

Multi-Institutional Registry of Large Bowel Cancer in Japan

Vol. 42

Cases treated in 2016

Japan Society for Cancer of the Colon and Rectum

全国登録委員会

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松本 寛

まえがき

全国大腸癌登録調査報告書第 42 号 (Multi-Institutional Registry of Large Bowel Cancer in Japan, Vol. 42) をお届けします。本号は 2016 年に大腸癌研究会の会員施設において初回治療された大腸悪性腫瘍 12825 例の調査報告書です。皆様のご協力のお陰で、昨年に引き続き本年も単年度の登録としては過去最多のご登録をいただきました。改めて御礼申し上げます。前々回より臨床病理学的事項は、大腸癌取扱い規約第 8 版に従って記載されており、新しい調査項目として EX, perineural invasion, budding が追加されています。オンラインのみでの公開され、これまでの部位別の検討を一部省略する一方で、予後については数値のみでなく生存曲線も掲載しています。それに伴い、従来は生命表法で集計していた生存分析は、Kaplan-Meier 法で集計しております。

全国がん登録や院内がん登録、National Clinical Database (NCD) など、様々な registry が本邦で行われていますが、大腸癌研究会が行ってきた大腸癌全国登録、いわゆる臓器がん登録の重要性は今後益々大きくなっていくものと考えます。本邦の質の高い大腸癌の治療は、大腸癌取扱い規約や大腸癌治療ガイドラインに支えられている面があります。これら大腸癌取扱い規約や大腸癌治療ガイドラインの作成や改訂において、本全国登録で得られた高質なデータの果たす役割は重要です。

会員施設の先生方におかれましては、本登録の意義をご理解いただき、引き続き登録へのご協力をお願い申し上げます。また、登録いただいた会員施設の先生方には、全国登録データ利用の門戸が開かれています。是非積極的にご活用いただきますようお願い申し上げます。

2025 年 3 月

大腸癌研究会

会長 味岡 洋一

全国大腸癌登録委員会

委員長 小林 宏寿

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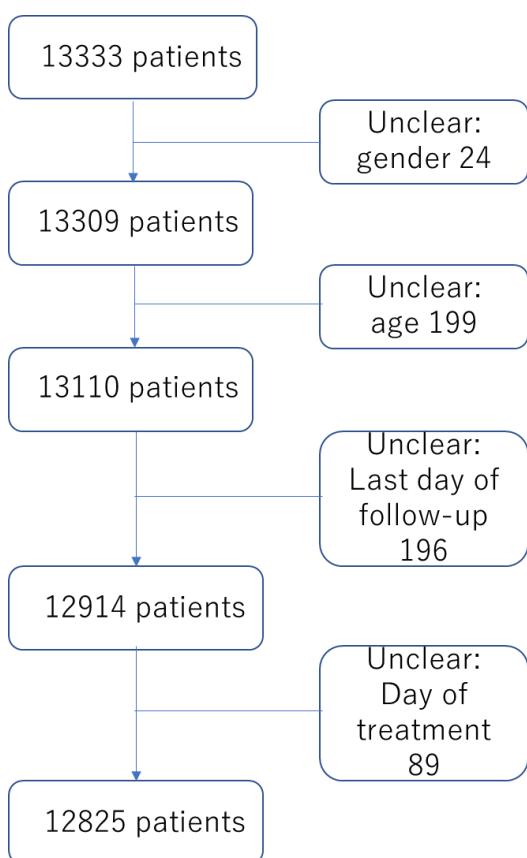
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Data-flow chart (Algorithm of data cleaning)

Analyses were also conducted on patients with some missing data, as the percentage of missing data could provide useful insights for interpreting the data more accurately.

Table 1-Treatment

Treatment	Number	Percentage
Endoscopic excision	1091	8.5
Surgery after endoscopic excision	756	5.9
Surgery	10806	84.3
Non-surgery	172	1.3
Total	12825	100

Table 2-1 Endoscopic excision-Gender

Gender	Number	Percentage
Male	731	67
Female	360	33
Total	1091	100

Table 2-2 Endoscopic excision-Age

Age (median) 67 (25-92)

Age (mean) 66.6 ± 11.9

Table 2-3 Endoscopic excision-Age classification

Age classification	Number	Percentage
20-29	2	0.2
30-39	18	1.7
40-49	89	8.2
50-59	165	15.1
60-69	339	31.1
70-79	340	31.2
80-89	133	12.2
90=<	5	0.5
Total	1091	100

Table 2-4 Endoscopic excision-Tumor locatic

Tumor location	Number	Percentage
Cecum	72	6.6
Ascending	138	12.6
Transverse	129	11.8
Descending	53	4.9
Sigmoid	372	34.1
Rectosigmoid	84	7.7
Upper rectum	99	9.1
Lower rectum	124	11.4
Anal canal	1	0.1
Unknown	19	1.7
Total	1091	100

Table 2-5 Endoscopic excision-Procedure

Procedure	Number	Percentage
Polypectomy	111	10.2
EMR	677	62.1
ESD	278	25.5
Unknown	25	2.3
Total	1091	100

Table 2-6 Endoscopic excision-En bloc or piecemeal

Resection type	Number	Percentage
En bloc	949	87.0
Piecemeal	70	6.4
Unknown	72	6.6
Total	1091	100

Table 2-7 Endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	226	20.7
Isp	259	23.7
Is	171	15.7
Ila	178	16.3
Ilb	1	0.1
Ilc	7	0.6
Ila+Ilc	43	3.9
Ilc+Ila	3	0.3
Others	97	8.9
Unknown	106	9.7
Total	1091	100

Table 2-8 Endoscopic excision-Tumor size

Median	15 (4-70) mm
Mean	17.7 ± 10.8 mm

Table 2-9 Endoscopic excision-Tumor size 2

Tumor size	Number	Percentage
≤5 mm	52	5.1
6-10 mm	283	27.7
11-15 mm	248	24.3
16-20 mm	175	17.1
21-30 mm	163	16.0
31-40 mm	60	5.9
>40 mm	40	3.9
Unknown	70	
Total	1091	100

Table 2-10 Endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	947	86.8
Moderately differentiated	64	5.9
Poorly differentiated	1	0.1
Neuroendocrine tumor	42	3.9
Others	24	2.2
Unknown	13	1.2
Total	1091	100

Table 2-11 Endoscopic excision-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pTis	890	81.6
pT1a	114	10.4
pT1b	55	5.0
pT1(NOS)	12	1.1
pT2	0	0
pT3	0	0
Unknown	20	1.8
Total	1091	100

Table 2-12 Endoscopic excision-Distance of submucosal invasion

Distance of submucosal invasion	
Median 350 μ m (0-9000)	(N = 96)
Mean 959 μ m \pm 1551	

Table 2-13 Endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	1043	95.6
ly1	9	0.8
ly2	2	0.2
ly3	0	0
ly+ grade unknown	0	0
Unknown	37	3.4
Total	1091	100

Table 2-14 Endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	1037	95.1
v1	13	1.2
v2	2	0.2
v3	1	0.1
v+ grade unknown	0	0
Unknown	38	3.5
Total	1091	100

Table 2-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	222	20.3
Grade 2	9	0.8
Grade 3	4	0.4
Unknown	856	78.5
Total	1091	100

Table 2-16 Endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	971	89
HM1	24	2.2
Unknown	96	8.8
Total	1091	100

Table 2-17 Endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	996	91.3
VM1	7	0.6
Unknown	88	8.1
Total	1091	100

Table 2-18 Endoscopic excision-Curability

Curability	Number	Percentage
CurE A	962	88.2
CurE B	33	3.0
CurE C	41	3.8
Unknown	55	5.0
Total	1091	100

Table 3-1 Surgery after endoscopic excision-Gender

Gender	Number	Percentage
Male	477	63.1
Female	279	36.9
Total	756	100

Table 3-2 Surgery after endoscopic excision-Age

Age (median)	66 (17-89)
Age (mean)	64.8 ± 11.4

Table 3-3 Surgery after endoscopic excision-Age classification

Age classification	Number	Percentage
<20	1	0.1
20-29	0	0
30-39	16	2.1
40-49	71	9.4
50-59	127	16.8
60-69	256	33.9
70-79	232	30.7
80-89	53	7.0
90=<	0	0
Total	756	100

Table 3-4 Surgery after endoscopic excision-Tumor location

Tumor location	Number	Percentage
Vermiformis appendix	1	0.1
Cecum	34	4.5
Ascending	85	11.2
Transverse	58	7.7
Descending	31	4.1
Sigmoid	259	34.3
Rectosigmoid	85	11.2
Upper rectum	70	9.3
Lower rectum	91	12
Proctos	2	0.3
Unknown	40	5.3
Total	756	100

Table 3-5 Surgery after endoscopic excision-Endoscopic procedure

Procedure	Number	Percentage
Polypectomy	37	4.9
EMR	466	61.6
ESD	203	26.9
Unknown	50	6.6
Total	756	100

Table 3-6 Surgery after endoscopic excision-En bloc or piecemeal

Resection	Number	Percentage
En bloc	564	74.6
Piecemeal	73	9.7
Unknown	119	15.7
Total	756	100

Table 3-7 Surgery after endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	94	12.4
Isp	197	26.1
Is	158	20.9
Ila	75	9.9
IIb	4	0.5
Ilc	11	1.5
Ila+Ilc	49	6.5
Ilc+Ila	7	9.3
Others	38	5.0
Unknown	123	16.3
Total	756	100

Table 3-8 Surgery after endoscopic excision-Tumor size

Median	15 (4-100) mm
Mean	18.5 ± 12.8 mm

Table 3-9 Surgery after endoscopic excision-Tumor size 2

Tumor size	Number	Percentage
<=5 mm	19	3.8
6-10 mm	129	25.9
11-15 mm	122	24.4
16-20 mm	102	20.4
21-30 mm	79	15.8
31-40 mm	22	4.4
>40 mm	26	5.2
Unknown	257	
Total	756	100

Table 3-10 Surgery after endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	468	61.9
Moderately differentiated	197	26.1
Poorly differentiated	7	0.9
Mucinous	5	0.7
Signet ring cell	0	0
Neuroendocrine tumor	15	2.0
Others	5	0.7
Unknown	59	7.8
Total	756	100

Table 3-11 Surgery after endoscopic excision-Depth of tumor invasion (endoscopic)

Depth of tumor invasion	Number	Percentage
pTis	52	6.9
pT1a	83	11
pT1b	545	72.1
pT1(NOS)	16	2.1
pT2	12	1.6
pT3	1	0.1
pT4a	0	0.1
pT4b	0	0.1
Unknown	47	6.2
Total	756	100

Table 3-12 Surgery after endoscopic excision-Distance of submucosal invasion

Distance of submucosal invasion	
Median 2000 μ m (0-14000)	(N = 434)
Mean 2717 μ m \pm 2095	

Table 3-13 Surgery after endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	395	52.2
ly1	149	19.7
ly2	15	2.0
ly3	2	0.3
ly+ grade unknown	16	2.1
Unknown	179	23.7
Total	756	100

Table 3-14 Surgery after endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	400	52.9
v1	136	18
v2	17	2.2
v3	2	0.3
v+ grade unknown	15	2.0
Unknown	186	24.6
Total	756	100

Table 3-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	234	31.0
Grade 2	46	6.1
Grade 3	18	2.4
Unknown	458	60.6
Total	756	100

Table 3-16 Surgery after endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	528	69.8
HM1	57	7.5
Unknown	171	22.6
Total	756	100

Table 3-17 Surgery after endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	471	62.3
VM1	127	16.8
Unknown	158	20.9
Total	756	100

Table 3-18 Surgery after endoscopic excision-Endoscopic curability

Curability	Number	Percentage
CurE A	376	49.7
CurE B	68	9.0
CurE C	152	20.1
Unknown	160	21.1
Total	756	100

Table 3-19 Surgery after endoscopic excision-Operative approach

Operative approach	Number	Percentage
Transanal	4	0.5
Laparoscopic	672	88.9
Open	57	7.5
Others	4	0.5
Unknown	19	2.5
Total	756	100

Table 3-20 Surgery after endoscopic excision-Lymph node dissection

Type of anastomosis	Number	Percentage
D0	10	1.3
D1	19	2.5
D2	475	62.8
D3	215	28.4
Unknown	37	4.9
Total	756	100

Table 3-21 Surgery after endoscopic excision-Histologic type after surgery

Histologic type	Number	Percentage
Well differentiated	468	61.9
Moderately differentiated	197	26.1
Poorly differentiated	7	0.9
Mucinous	5	0.7
Signet ring cell	0	0
Neuroendocrine tumor	18	2.4
Others	4	0.5
Unknown	57	7.5
Total	756	100

Table 3-22 Surgery after endoscopic excision-Depth of tumor invasion after surgery

Depth of tumor invasion	Number	Percentage
pT0	58	7.7
pTis	46	6.1
pT1a	63	8.3
pT1b	424	56.1
pT1 (NOS)	15	2.0
pT2	31	4.1
pT3	21	2.8
pT4a	5	0.7
pT4b	2	0.3
Unknown	91	12.0
Total	756	100

Table 3-23 Surgery after endoscopic excision-Perineural invasion

Perineural invasion	Number	Percentage
PN0	267	35.3
PN1a	13	1.7
PN1b	4	0.5
Unknown	472	62.4
Total	756	100

Table 3-24 Surgery after endoscopic excision-EX

EX	Number	Percentage
Absent	455	60.2
Tumor deposits predominantly confined to the perineural space	0	0
Tumor deposits predominantly confined to the vascular space	1	0.1
Tumor nodule (ND)	5	0.7
ND(v+)	0	0.0
ND (PN+)	0	0.0
Unknown	295	39.0
Total	756	100

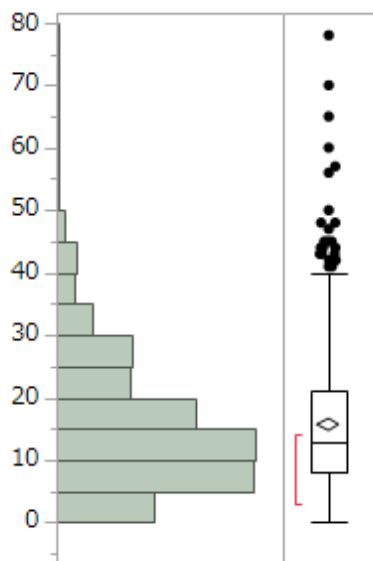
Table 3-25 Surgery after endoscopic excision-Lymph node metastasis

Lymph node metastasis	Number	Percentage
pN0	655	86.6
pN1	76	10.1
pN2	13	1.7
pN3	3	0.4
Unknown	9	1.2
Total	756	100

Table 3-26 Surgery after endoscopic excision-Number of lymph node retrieved

Number of lymph node retrieved (median)	13 (0-78)
Number of lymph node retrieved (mean)	15.7 ± 11.3

N = 667



* 外れ値検出のある箱ひげ図には次のものが表示されます。

- IQR = 第 3 四分位点- 第 1 四分位点
- 箱の端から $1.5 \times \text{IQR}$ までの範囲にある一番遠くの点までのひげ
- 外れ値の可能性のある点
- 半分のオブザベーションが含まれる最も短い範囲を示す赤い括弧

Table 3-27 Surgery after endoscopic excision-Number of positive lymph node

Number of positive node (median)	0 (0-20)
Number of positive node (mean)	0.3 ± 1.3

N = 667

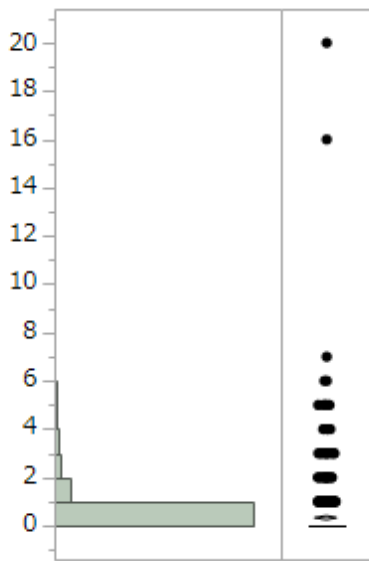


Table 3-28 Surgery after endoscopic excision-Curability after surgery

Curability	Number	Percentage
pCur A	706	93.4
pCur B	1	0.1
pCur C	2	0.3
Unknown	47	6.2
Total	756	100

Table 3-29 Surgery after endoscopic excision-Recurrence after surgery

Recurrence	Number	Percentage
Absent	717	94.8
Present	25	3.3
Unknown	14	1.9
Total	756	100

Table 3-30 Surgery after endoscopic excision-Recurrence site after surgery

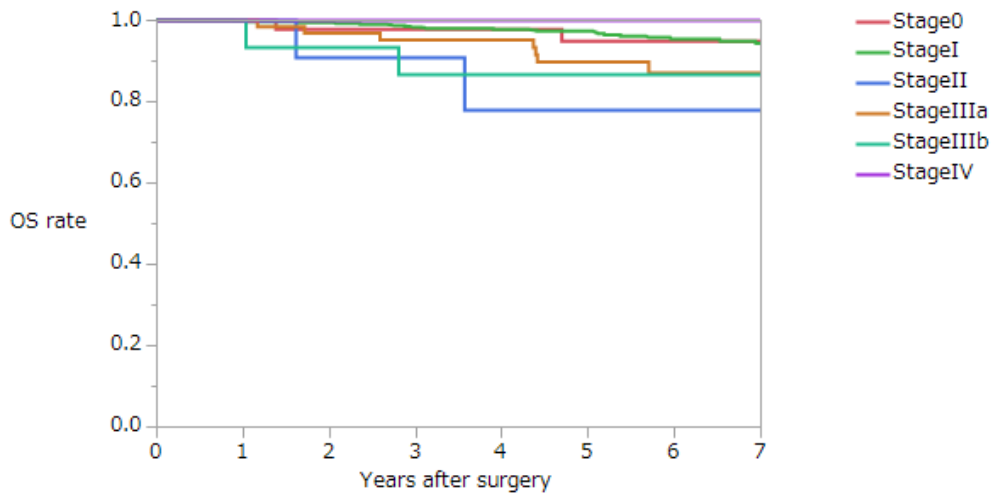
First recurrence site	Number
Anastomosis	0
Regional lymph node	1
Local	1
Peritoneal	1
Liver	5
Lung	13
Lymph node (not regional)	0
Bone	1
Brain	0
Adrenal gland	0
Skin	0
Others	2
(overlapping+)	

Table 3-31 Surgery after endoscopic excision-Treatment for recurrence

Treatment for recurrence	Number
None	6
Curative surgery	10
Palliative surgery	1
Radiotherapy	0
Chemotherapy	8
Others	0
Unknown	0
Total	25

Table3-32 Surgery after endoscopic excision-Overall survival rates after surgery (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	48	100	97.8	97.8	97.8	95.0
Stage I	592	99.7	99.3	98.2	97.6	97.2
Stage II	12	100	90.9	90.9	77.9	77.9
Stage IIIa	70	100	96.9	95.2	95.2	89.8
Stage IIIb	16	100	93.3	86.7	86.7	86.7
Stage IV	3	100	100	100	100	100
Unknown	15					
All	756	99.7	98.7	97.6	96.9	95.9



Overall survival of all patients with surgery after endoscopic excision

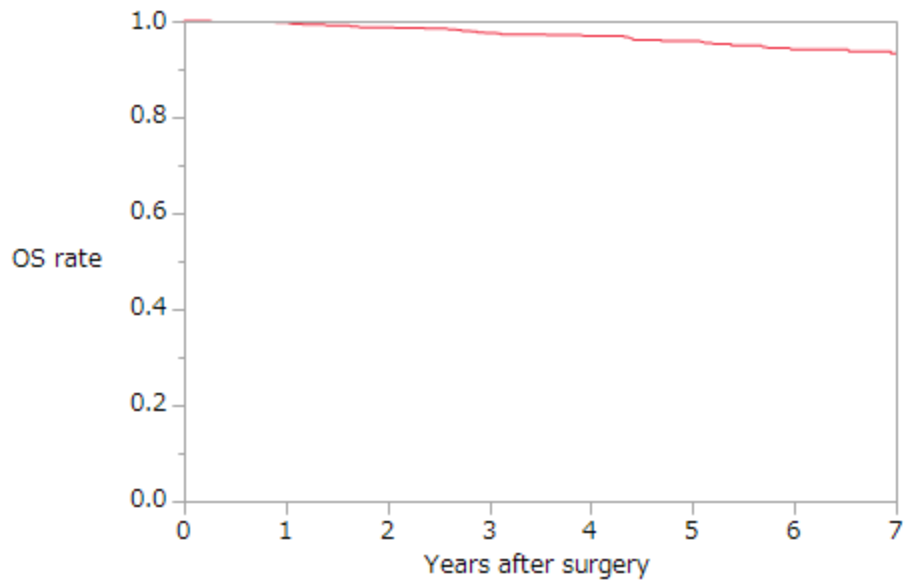


Table 4-1 Surgery-Gender

Gender	Number	Percentage
Male	6141	56.8
Female	4665	43.2
Total	10806	100

Table 4-2 Surgery-Age

Age (median)	69(16-101)
Age (mean)	68.8 ± 11.9

Table 4-3 Surgery-Age classification

Age classification	Number	Percentage
<20	2	0.02
20-29	35	0.3
30-39	173	1.6
40-49	577	5.3
50-59	1285	11.9
60-69	3279	30.3
70-79	3513	32.5
80-89	1758	16.3
90=<	184	1.7
Total	10806	100

Table 4-4 Surgery-Tumor location

Tumor location	Number	Percentage
Vermiformis appendix	299	2.8
Cecum	848	7.8
Ascending	1739	16.1
Transverse	992	9.2
Descending	484	4.5
Sigmoid	2501	23.1
Rectosigmoid	1359	12.6
Upper rectum	986	9.1
Lower rectum	1290	11.9
Proctos (anal canal)	77	0.7
Unknown	231	2.1
Total	10806	100

Table 4-5 Surgery-Preoperative serum CEA value

Preoperative serum CEA value	Number	Percentage
Normal	5847	54.1
<2 x ULN	1825	16.9
<4 x ULN	896	8.3
<8 x UNL	563	5.2
>=8 x UNL	971	9.0
Unknown	704	6.5
Total	10806	100

Table 4-6 Surgery-Multiple primary cancers

Multiple primary cancers	Number	Percentage
Absent	8347	77.2
Synchronous	478	4.4
Metachronous	948	8.8
Synchronous and metachronous	49	0.5
Unknown	984	9.1
Total	10806	100

Table 4-7 Surgery-Synchronous multiple colorectal cancers

Synchronous multiple CRC	Number	Percentage
Absent	9667	89.5
Present: early cancer	292	2.7
Present: advanced cancer	191	1.8
Present: early and advanced cancer	188	1.7
Unknown	468	4.3
Total	10806	100

Table 4-8 Surgery-Metachronous multiple colorectal cancers

Metachronous multiple CRC	Number	Percentage
Absent	9797	90.7
Present: early cancer	91	0.8
Present: advanced cancer	170	1.6
Present: early and advanced cancer	23	0.2
Unknown	725	6.7
Total	10806	100

Table 4-9 Operative procedure

Operative procedure	Number	Percentage
Polypectomy	31	0.30
Tumorectomy	69	0.6
Local excision	27	0.3
Appendectomy	11	0.10
Ileocecal resection	1106	10.2
Partial colectomy	816	7.6
Right hemicolectomy	1732	16.0
Left hemicolectomy	384	3.6
Sigmoidectomy	2001	18.5
Subtotal colectomy	30	0.3
Total colectomy	12	0.1
Total proctocolectomy	34	0.3
High anterior resection	960	8.9
Low anterior resection	1676	15.5
Ultra-low anterior resection	246	2.3
Intersphincteric resection	172	1.6
Hartmann procedure	334	3.1
Abdominoperineal resection	522	4.8
Total pelvic exenteration	68	0.6
Other types of colectomy	19	0.2
Bypass surgery	6	0.1
Colostomy, ileostomy	48	0.4
Exploratory laparotomy	0	0
Other palliative procedures	5	0.1
Unknown	497	4.6
Total	10806	100

Table 4-10 Surgery-Operative approach

Operative approach	Number	Percentage
Transanal	71	0.7
Laparoscopic	7059	65.3
Open	3102	28.7
Others	26	0.2
Unknown	548	5.1
Total	10806	100

Table 4-11 Surgery- Lymph node dissection

Lymph node dissection	Number	Percentage
D0	134	1.2
D1	305	2.8
D2	2463	22.8
D3	6799	62.9
Unknown	1105	10.2
Total	10806	100

Table 4-12 Surgery-Tumor size

Tumor size	
Median	40 mm (0-220)
Mean	42.8 ± 23.4 mm
Unknown	1961
Total	10806

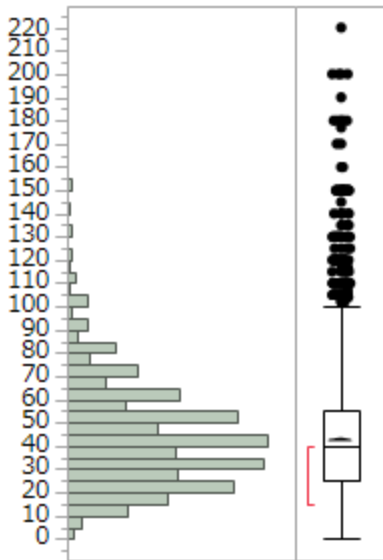


Table 4-13 Surgery-Histologic type

Histologic type	Number	Percentage
Well differentiated	3771	34.9
Moderately differentiated	5593	51.8
Poorly differentiated	305	2.8
Mucinous	385	3.6
Signet ring cell	25	0.2
Medullary carcinoma	19	0.2
Adenocarcinoma (NOS)	14	0.1
Adenosquamous carcinoma	5	0.04
Squamous cell carcinoma	9	0.08
Carcinoid tumor	18	0.2
Endocrine cell carcinoma	13	0.1
Adenoendocrine cell carcinoma	2	0.0
Miscellaneous histological types of malignant epithelial tumors	12	0.1
Malignant lymphoma	11	0.1
Malignant melanoma	5	0.04
Other non-epithelial tumors	10	0.1
Unknown	609	5.6
Total	10806	100

Table 4-14 Surgery-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pT0	23	0.2
pTis	344	3.2
pT1a	316	2.9
pT1b	1171	10.8
pT1 (NOS)	52	0.5
pT2	1462	13.5
pT3	4655	43.1
pT4a	1740	16.1
pT4b	563	5.2
Unknown	480	4.4
Total	10806	100

Table 4-15 Surgery-Number of invaded organs during surgery

Number of invaded organs	Number	Percentage
0	2714	25.1
1	514	4.8
2	140	1.3
3	35	0.3
4 or more	5	0.04
Unknown	7398	68.5
Total	10806	100

Table 4-16 Surgery-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	4936	44.8
ly1	3813	35.3
ly2	1179	10.9
ly3	432	4.0
ly+ grade unknown	40	0.4
Unknown	506	4.7
Total	10806	100

Table 4-17 Surgery-Venous invasion

Venous invasion	Number	Percentage
v0	3605	33.4
v1	3814	35.3
v2	2104	19.5
v3	754	7.0
v+ grade unknown	31	0.3
Unknown	498	4.6
Total	10806	100

Table 4-18 Surgery-Interstitialium

Interstitialium	Number	Percentage
Medullary pattern	643	6.0
Intermediate pattern	6690	61.9
Scirrhous pattern	142	1.3
Unknown	3331	30.8
Total	10806	100

Table 4-19 Surgery-Infiltrative growth pattern

Infiltrative growth pattern	Number	Percentage
INF α	553	5.1
INF β	8179	75.7
INF γ	374	3.5
Unknown	1700	15.7
Total	10806	100

Table 4-20 Surgery-Perineural invasion

Perineural invasion	Number	Percentage
PN0	5007	46.3
PN1a	1756	16.3
PN1b	956	8.8
Unknown	3087	58.6
Total	10806	100

Table 4-21 Surgery-EX

EX	Number	Percentage
Absent	6280	58.1
Tumor deposits predominantly confined to the perineural space	55	0.5
Tumor deposits predominantly confined to the vascular space	96	0.9
Tumor nodule (ND)	400	3.7
ND(v+)	115	1.1
ND (PN+)	50	0.5
Unknown	3810	35.3
Total	10806	100

Table 4-22 Surgery-Budding

Perineural invasion	Number	Percentage
Grade 1	1611	14.9
Grade 2	501	4.6
Grade 3	296	2.7
Unknown	8398	77.7
Total	10806	100

Table 4-23 Surgery-Proximal margin

Proximal margin	Number	Percentage
PM0	10068	93.2
PM1	15	0.1
Unknown	723	6.7
Total	10806	100

Table 4-24 Surgery-Distal margin

Distal margin	Number	Percentage
DM0	10016	92.7
DM1	80	0.7
Unknown	710	6.6
Total	10806	100

Table 4-25 Surgery-Circumferential resection margin

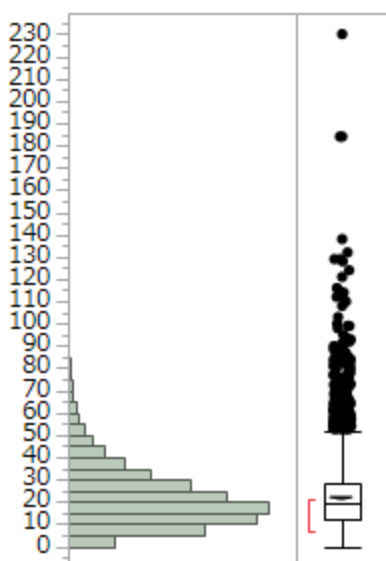
Circumferential resection margin	Number	Percentage
RM0	7886	73.0
RM1	222	2.1
Unknown	2698	25.0
Total	10806	100

Table 4-26 Surgery-lymph node metastasis

Lymph node metastasis	Number	Percentage
pN0	6180	57.2
pN1	2595	24.0
pN2	1081	10.0
pN3	506	4.7
Unknown	444	4.1
Total	10806	100

Table 4-27 Surgery-number of lymph node retrieved (N = 8825)

Number of lymph node retrieved (median)	19 (0-230)
Number of lymph node retrieved (mean)	21.8 ± 14.6



* 外れ値検出のある箱ひげ図には次のものが表示されます。

- IQR = 第 3 四分位点- 第 1 四分位点
- 箱の端から $1.5 \times \text{IQR}$ までの範囲にある一番遠くの点までのひげ
- 外れ値の可能性のある点
- 半分のオブザベーションが含まれる最も短い範囲を示す赤い括弧

Table 4-28 Surgery-number of positive lymph node (N = 8812)

Number of positive node (median)	0 (0-96)
Number of positive node (mean)	1.6 ± 3.7

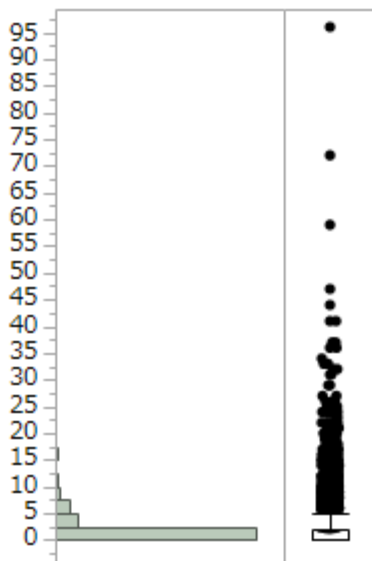


Table 4-29 Surgery-number of paracolic lymph node retrieved (N = 8784)

Number of lymph node retrieved (median)	11 (0-210)
Number of lymph node retrieved (mean)	12.7 ± 9.9

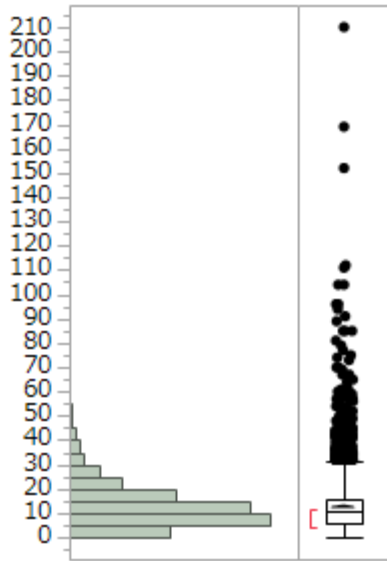


Table 4-30 Surgery-number of positive paracolic lymph node (N = 8768)

Number of positive node (median)	0 (0-47)
Number of positive node (mean)	1.2 ± 2.7

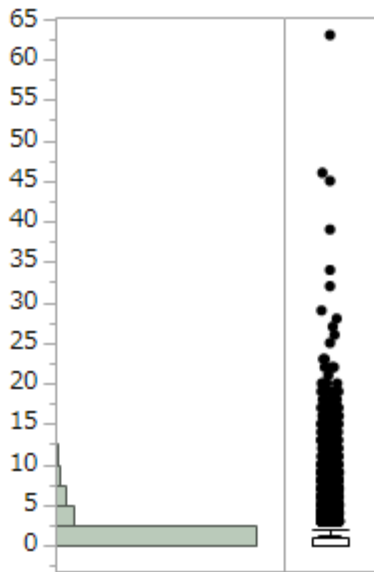


Table 4-31 Surgery-number of intermediate lymph node retrieved (N = 8501)

Number of lymph node retrieved (median)	5 (0-86)
Number of lymph node retrieved (mean)	5.7 ± 4.6

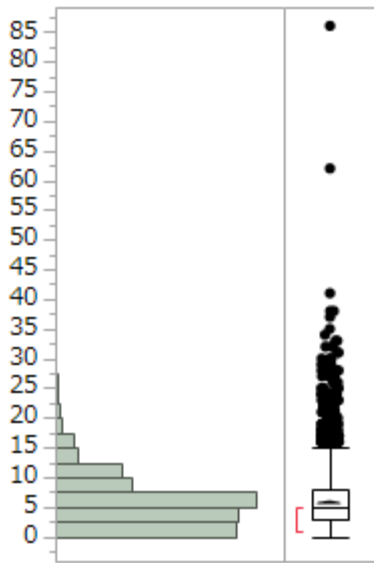


Table 4-32 Surgery-number of positive intermediate lymph node (N = 8487)

Number of positive node (median)	0 (0-37)
Number of positive node (mean)	0.3 ± 1.2

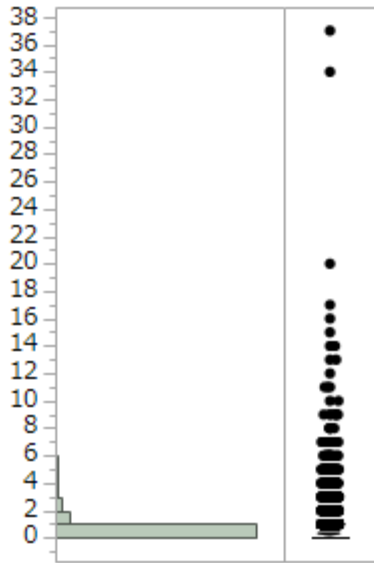


Table 4-33 Surgery-number of main lymph node retrieved (N = 6842)

Number of lymph node retrieved (median)	3 (0-29)
Number of lymph node retrieved (mean)	3.6 ± 3.4

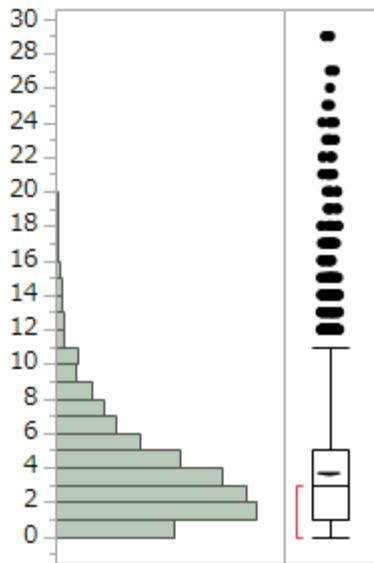


Table 4-34 Surgery-number of positive main lymph node (N = 6839)

Number of positive node (median)	0 (0-28)
Number of positive node (mean)	0.1 ± 0.7

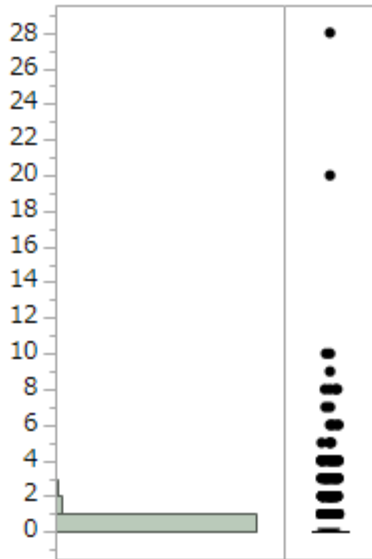


Table 4-35 Surgery-number of lateral pelvic lymph node retrieved (N = 524)

Number of lymph node retrieved (median)	13 (0-56)
Number of lymph node retrieved (mean)	14.6 ± 10.6

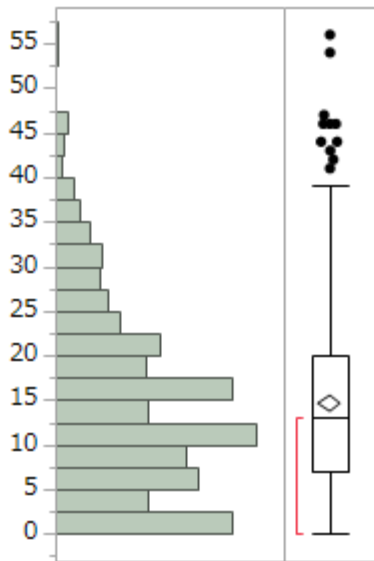


Table 4-36 Surgery-number of positive lateral pelvic lymph node (N = 526)

Number of positive node (median)	0 (0-20)
Number of positive node (mean)	0.7 ± 2.1

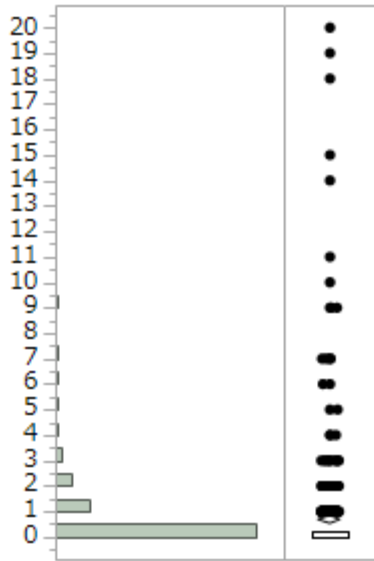


Table 4-37 Surgery-liver metastasis

Liver metastasis	Number	Percentage
H0	6030	55.8
H1	357	3.3
H2	177	1.6
H3	106	1.0
Unknown	4136	38.3
Total	10806	100

Table 4-38 Surgery-Peritoneal metastasis

Peritoneal metastasis	Number	Percentage
P0	6409	59.3
P1	126	1.2
P2	65	0.6
P3	92	0.9
Unknown	4114	38.1
Total	10806	100

Table 4-39 Surgery-Distant metastasis other than liver

Distant metastasis	Number	Percentage
M0	5974	55.3
M1a	719	6.7
M1b	249	2.3
Unknown	3864	35.8
Total	10806	100

Table 4-40 Surgery-Lung metastasis

Lung metastasis	Number	Percentage
PUL0	6386	59.1
PUL1	145	1.3
PUL2	70	0.6
Unknown	4205	38.9
Total	10806	100

Table 4-41 Surgery-Curability after surgery

Curability	Number	Percentage
pCur A	8397	77.7
pCur B	426	3.9
pCur C	1085	10.0
Unknown	898	8.3
Total	10806	100

Table 4-42 Surgery-Recurrence after surgery

recurrence	Number	Percentage
Absent	8049	74.5
Present	2002	18.5
Unknown	755	7
Total	10806	100

Table 4-43 Surgery-Recurrence rate according to stage

	Stage 0	Stage I	Stage II	Stage IIIa	Stage IIIb	Stage IV	Unknown	Total
Absent	314 (91.8)	2131 (90.6)	2534 (82.5)	1530 (72.6)	522 (54.7)	838 (48.9)	180 (67.9)	8049 (74.5)
Present	6 (1.8)	123 (5.2)	407 (13.3)	492 (23.4)	389 (21.7)	544 (31.7)	41 (15.5)	2002 (18.5)
Unknown	22 (6.4)	98 (4.2)	130 (4.2)	85 (4.0)	44 (4.6)	332 (19.4)	44 (16.6)	755 (7.0)
Total	342	2352	3071	2107	955	1714	265	10806

Table 4-44 Surgery-Recurrence site after surgery

Fisrt recurrence site	Number
Anastomosis	79
Regional lymph node	181
Local	143
Peritoneal	317
Liver	742
Lung	610
Lymph node (not regional)	165
Bone	63
Brain	18
Adrenal gland	11
Skin	8
Others	57

(overlapping+)

Table 4-45 Surgery-Treatment after recurrence

Treatment for recurrence	Number	Percentage
None	359	17.9
Curative surgery	646	32.3
Palliative surgery	27	1.3
Radiation	77	3.8
Chemotherapy	738	36.9
Others	23	1.1
Unknown	132	6.6
Total	2002	100

Table 4-46 Surgery-Overall survival rates after surgery (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	342	99.0	98.7	95.4	93.7	92.7
Stage I	2352	99.1	97.6	96.3	94.5	93.0
Stage II	3071	97.8	95.4	92.4	89.3	86.5
Stage IIIa	2107	97.3	93.2	88.8	84.7	81.0
Stage IIIb	955	94.4	86.2	79.5	73.2	70.2
Stage IV	1714	80.6	62.6	50.4	40.6	34.9
Unknown	265					
All	10806	95.0	89.7	85.1	80.9	77.8

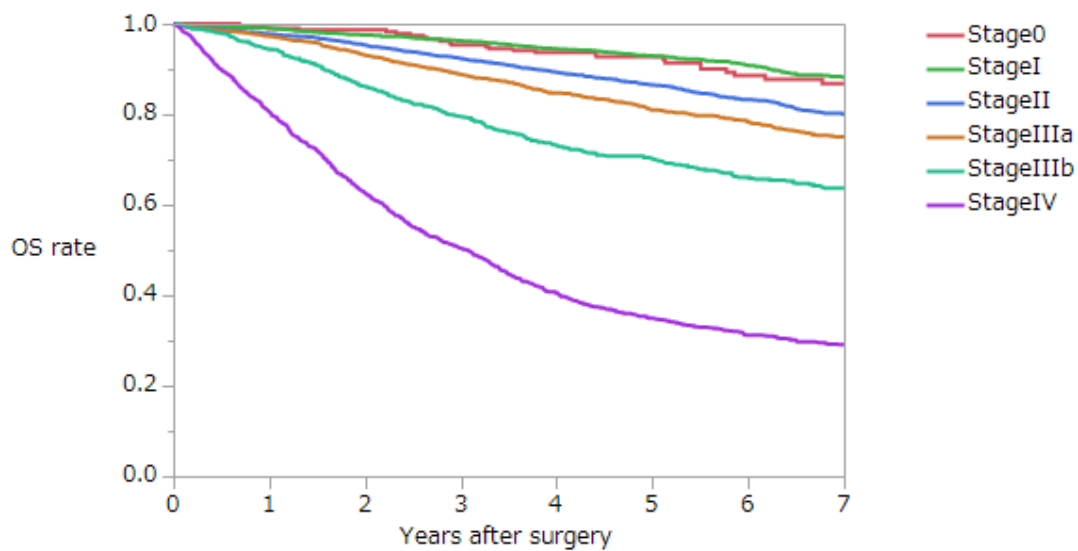


Table 4-47 Surgery-Overall survival rates after surgery (colon) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	240	99.1	98.5	94.3	93.0	91.5
Stage I	1474	99.1	97.3	96.1	93.9	92.1
Stage II	2067	97.6	95.3	92.4	89.6	86.4
Stage IIIa	1326	97.6	93.4	89.2	85.5	82.4
Stage IIIb	522	93.3	84.9	77.7	70.1	67.3
Stage IV	1116	78.8	60.3	47.6	38.8	33.5
All	6745	94.7	89.2	84.6	80.6	77.4

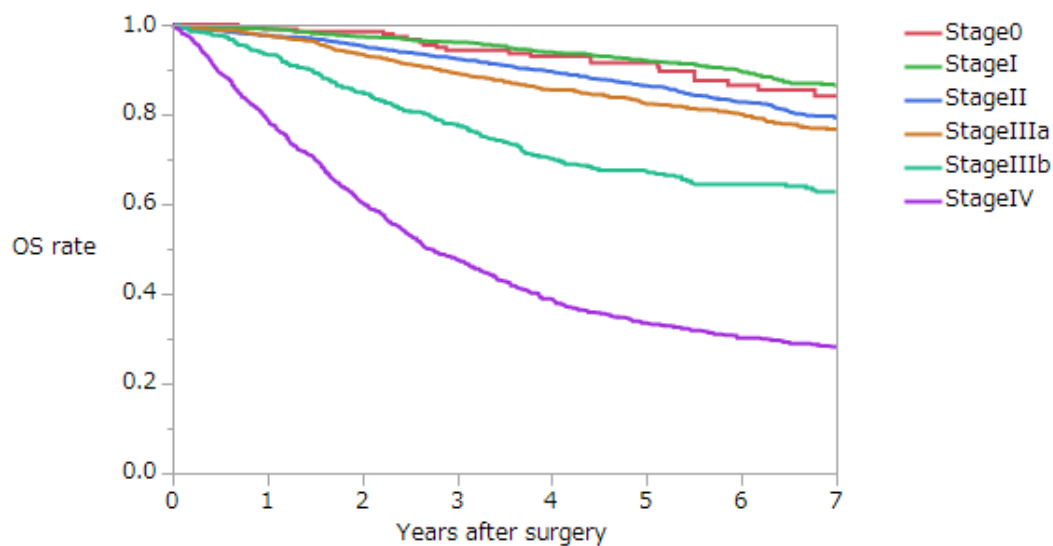


Table 4-48 Surgery-Overall survival rates after surgery (rectum) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	102	98.9	98.9	97.7	95.2	95.2
Stage I	878	99.1	98.0	96.5	95.6	94.4
Stage II	1004	98.3	95.5	92.3	88.9	86.8
Stage IIIa	781	96.9	92.6	88.2	83.4	78.8
Stage IIIb	433	95.7	87.8	81.8	76.9	73.7
Stage IV	599	83.8	66.8	55.4	43.9	37.7
All	3797	95.7	90.5	86.0	81.5	78.5

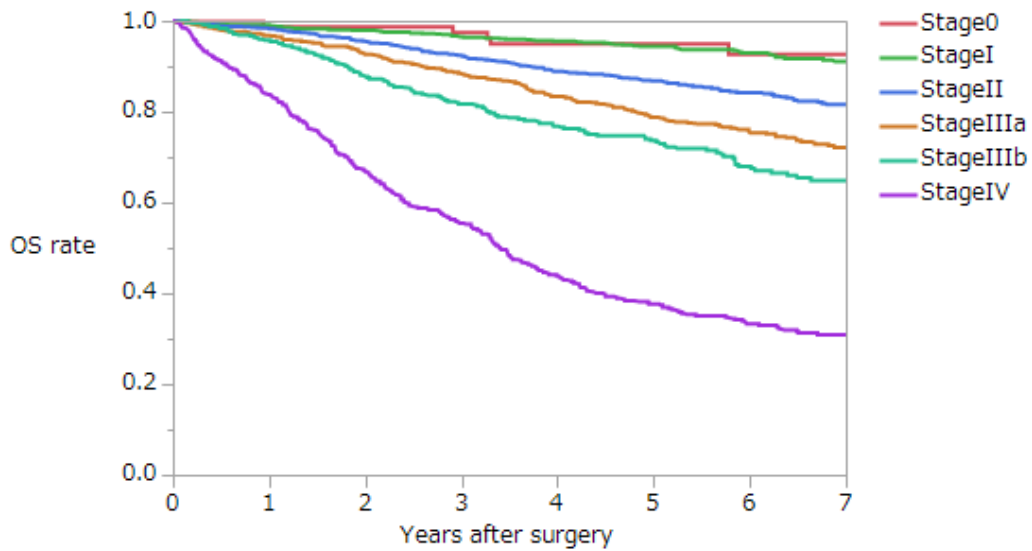


Table 4-49 Surgery-Overall survival rates according to liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
H0	6030	96.8	93.0	89.1	85.8	83.0
H1	357	89.3	73.7	61.9	51.6	45.4
H2	177	84.2	60.9	47.6	34.8	33.8
H3	106	70.3	45.9	28.0	19.1	17.3
Unknown	4136					

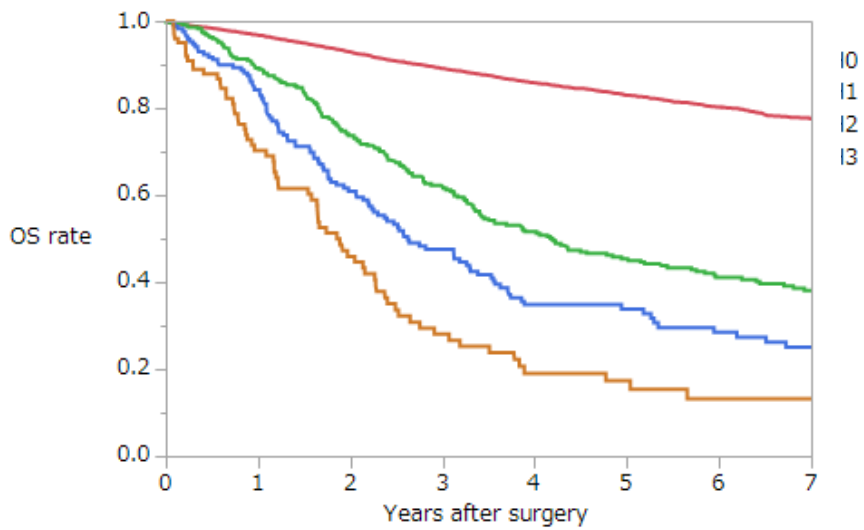


Table 4-50 Surgery-Overall survival rates according to peritoneal metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
P0	6409	96.4	91.8	87.4	83.7	80.9
P1	126	77.2	62.8	52.3	42.0	32.4
P2	65	76.6	46.1	34.0	31.4	22.0
P3	92	58.5	33.9	19.6	13.3	8.0
Unknown	4114					

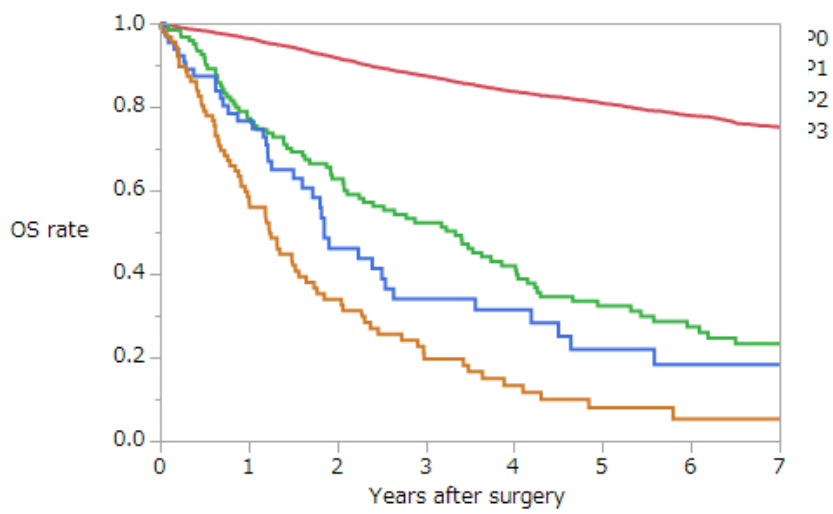


Table 4-51 Surgery-Overall survival rates according to lung metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
PUL0	6386	96.1	91.4	87.1	83.3	80.6
PUL1	145	88.6	68.2	52.9	46.4	39.5
PUL2	70	78.7	61.2	45.2	31.3	23.2
Unknown	4205					

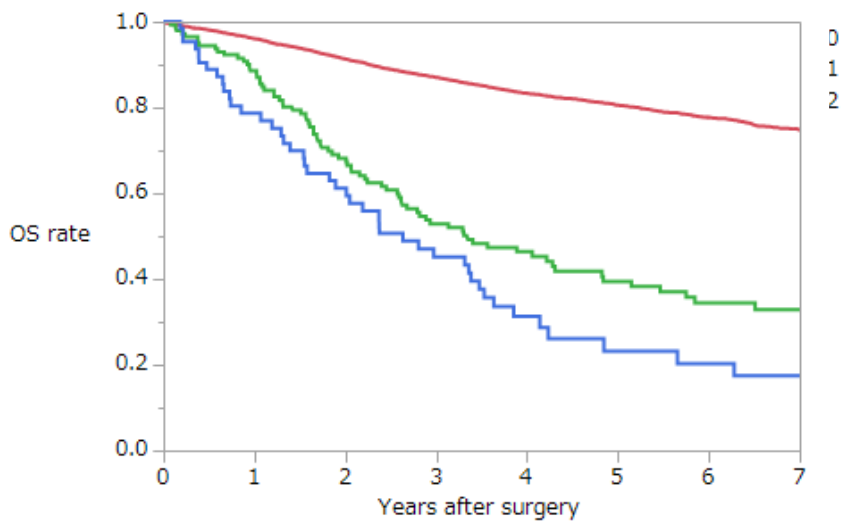


Table 4-52 Surgery-Overall survival rates according to distant metastasis other than liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
M0	5974	97.5	94.2	90.8	87.6	85.0
M1a	719	85.8	71.3	58.7	49.6	44.9
M1b	249	72.1	46.8	31.7	20.9	16.1
Unknown	3864					

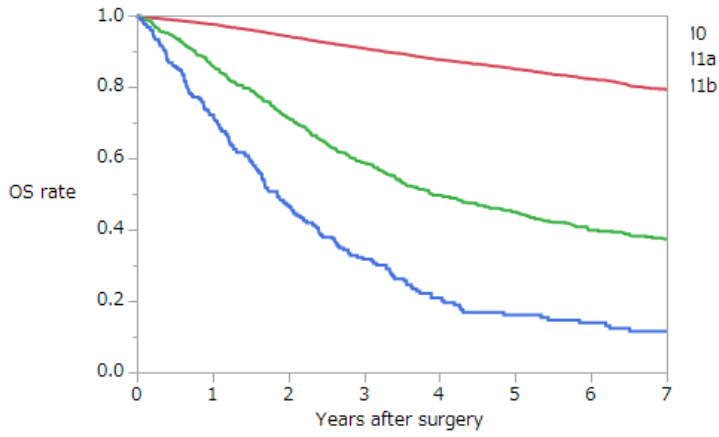
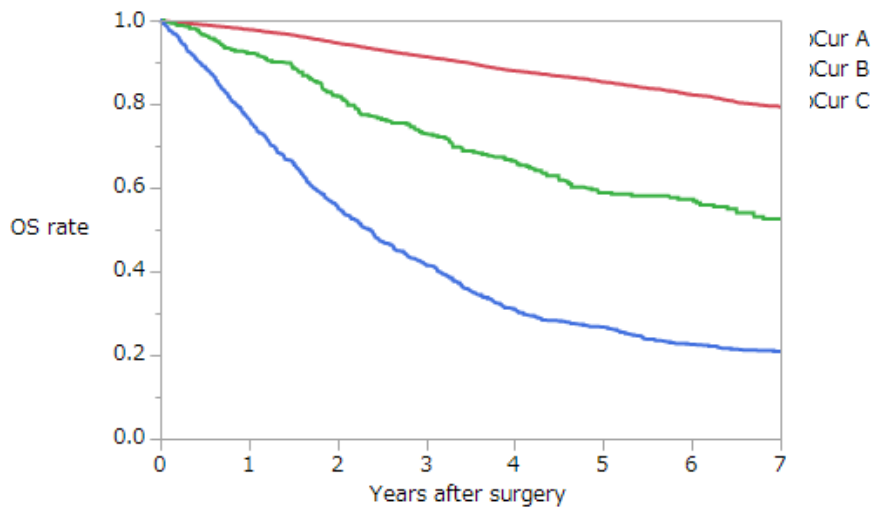


Table 4-53 Surgery-Overall survival rates according to curability (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
pCur A	8397	97.8	94.6	91.3	88.0	85.3
pCur B	426	92.2	81.8	72.8	66.4	58.9
pCur C	1085	76.4	55.5	41.6	31.0	26.7
Unknown	898					



Participating institutions

相澤病院 外科
愛知県がんセンター中央病院 消化器外科
青森市民病院 外科
秋田大学医学系研究科消化器外科学講座
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琉球大学 第一外科相澤病院 外科

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全国登録委員会：帝京大学医学部附属溝口病院
〒213-8507 神奈川県川崎市高津区二子 5-1-1
TEL 044-844-3333
