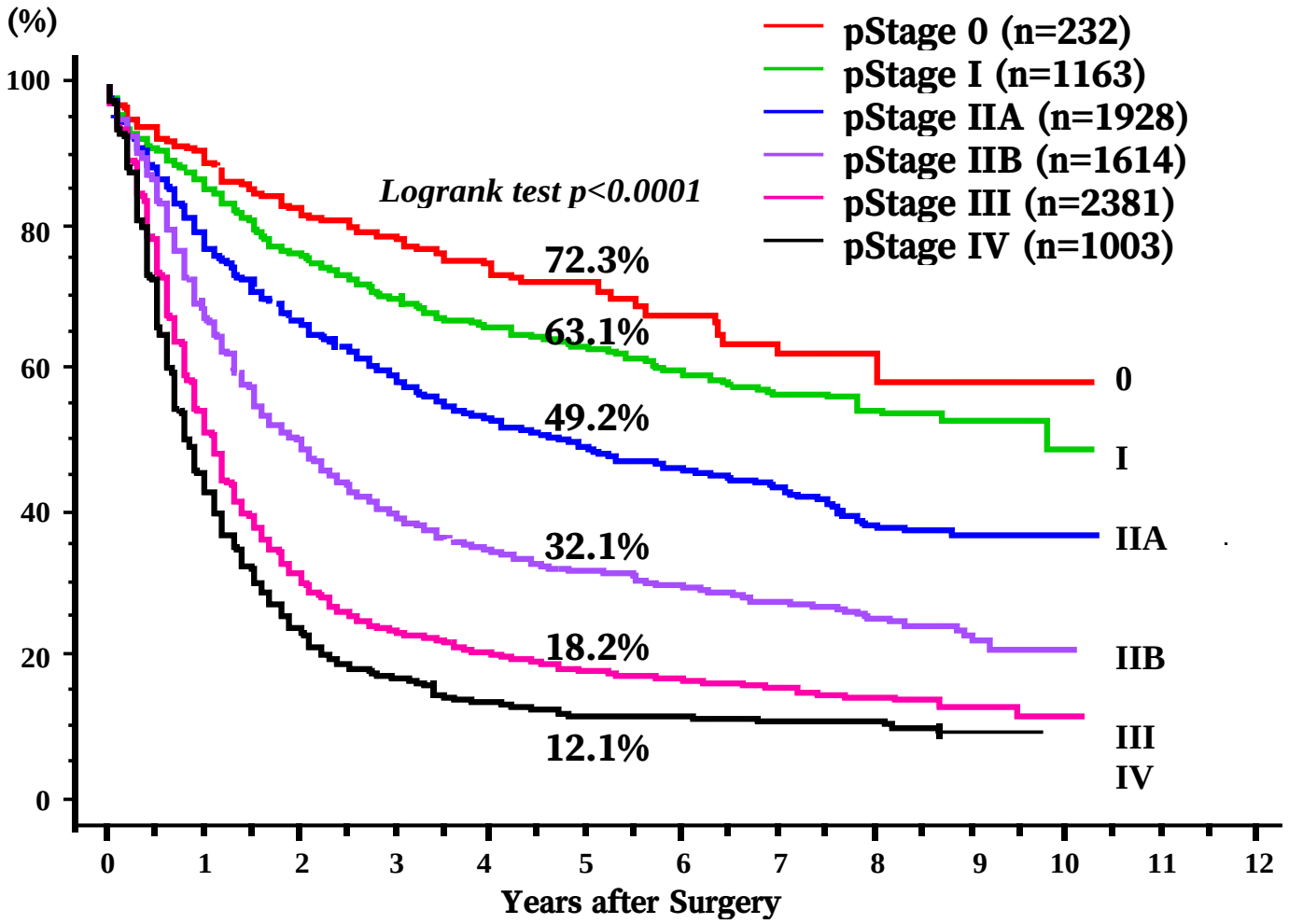


Fig. 18 Survival of patients treated by esophagectomy in relation to pStage (UICC-TNM classification)



Clinical Factors in Patients with Chemotherapy and/or Radiation Therapy

45) Ages and gender of non-surgically treated cases

Ages	Cases (%)	Male	Female
- 29	1 (0.06%)	1	
30 - 39	22 (0.63%)	7	4
40 - 49	276 (5.0%)	77	10
50 - 59	1,097 (19.1%)	303	28
60 - 69	1,643 (34.3%)	548	48
70 - 79	890 (29.2%)	433	75
80 - 89	164 (11.4%)	154	44
90 -	8 (0.29%)	4	1
Total (%)	1,737 (100%)	1,527 (87.9%)	210 (12.1%)

46) Tumor location of non-surgically treated cases

Location	cases	(%)
Pharynx	11	(0.6%)
Cervical esophagus	100	(5.8%)
Upper thoracic esophagus	299	(17.2%)
Middle thoracic esophagus	992	(57.1%)
Lower thoracic esophagus	267	(15.4%)
Abdominal esophagus	30	(1.7%)
EG junction	8	(0.5%)
unknown	30	(1.8%)
Total (%)	1,737	(100%)

47) Tumor length of non-surgically treated cases

Tumor length	cases	(%)
not examined	32	(1.8%)
~1 cm	16	(0.9%)
1~2 cm	43	(2.5%)
2~3 cm	90	(5.2%)
3~5 cm	303	(17.4%)
5~7 cm	431	(24.8%)
7~10 cm	433	(24.9%)
10~15 cm	211	(12.1%)
15 cm ~	41	(2.4%)
unknown	137	(7.9%)
Total	1,737	(100%)

48) Clinical T-category of non-surgically treated cases (UICC-cTNM classification)

	cT0	cTis	cT1	cT2	cT3	cT4	cTX	unknown	Total	(%)
Pharynx				2	2	3	3	1	11	(0.6%)
Cervical esophagus	2		9	11	30	29	5	14	100	(5.8%)
Upper thoracic esophagus	2	1	19	38	80	116	15	28	299	(17.2%)
Middle thoracic esophagus	5	8	106	153	337	246	46	91	992	(57.1%)
Lower thoracic esophagus		2	39	50	103	33	12	28	267	(15.4%)
Abdominal esophagus	1		3	4	10	4	4	4	30	(1.7%)
EG junction			1		4	3			8	(0.5%)
unknown			2	3	3	1	3	18	30	(1.8%)
Total	10	11	179	261	569	435	88	184	1,737	
(%)	0.6%	0.6%	10.3%	15.0%	32.8%	25.0%	5.1%	10.6%	100%	

49) Clinical N-category of non-surgically treated cases (UICC-cTNM classification)

	cN0	cN1	unknown	Total	(%)
Pharynx	1	8	2	11	(0.6%)
Cervical esophagus	19	61	20	100	(5.8%)
Upper thoracic esophagus	51	205	43	299	(17.2%)
Middle thoracic esophagus	170	672	150	992	(57.1%)
Lower thoracic esophagus	45	190	32	267	(15.4%)
Abdominal esophagus	7	19	4	30	(1.7%)
EG junction	1	7		8	(0.5%)
unknown	3	11	16	30	(1.8%)
Total	297	1,173	267	1,737	
(%)	17.1%	67.5%	15.4%	100%	

50) Clinical M-category of non-surgically treated cases (UICC-cTNM classification)

	M0	M1	unknown	Total	(%)
Pharynx	6	2	3	11	(0.6%)
Cervical esophagus	50	29	21	100	(5.8%)
Upper thoracic esophagus	138	102	59	299	(17.2%)
Middle thoracic esophagus	447	365	180	992	(57.1%)
Lower thoracic esophagus	109	108	50	267	(15.4%)
Abdominal esophagus	15	12	3	30	(1.7%)
EG junction	3	4	1	8	0.5%)
unknown	8	6	16	27	(1.8%)
Total	776	628	333	1,737	
(%)	44.7%	36.2%	19.2%	100%	

51) Treatments of non-surgically treated cases

	csases	(%)
Chemotherapy alone	296	(17.0%)
Radiotherapy (< 60 Gy)	454	(26.1%)
Chemoradiotherapy (≥ 60 Gy)	316	(18.2%)
Radiotherapy (≥ 60 Gy)	331	(19.1%)
Chemoradiotherapy	256	(14.7%)
Unknown	84	(4.8%)
Total (%)	1,737	(100%)

Overall Survival After Chemotherapy and/or Radiation Therapy

Fig. 19 Overall survival curve of patients receiving chemotherapy and/or radiation therapy

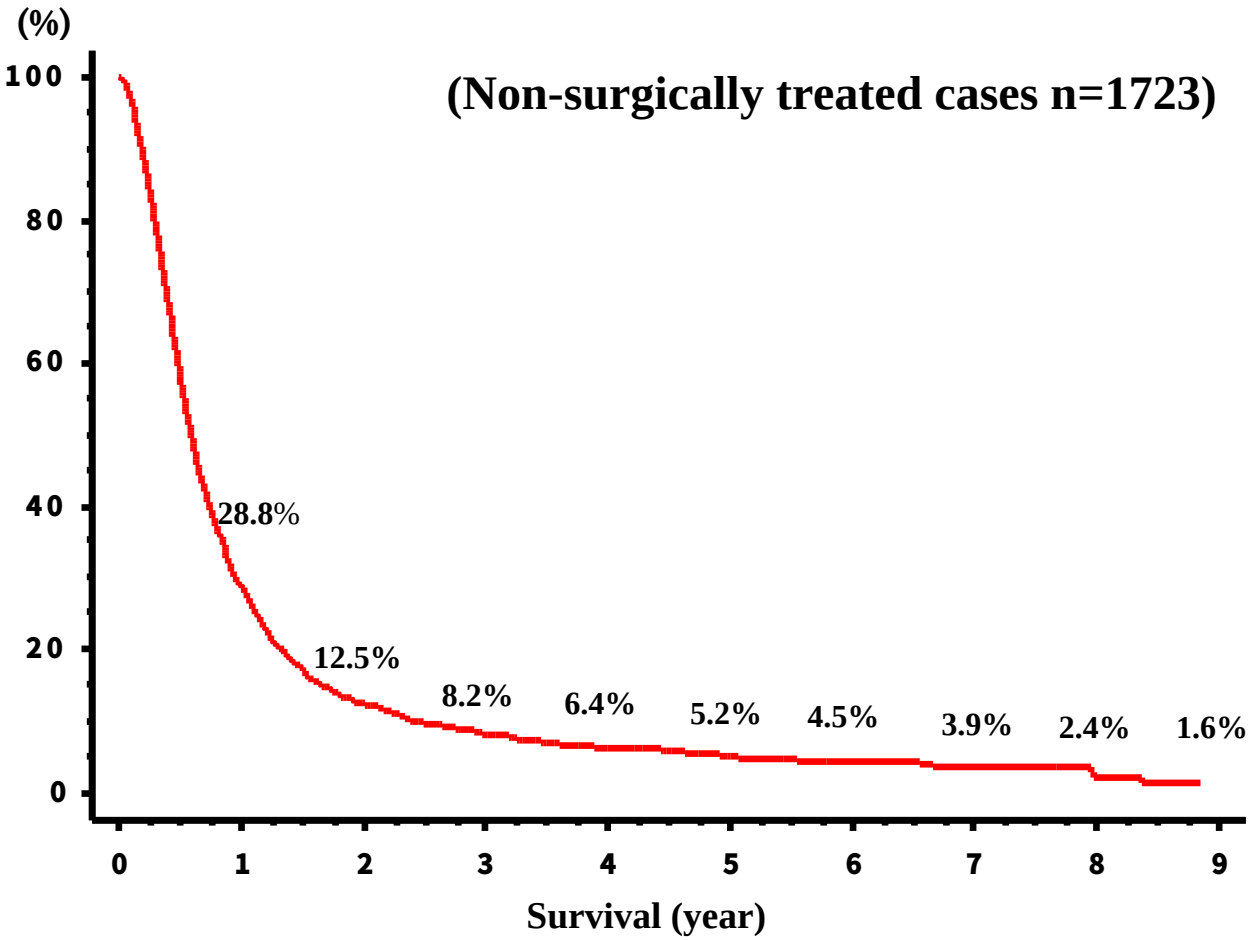


Fig. 20 Survival curves according to gender in patients receiving chemotherapy and/or radiation therapy

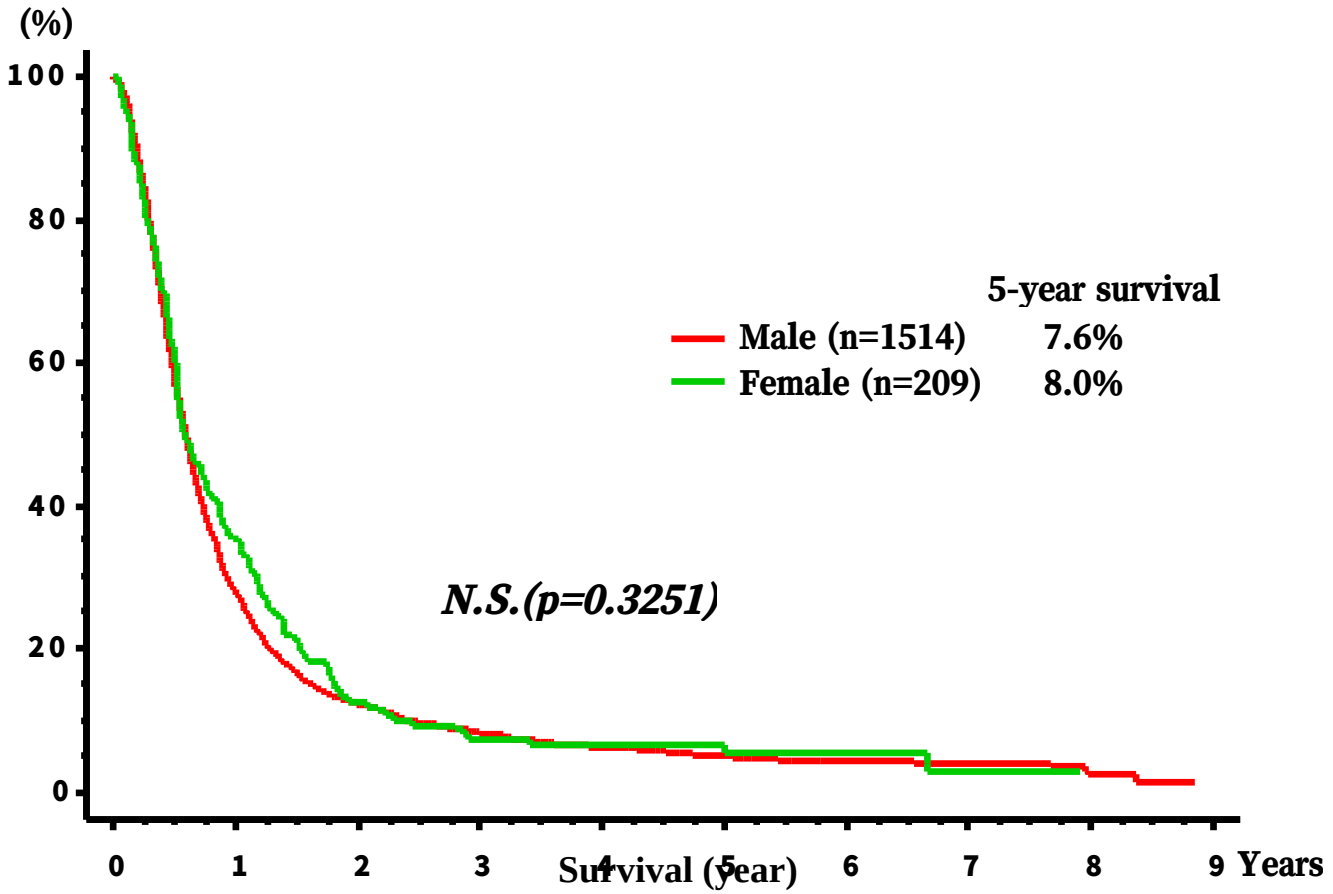


Fig. 21 Survival curves according to cT factor in patients receiving chemotherapy and/or radiation therapy

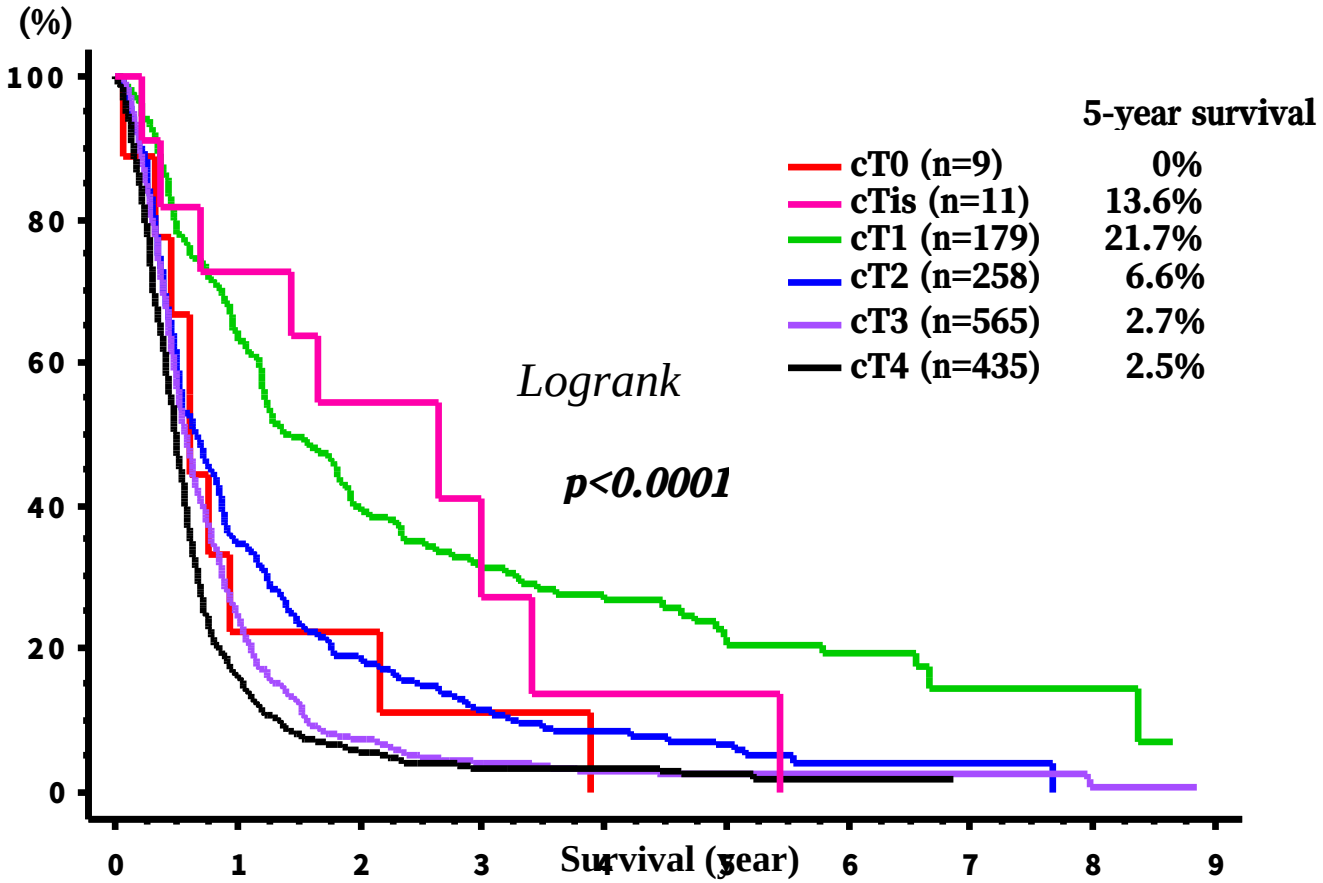


Fig. 22 Survival curves according to cN factor in patients receiving chemotherapy and/or radiation therapy

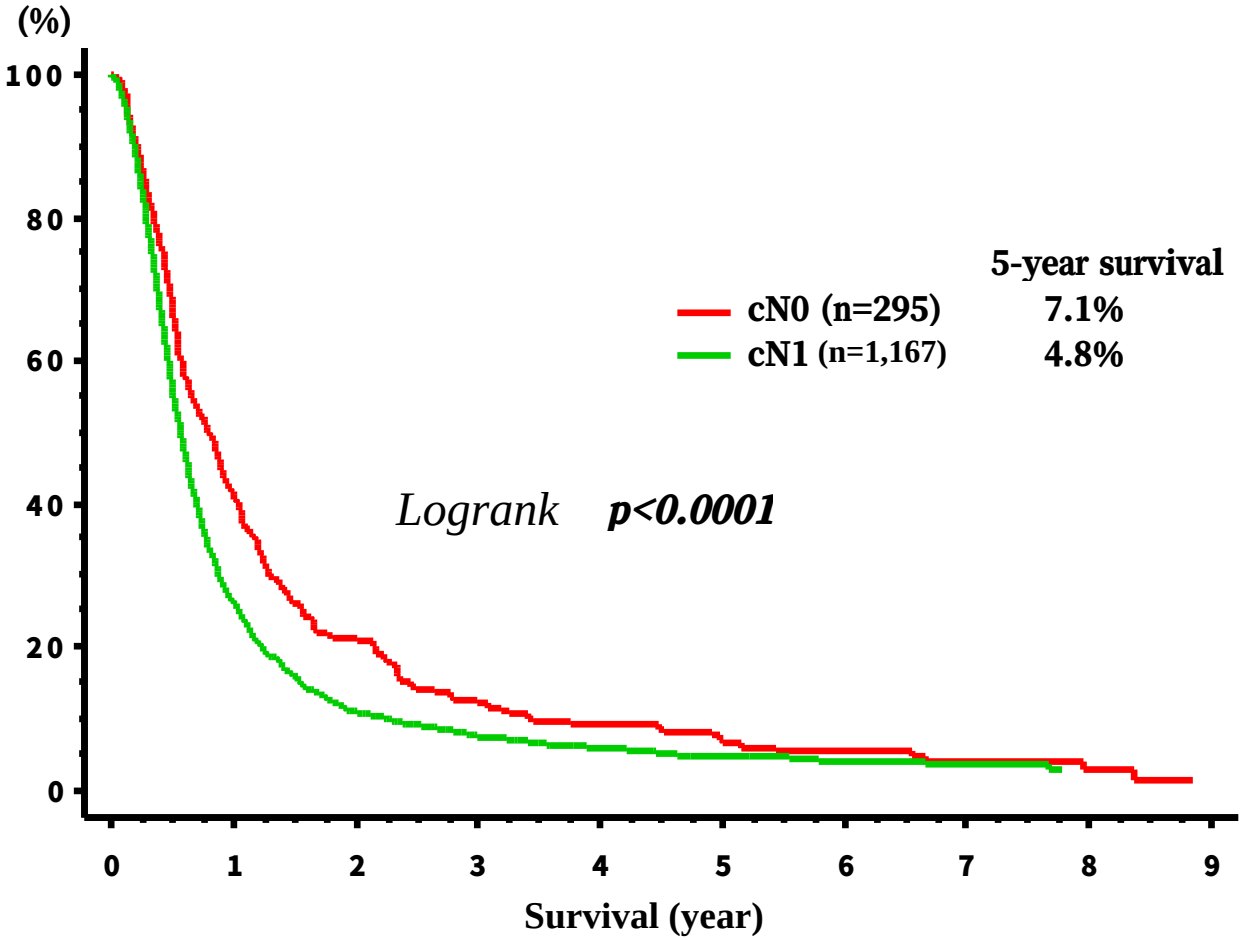


Fig. 23 Survival curves according to cM factor in patients receiving chemotherapy and/or radiation therapy

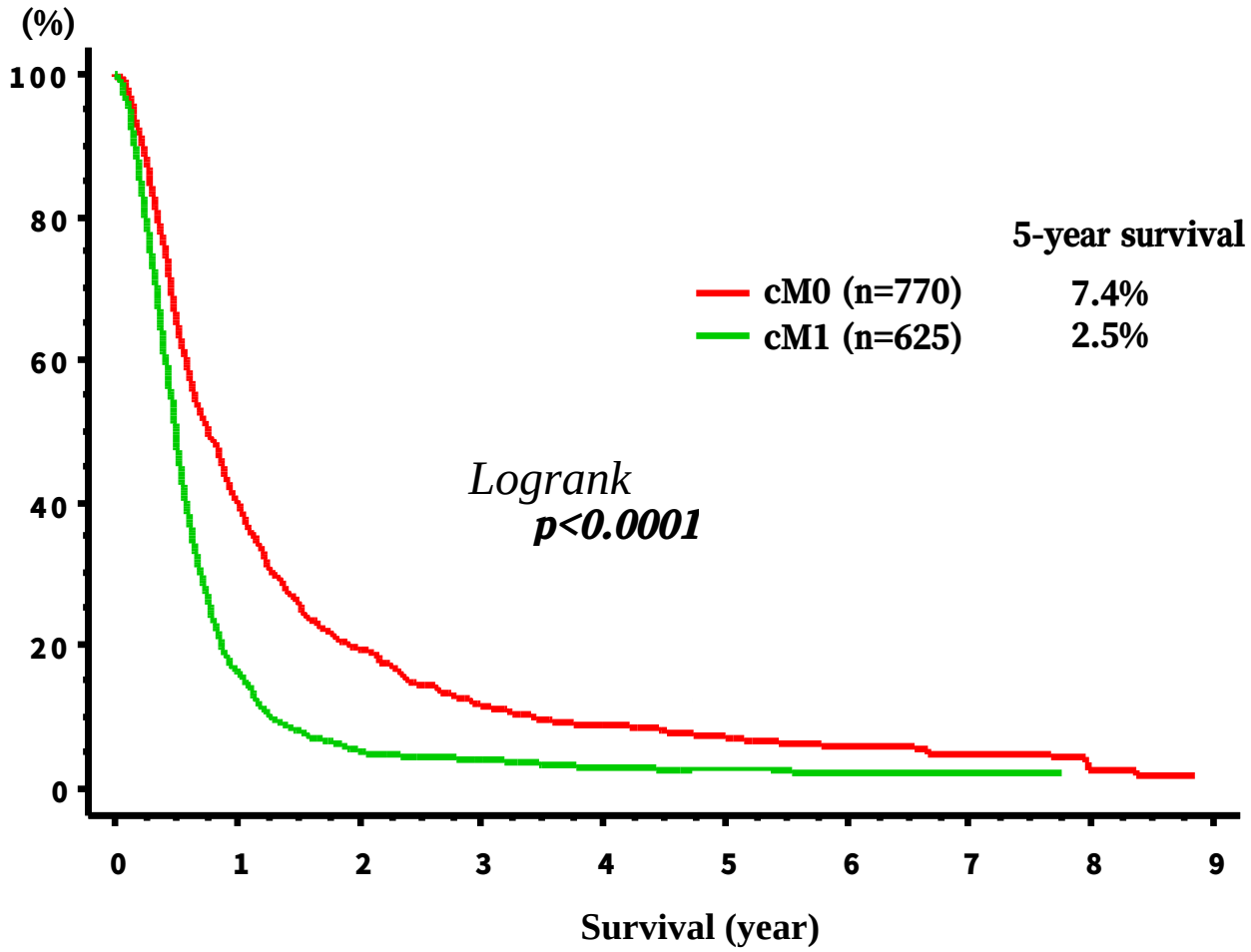


Fig. 24 Survival curves in patients receiving chemotherapy and/or radiation therapy

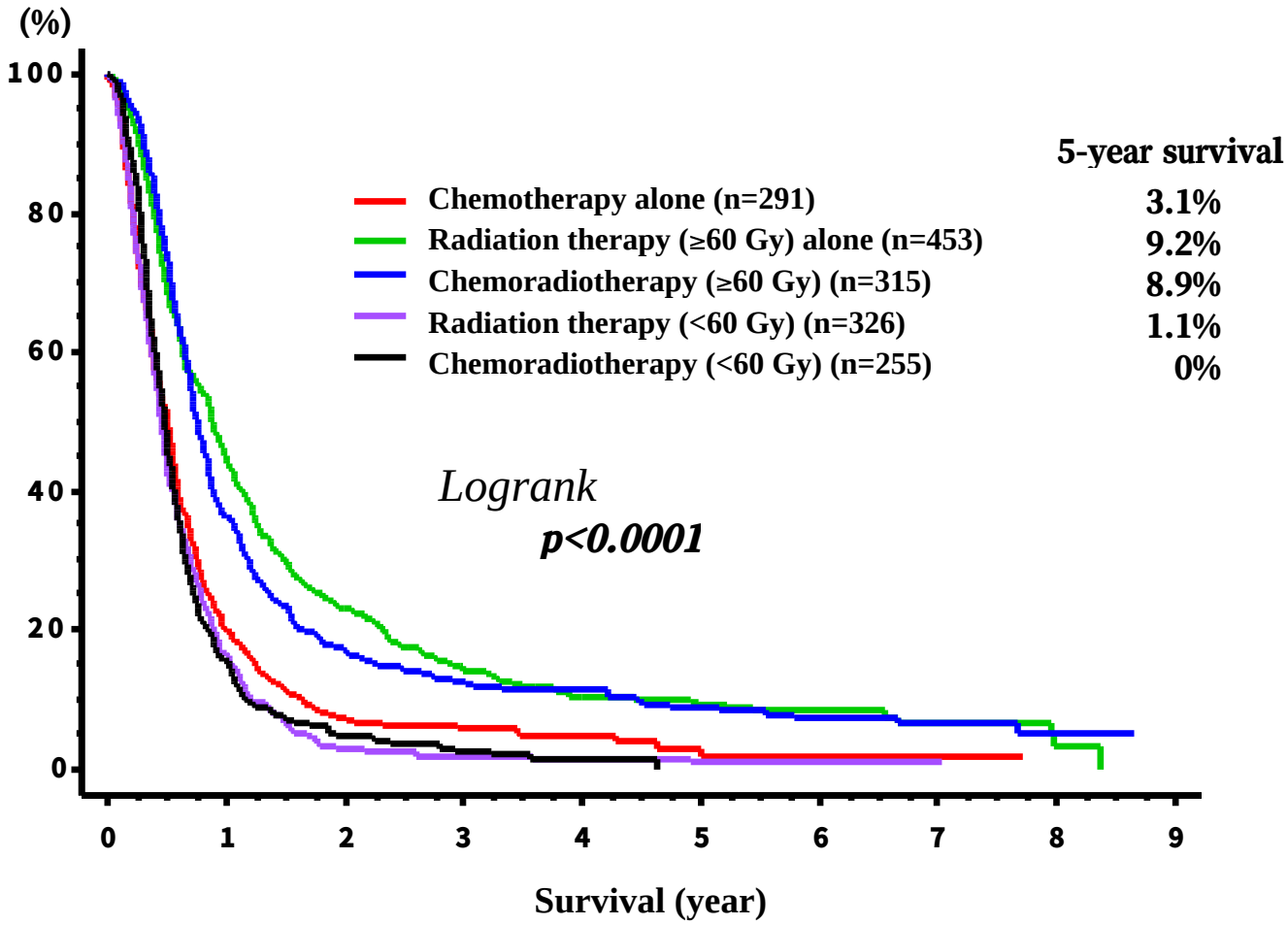


Fig. 25 Survival curves in patients receiving chemotherapy and/or radiation therapy

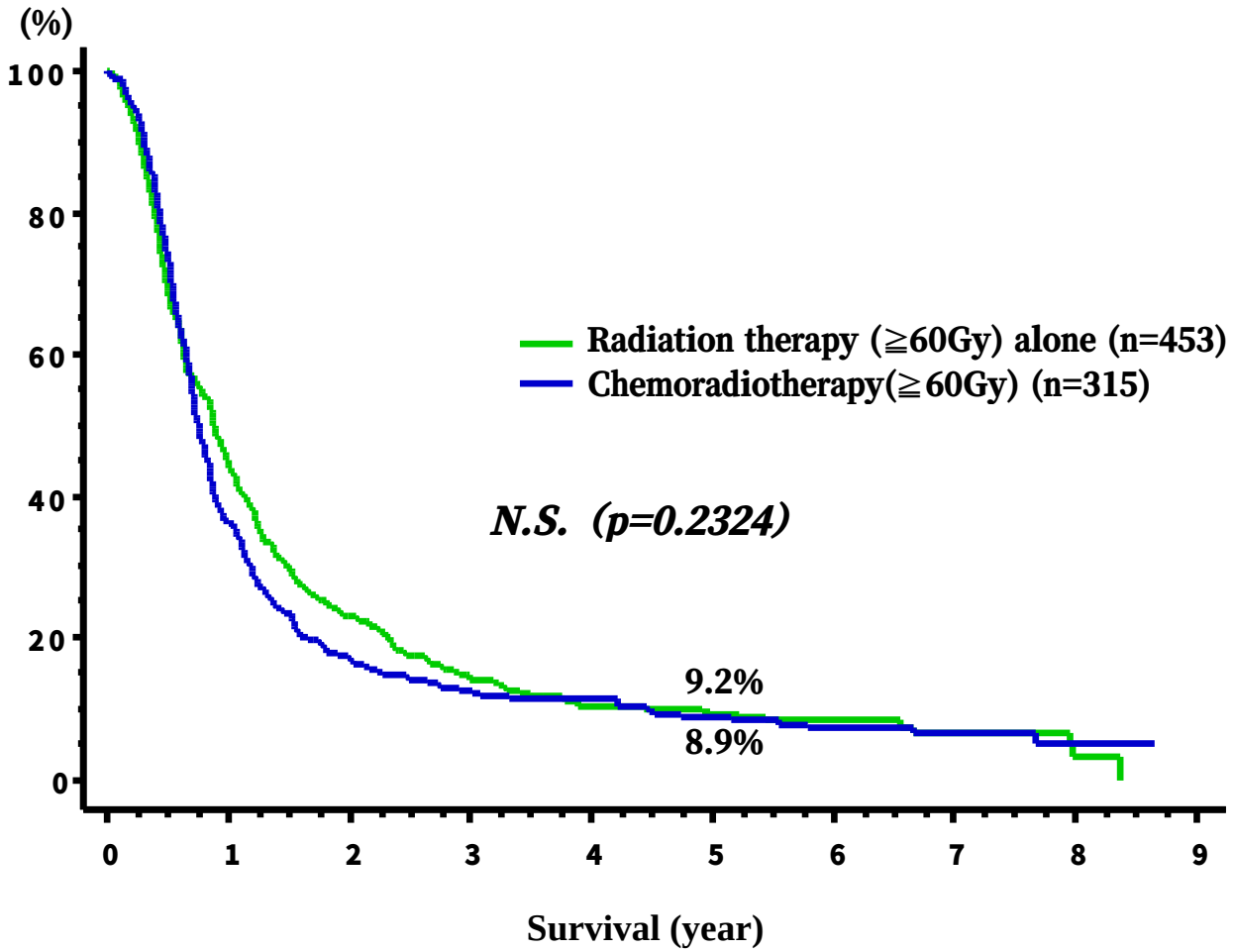


Fig. 26 Survival curves in patients receiving chemotherapy or chemoradiation therapy

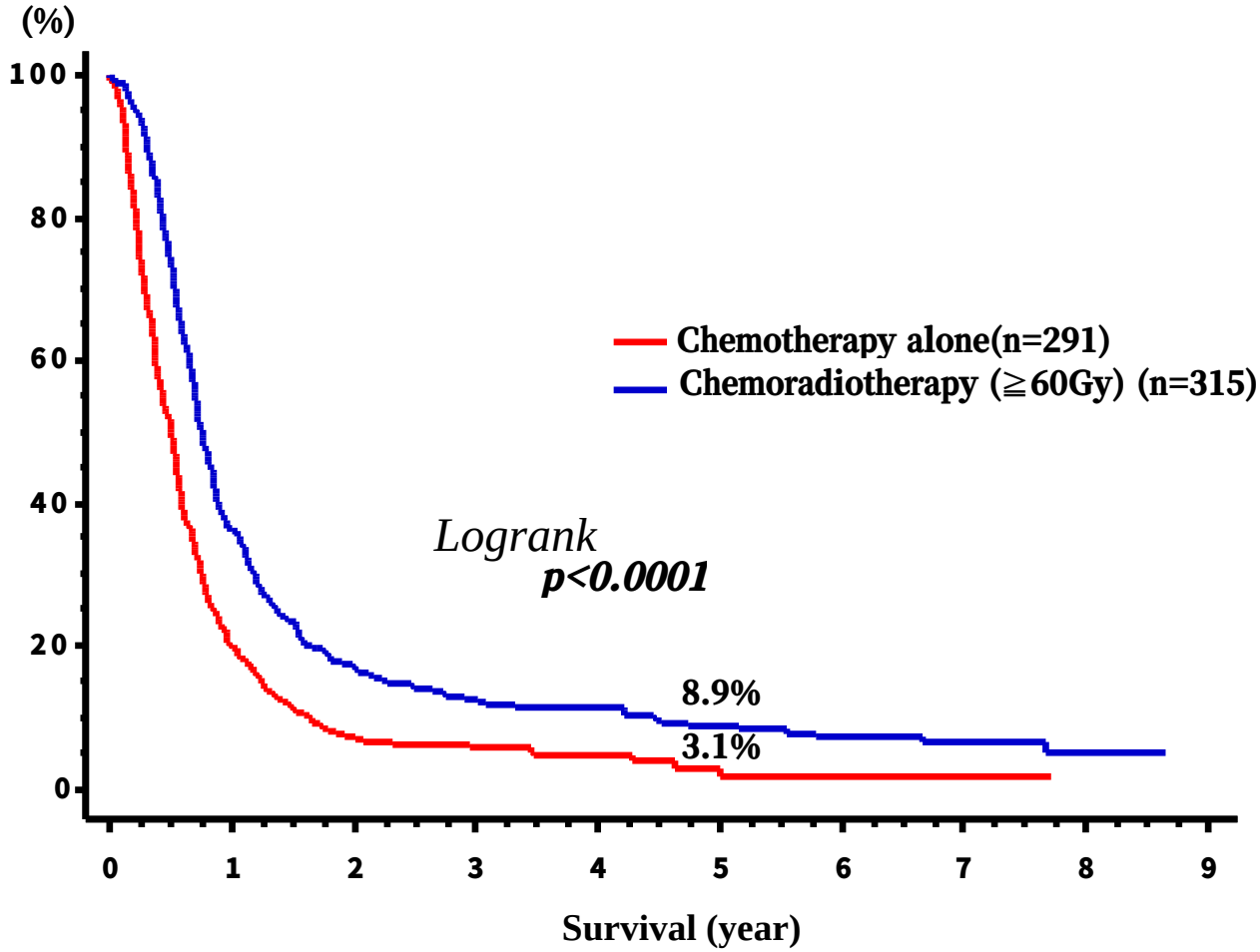


Fig. 27 Survival curves in cTis and cT1 cases

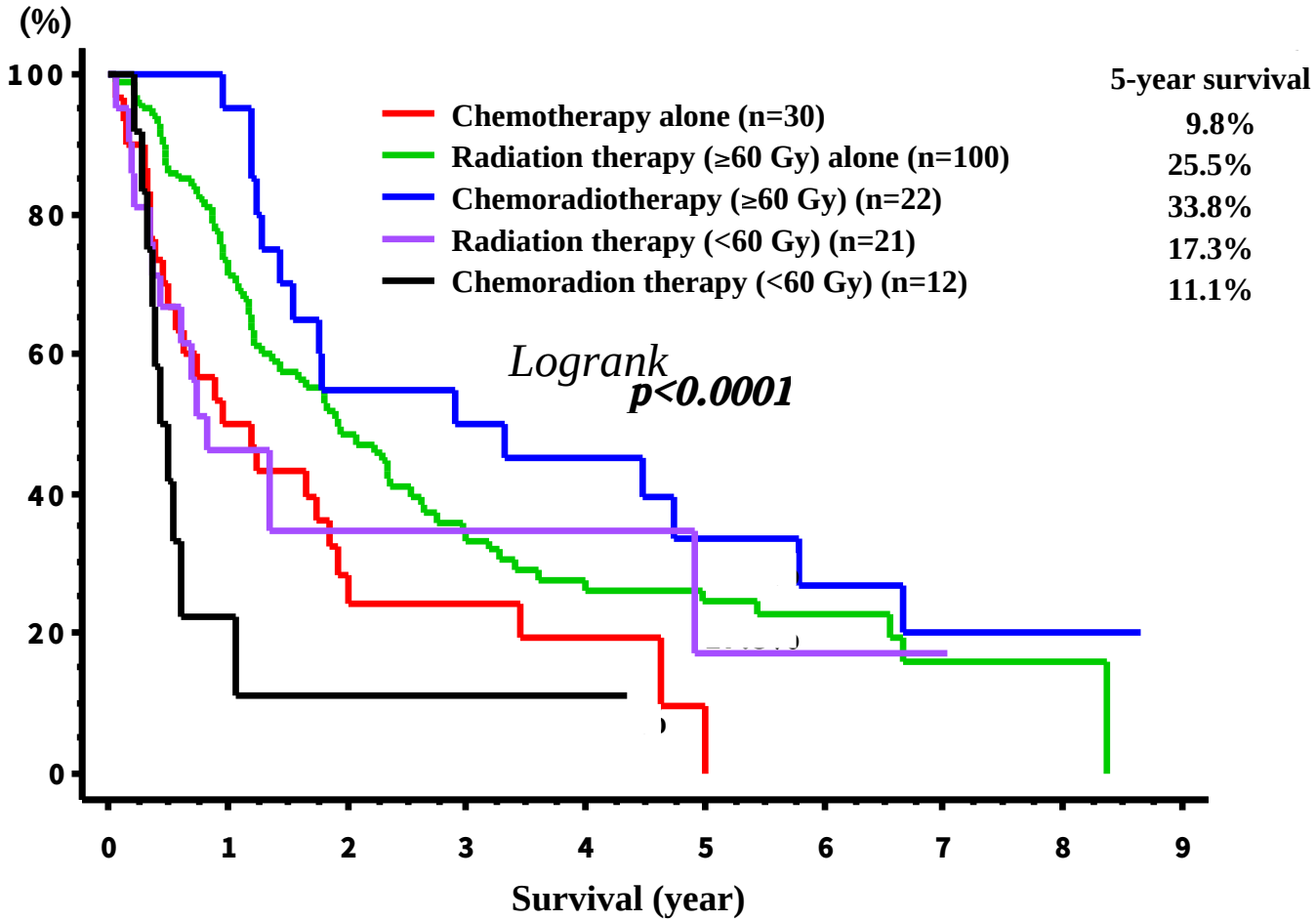


Fig. 28 Survival curves in cT2 and cT3 cases

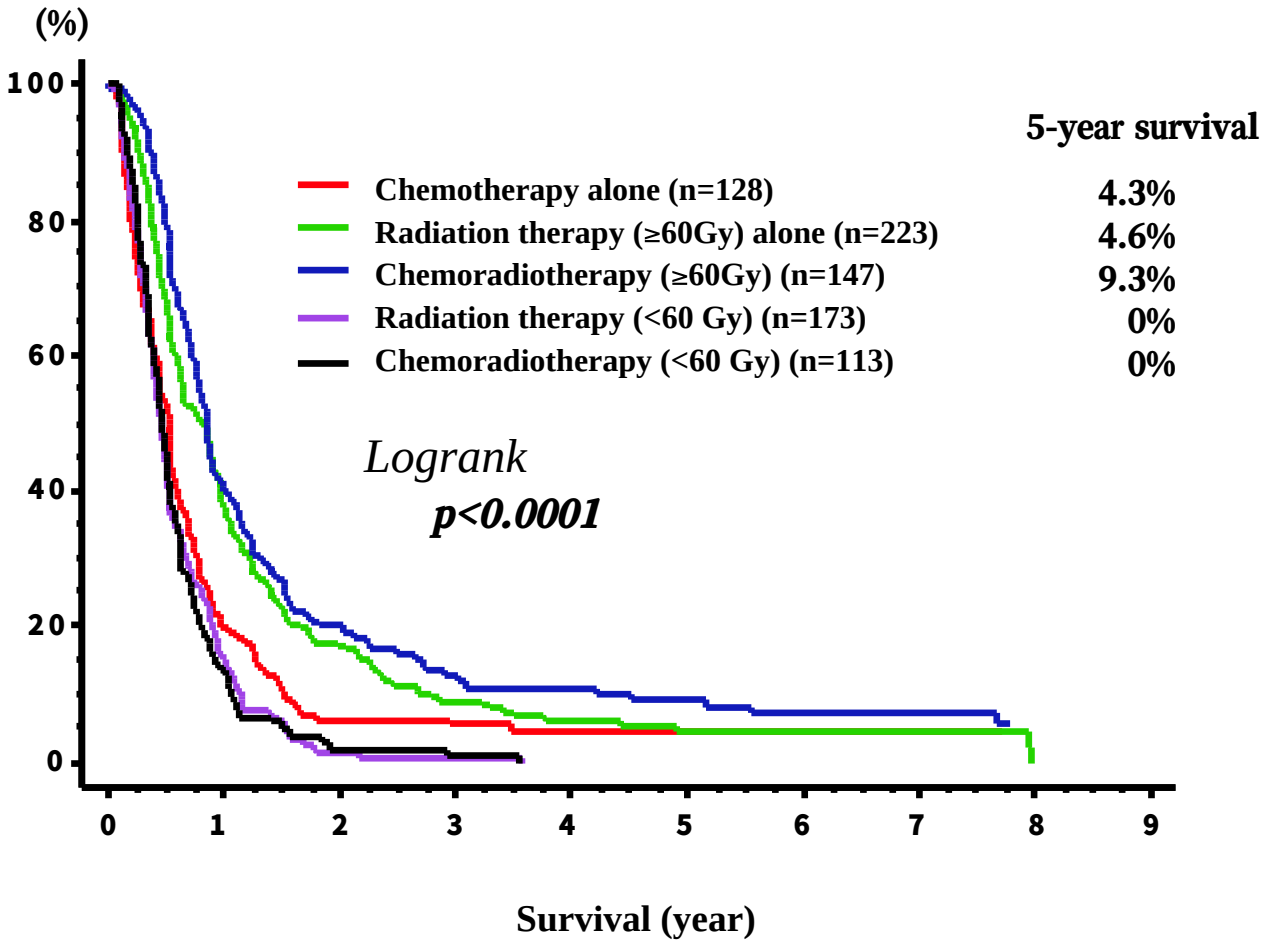


Fig. 29 Survival curves in cT4 cases

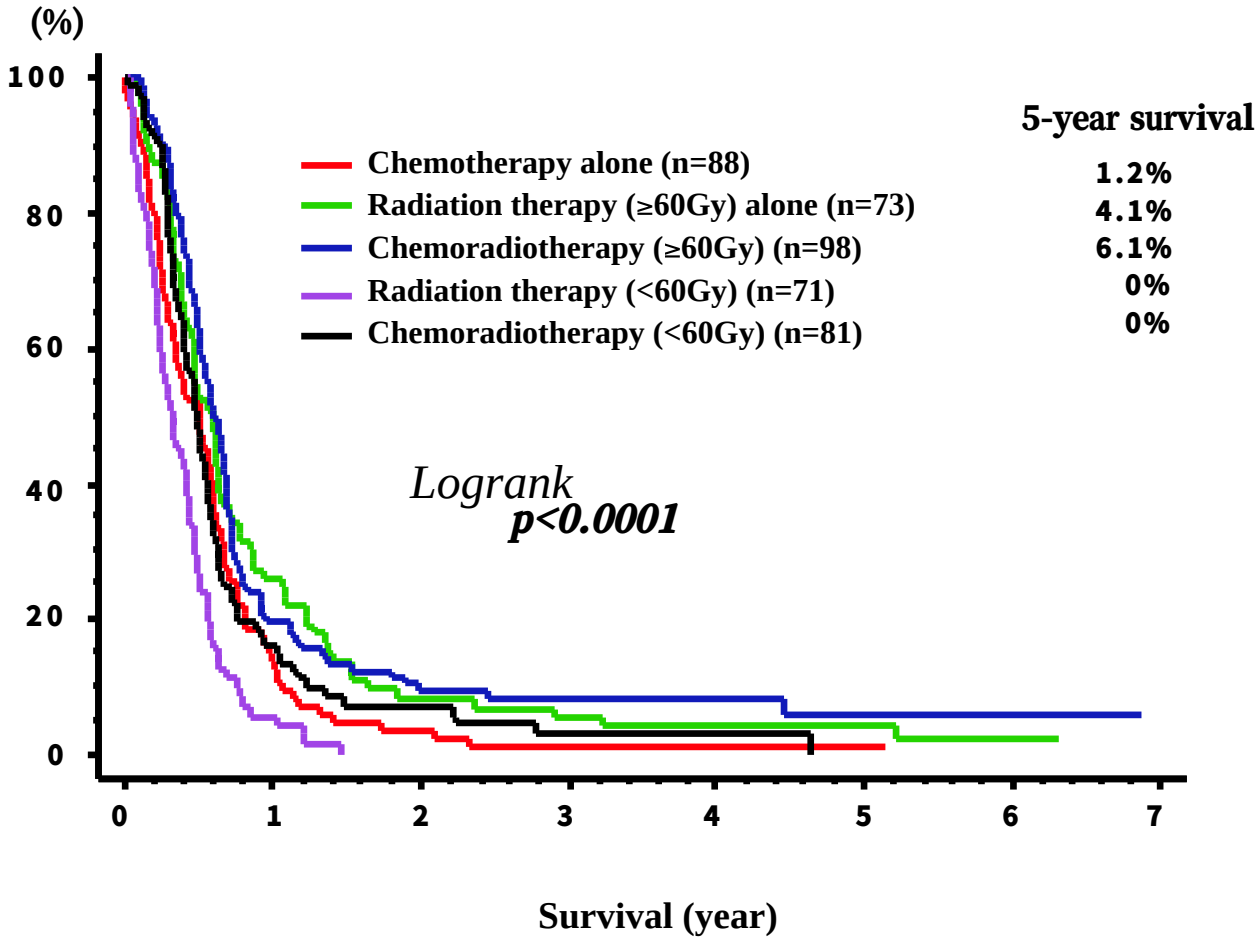


Fig. 30 Survival curves in cN0 cases

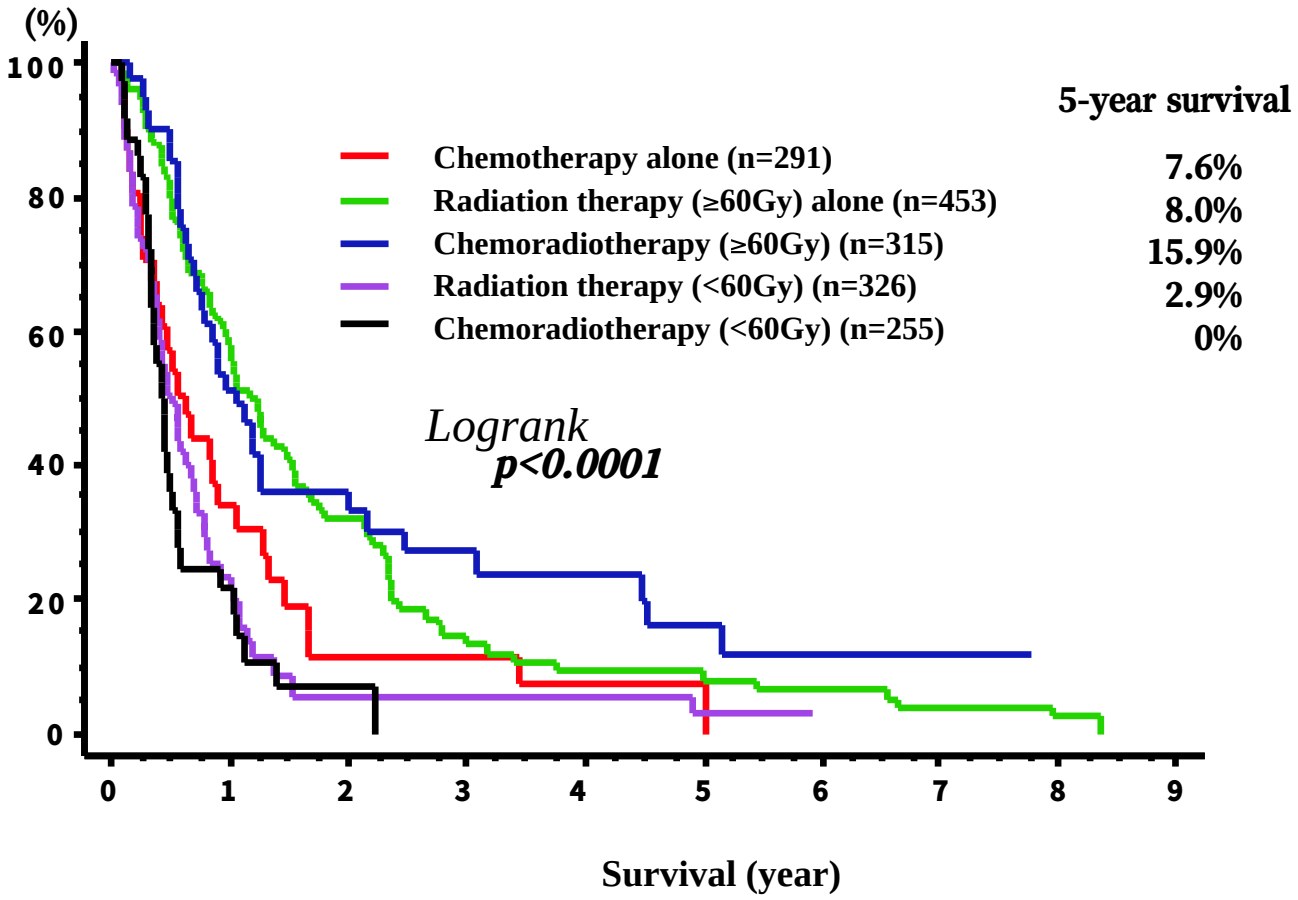


Fig. 31 Survival curves in cN1 cases

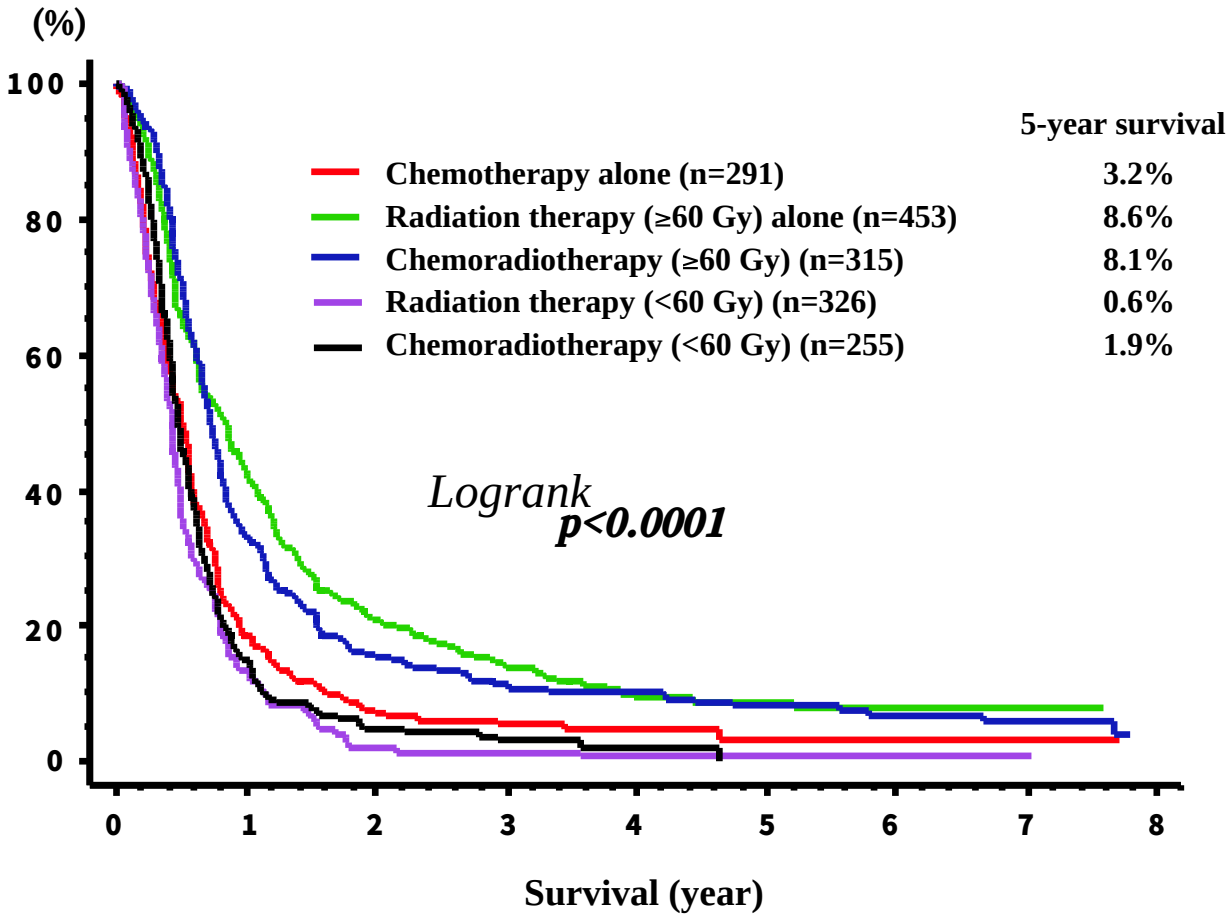


Fig. 32 Survival curves in cM0 cases

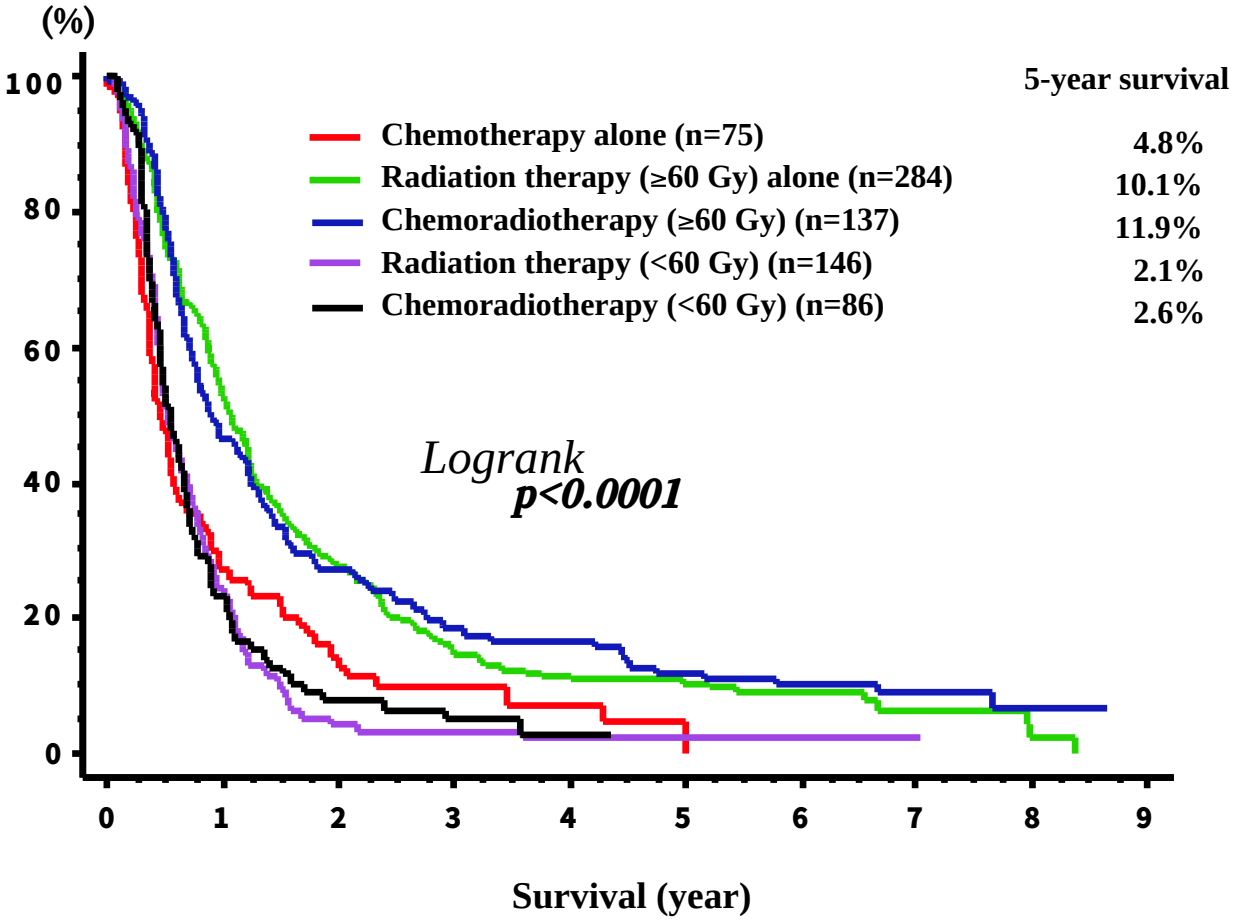


Fig. 33 Survival curves in cM1 cases

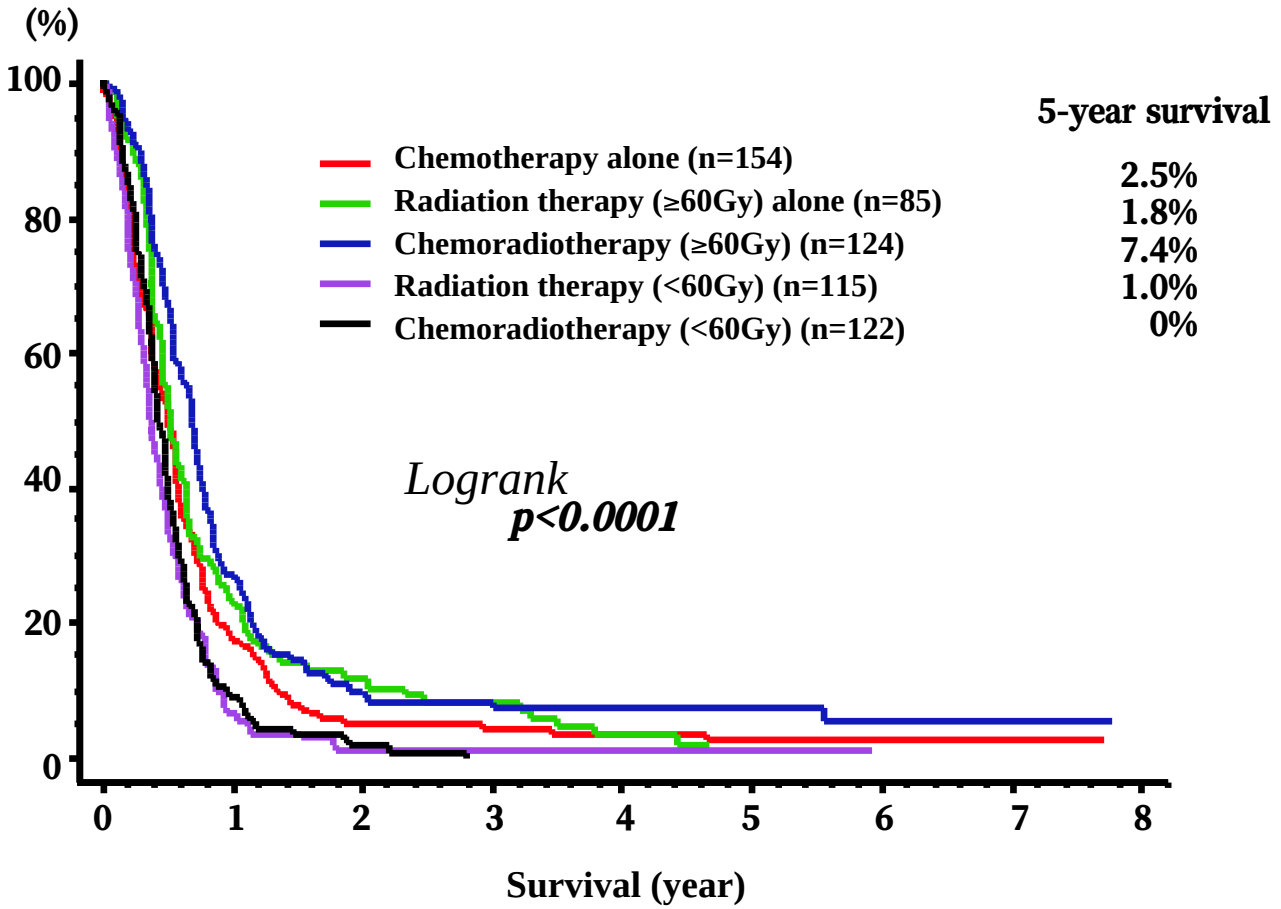


Fig. 34 Survival curves of patients with or without esophagectomy after non-surgical treatment