

Multi-Institutional Registry of Large Bowel Cancer in Japan

Vol. 40

Cases treated in 2014

Japan Society for Cancer of the Colon and Rectum

全国登録委員会

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まえがき

全国大腸癌登録調査報告書第40号（Multi-Institutional Registry of Large Bowel Cancer in Japan, Vol. 40）をお届けします。本号は2014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11122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。今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となり、これまでの部位別の検討を一部省略する一方で、数値のみでなく生存曲線も掲載しました。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法で集計しました。

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。

会員施設に勤務されている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広く開かれています。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。

2023年6月

大腸癌研究会

会長 味岡 洋一

全国大腸癌登録委員会

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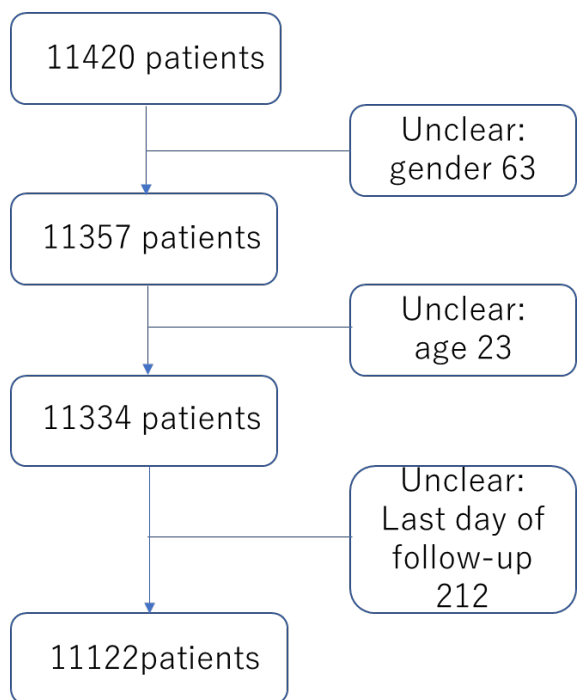
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Data-flow chart (Algorithm of data cleaning)

Analyses were basically performed including the patients who had some missing data, because the percentage of missing data would be helpful to interpret the data more precisely.

Table 1-Treatment

Treatment	Number	Percentage
Endoscopic excision	703	6.3
Surgery after endoscopic excision	568	5.1
Surgery	9733	87.5
Non-surgery	118	1.1
Total	11122	100

Table 2-1 Endoscopic excision-Gender

Gender	Number	Percentage
Male	445	63.3
Female	258	36.7
Total	703	100

Table 2-2 Endoscopic excision-Age

Age (median)	68 (34-94)
Age (mean)	67.7 ± 10.6

Table 2-3 Endoscopic excision-Age classification

Age classification	Number	Percentage
20-29	0	0
30-39	5	0.7
40-49	37	5.3
50-59	108	15.4
60-69	220	31.3
70-79	242	34.4
80-89	87	12.4
90=<	4	0.6
Total	703	100

Table 2-4 Endoscopic excision-Tumor location

Tumor location	Number	Percentage
Cecum	37	5.3
Ascending	87	12.4
Transverse	67	9.5
Descending	39	5.5
Sigmoid	249	35.4
Rectosigmoid	62	8.8
Upper rectum	63	9.0
Lower rectum	71	10.1
Unknown	28	4.0
Total	703	100

Table 2-5 Endoscopic excision-Procedure

Procedure	Number	Percentage
Polypectomy	31	4.4
EMR	456	64.9
ESD	175	24.9
Unknown	41	5.8
Total	703	100

Table 2-6 Endoscopic excision-En bloc or piecemeal

Resection type	Number	Percentage
En bloc	578	82.2
Piecemeal	44	6.3
Unknown	81	11.5
Total	703	100

Table 2-7 Endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	151	21.5
Isp	165	23.5
Is	86	12.2
Ila	120	17.1
IIb	0	0
IIc	5	0.7
Ila+IIc	26	3.7
IIc+Ila	4	0.6
Others	49	7
Unknown	97	13.8
Total	703	100

Table 2-8 Endoscopic excision-Tumor size

Median	15 (4-140) mm
Mean	18.3 ± 13.4 mm

Table 2-9 Endoscopic excision-Tumor size 2

Tumor size	Number	Percentage
≤5 mm	26	4.1
6-10 mm	194	30.5
11-15 mm	139	21.8
16-20 mm	114	17.9
21-30 mm	87	13.7
31-40 mm	49	7.7
>40 mm	28	4.4
Unknown	66	
Total	703	100

Table 2-10 Endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	589	83.8
Moderately differentiated	66	9.4
Poorly differentiated	2	0.3
Neuroendocrine tumor	14	2
Others	10	1.4
Unknown	27	3.8
Total	703	100

Table 2-11 Endoscopic excision-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pTis	567	80.7
pT1a	75	10.7
pT1b	42	6
pT1(NOS)	7	1
pT2	0	0
pT3	1	0.1
Unknown	11	1.6
Total	703	100

Table 2-12 Endoscopic excision-Distance of submucosal invasion

Distance of submucosal invasion	
Median 551 μ m (0-10000)	(N = 94)
Mean 1269 μ m \pm 1777	

Table 2-13 Endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	654	93
ly1	9	1.3
ly2	2	0.3
ly3	0	0
Unknown	38	5.4
Total	703	100

Table 2-14 Endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	654	93
v1	10	1.4
v2	2	0.3
v3	0	0
Unknown	37	5.3
Total	703	100

Table 2-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	156	22.2
Grade 2	2	0.3
Grade 3	1	0.1
Unknown	544	77.4
Total	703	100

Table 2-16 Endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	630	89.6
HM1	21	3
Unknown	52	7.4
Total	703	100

Table 2-17 Endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	648	92.2
VM1	5	0.7
Unknown	50	7.1
Total	703	100

Table 2-18 Endoscopic excision-Curability

Curability	Number	Percentage
CurE A	617	87.8
CurE B	18	2.6
CurE C	37	5.3
Unknown	31	4.4
Total	703	100

Table 3-1 Surgery after endoscopic excision-Gender

Gender	Number	Percentage
Male	347	61.1
Female	221	38.9
Total	568	100

Table 3-2 Surgery after endoscopic excision-Age

Age (median)	66 (30-92)
Age (mean)	65.3 ± 11.5

Table 3-3 Surgery after endoscopic excision-Age classification

Age classification	Number	Percentage
20-29	0	0.0
30-39	10	1.8
40-49	49	8.6
50-59	107	18.8
60-69	172	30.3
70-79	176	31.0
80-89	52	9.2
90=<	2	0.4
Total	568	100

Table 3-4 Surgery after endoscopic excision-Tumor location

Tumor location	Number	Percentage
Cecum	28	4.9
Ascending	56	9.9
Transverse	53	9.3
Descending	33	5.8
Sigmoid	189	33.3
Rectosigmoid	76	13.4
Upper rectum	55	9.7
Lower rectum	67	11.8
Proctos	1	0.2
Unknown	10	1.8
Total	568	100

Table 3-5 Surgery after endoscopic excision-Endoscopic procedure

Procedure	Number	Percentage
Polypectomy	26	4.6
EMR	371	65.3
ESD	130	22.9
Unknown	41	7.2
Total	568	100

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

Resection	Number	Percentage
En bloc	401	70.6
Piecemeal	65	11.4
Unknown	102	18
Total	568	100

Table 3-7 Surgery after endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	87	15.3
Isp	162	28.5
Is	84	14.8
Ila	80	14.1
Ilb	1	0.2
Ilc	4	0.7
Ila+Ilc	24	4.2
Ilc+Ila	1	0.2
Others	22	3.9
Unknown	103	18.1
Total	568	100

Table 3-8 Surgery after endoscopic excision-Tumor size

Median	15 (4-130) mm
Mean	18.8 ± 12.6 mm

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

Tumor size	Number	Percentage
<=5 mm	8	2.1
6-10 mm	92	24
11-15 mm	94	24.5
16-20 mm	85	22.2
21-30 mm	71	18.5
31-40 mm	20	5.2
>40 mm	13	3.4
Unknown	185	
Total	568	100

Table 3-10 Surgery after endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	359	63.2
Moderately differentiated	127	22.4
Poorly differentiated	3	0.5
Mucinous	2	0.4
Signet ring cell	1	0.2
Neuroendocrine tumor	12	2.1
Others	7	1.2
Unknown	57	10.0
Total	568	100

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

Depth of tumor invasion	Number	Percentage
pTis	22	3.9
pT1a	75	13.2
pT1b	386	68
pT1(NOS)	24	4.2
pT2	9	1.6
pT3	2	0.4
Unknown	50	8.8
Total	568	100

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

Distance of submucosal invasion	
Median 2000 μ m (0-21000)	(N = 287)
Mean 2655 μ m \pm 2362	

Table 3-13 Surgery after endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	351	61.8
ly1	133	23.4
ly2	11	1.9
ly3	4	0.7
Unknown	69	12.1
Total	568	100

Table 3-14 Surgery after endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	370	65.1
v1	114	20
v2	7	1.2
v3	0	0
Unknown	77	13.6
Total	568	100

Table 3-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	212	37.3
Grade 2	26	4.6
Grade 3	20	3.5
Unknown	310	54.6
Total	568	100

Table 3-16 Surgery after endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	382	67.3
HM1	40	7
Unknown	146	25.7
Total	568	100

Table 3-17 Surgery after endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	347	61.1
VM1	85	15
Unknown	136	23.9
Total	568	100

Table 3-18 Surgery after endoscopic excision-Endoscopic curability

Curability	Number	Percentage
CurE A	271	47.7
CurE B	47	8.3
CurE C	119	21
Unknown	131	23.1
Total	568	100

Table 3-19 Surgery after endoscopic excision-Operative approach

Operative approach	Number	Percentage
Transanal	4	0.7
Laparoscopic	505	88.9
Open	50	8.8
Unknown	9	1.6
Total	568	100

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

Type of anastomosis	Number	Percentage
D0	6	1.1
D1	29	5.1
D2	346	60.9
D3	161	28.3
Unknown	26	4.6
Total	568	100

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

Histologic type	Number	Percentage
Well differentiated	287	50.5
Moderately differentiated	115	20.2
Poorly differentiated	4	0.7
Mucinous	3	0.5
Signet ring cell	0	0
Neuroendocrine tumor	10	1.8
Others	7	1.2
Unknown	123	21.7
Total	568	100

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

Depth of tumor invasion	Number	Percentage
pT0	32	5.6
pTis	15	2.6
pT1a	60	10.6
pT1b	392	69.0
pT1 (NOS)	28	4.9
pT2	15	2.6
pT3	12	2.1
pT4a	1	0.2
pT4b	1	0.2
Unknown	12	2.1
Total	568	100

Table 3-23 Surgery after endoscopic excision-Perineural invasion

Perineural invasion	Number	Percentage
PN0	168	29.6
PN1a	6	1.1
PN1b	1	0.2
Unknown	393	69.2
Total	568	100

Table 3-24 Surgery after endoscopic excision-EX

EX	Number	Percentage
Absent	326	57.4
Tumor deposits predominantly confined to the perineural space	0	0
Tumor deposits predominantly confined to the vascular space	2	0.4
Tumor nodule (ND)	5	0.9
ND(v+)	4	0.7
ND (PN+)	4	0.7
Unknown	227	40
Total	568	100

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

Lymph node metastasis	Number	Percentage
pN0	491	86.4
pN1	53	9.3
pN2	6	1.1
pN3	1	0.2
Unknown	16	2.8
Total	568	100

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

Number of lymph node retrieved (median)	13 (0-100)
Number of lymph node retrieved (mean)	15.3 ± 11.7

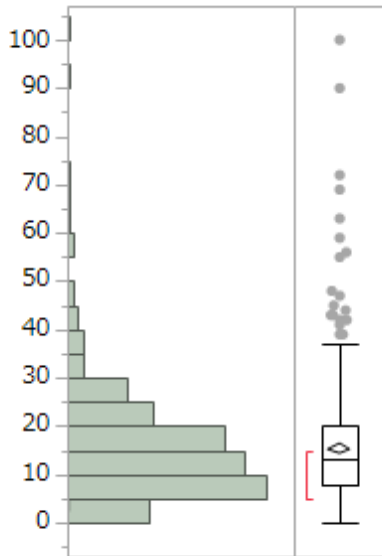


Table 3-27 Surgery after endoscopic excision-Number of positive lymph node

Number of positive node (median)	0 (0-9)
Number of positive node (mean)	0.2 ± 0.7

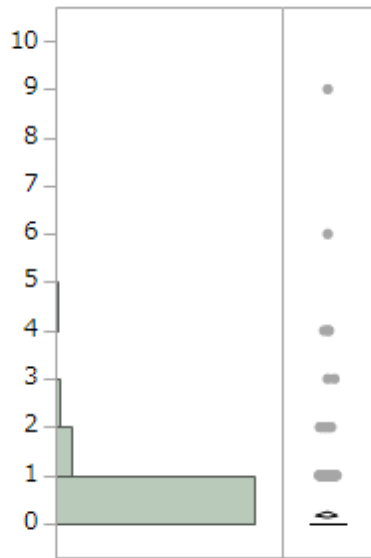


Table 3-28 Surgery after endoscopic excision-Curability after surgery

Curability	Number	Percentage
pCur A	540	95.1
pCur B	2	0.4
pCur C	0	0.0
Unknown	26	4.6
Total	568	100

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

Recurrence	Number	Percentage
Absent	527	92.8
Present	17	3
Unknown	24	4.2
Total	568	100

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

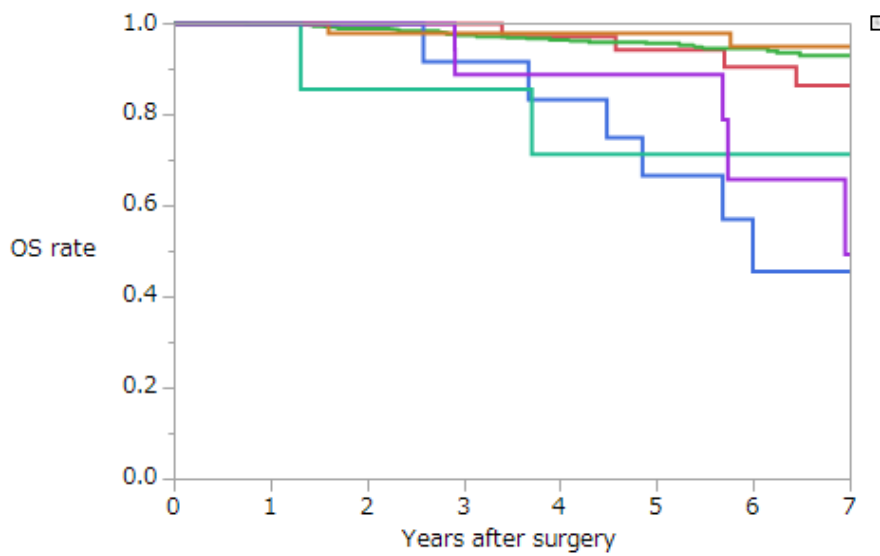
Fisrt recurrence site	Number
Anastomosis	1
Regional lymph node	1
Local	0
Lymph node (not regional)	0
Liver	3
Lung	10
Peritoneum	1
Bone	10
Brain	1
Adrenal gland	0
Skin	0
Others	0
(overlapping+)	

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

Treatment for recurrence	Number
None	4
Curative surgery	6
Palliative surgery	0
Radiotherapy	2
Chemotherapy	5
Unknown	0
Total	17

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	40	100	100	100	97.2	94.4
Stage I	432	99.8	98.8	97.3	96.3	95.5
Stage II	12	100	100	91.7	83.3	66.7
Stage IIIa	53	100	98	98	98	98
Stage IIIb	7	100	85.7	85.7	71.4	71.4
Stage IV	0					
Unknown	24					
All	568	99.8	98.7	97	95.7	94.5



Overall survival of all patients with surgery after endoscopic excision

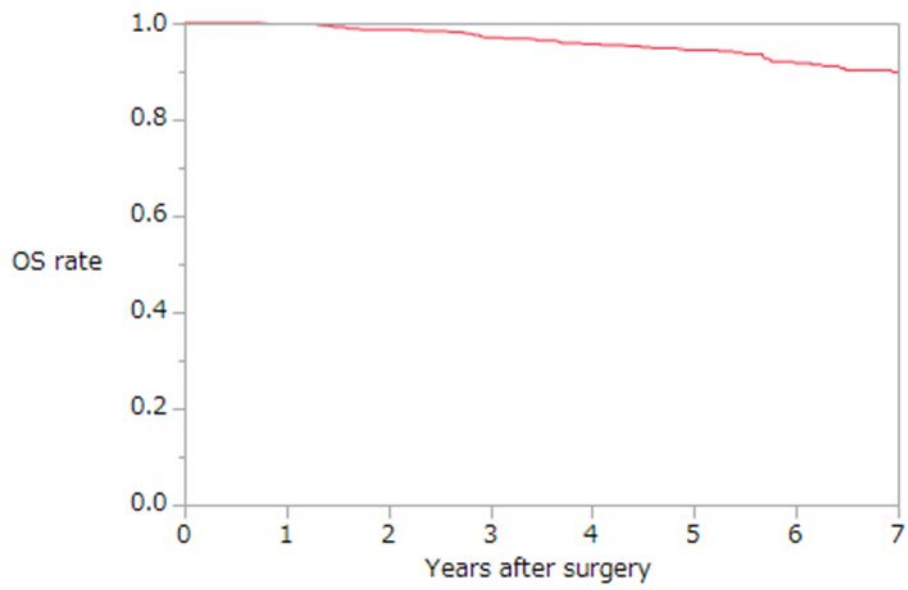


Table 4-1 Surgery-Gender

Gender	Number	Percentage
Male	5542	56.9
Female	4191	43.1
Total	9733	100

Table 4-2 Surgery-Age

Age (median)	70 (13-104)
Age (mean)	69.1 ± 11.8

Table 4-3 Surgery-Age classification

Age classification	Number	Percentage
<20	1	0.01
20-29	22	0.2
30-39	133	1.4
40-49	515	5.3
50-59	1143	11.7
60-69	2822	29
70-79	3245	33.3
80-89	1679	17.3
90= \leq	173	1.8
Total	9733	100

Table 4-4 Surgery-Tumor location

Tumor location	Number	Percentage
Vermiformis appendix	70	0.7
Cecum	730	7.5
Ascending	1561	16.0
Transverse	926	9.5
Descending	447	4.6
Sigmoid	2320	23.8
Rectosigmoid	1204	12.4
Upper rectum	999	10.3
Lower rectum	1295	13.3
Proctos (anal canal)	79	0.8
Unknown	102	1.0
Total	9733	100

Table 4-5 Surgery-Preoperative serum CEA value

Preoperative serum CEA value	Number	Percentage
Normal	5188	53.3
<2 x ULN	1798	18.5
<4 x ULN	850	8.7
<8 x UNL	539	5.5
>=8 x UNL	846	8.7
Unknown	512	5.3
Total	9733	100

Table 4-6 Surgery-Multiple primary cancers

Multiple primary cancers	Number	Percentage
Absent	8184	84.1
Synchronous	451	4.6
Metachronous	815	8.4
Synchronous and metachronous	45	0.5
Unknown	238	2.4
Total	9733	100

Table 4-7 Surgery-Synchronous multiple colorectal cancers

Synchronous multiple CRC	Number	Percentage
Absent	8803	90.4
Present: early cancer	312	3.2
Present: advanced cancer	187	1.9
Present: early and advanced cancer	146	1.5
Unknown	285	2.9
Total	9733	100

Table 4-8 Surgery-Metachronous multiple colorectal cancers

Metachronous multiple CRC	Number	Percentage
Absent	8664	89.0
Present: early cancer	76	0.8
Present: advanced cancer	133	1.4
Present: early and advanced cancer	18	0.2
Unknown	842	8.7
Total	9733	100

Table 4-9 Operative procedure

Operative procedure	Number	Percentage
Polypectomy	6	0.06
Tumorectomy	47	0.5
Local excision	24	0.2
Appendectomy	10	0.10
Ileocecal resection	967	9.9
Partial colectomy	746	7.7
Right hemicolectomy	1537	15.8
Left hemicolectomy	333	3.4
Sigmoidectomy	1857	19.1
Subtotal colectomy	38	0.4
Total colectomy	14	0.1
Total proctocolectomy	36	0.4
High anterior resection	866	8.9
Low anterior resection	1623	16.7
Ultra-low anterior resection	221	2.3
Intersphincteric resection	205	2.1
Hartmann procedure	369	3.8
Abdominoperineal resection	435	4.5
Total pelvic exenteration	45	0.5
Othertypes of colectomy	48	0.5
Bypass surgery	13	0.1
Colostomy, ileostomy	72	0.7
Exploratory laparotomy	1	0.0
Other palliative procedures	5	0.1
Unknown	215	2.2
Total	9733	100

Table 4-10 Surgery-Operative approach

Operative approach	Number	Percentage
Transanal	84	0.9
Laparoscopic	5846	60.1
Open	3556	36.5
Others	52	0.5
Unknown	195	2.0
Total	9733	100

Table 4-11 Surgery- Lymph node dissection

Lymph node dissection	Number	Percentage
D0	190	2.0
D1	378	3.9
D2	2452	25.2
D3	6046	62.1
Unknown	667	6.9
Total	9733	100

Table 4-12 Surgery-Tumor size

Tumor size	
Median	40 mm (0-220)
Mean	42.8 ± 22.9 mm
Unknown	1587
Total	9733

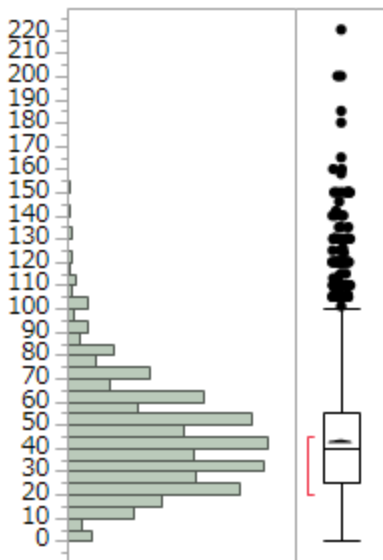


Table 4-13 Surgery-Histologic type

Histologic type	Number	Percentage
Well differentiated	3955	40.6
Moderately differentiated	4660	47.9
Poorly differentiated	266	3.0
Mucinous	281	3.2
Signet ring cell	23	0.3
Medullary carcinoma	9	0.1
Adenocarcinoma (NOS)	36	0.4
Medullary carcinoma	3	0.03
Squamous cell carcinoma	11	0.1
Carcinoid tumor	35	0.4
Endocrine cell carcinoma	16	0.2
Adenoendocrine cell carcinoma	3	0.0
Miscellaneous histological types of malignant epithelial tumors	25	0.3
Malignant lymphoma	5	0.1
Malignant melanoma	11	0.1
Other non-epithelial tumors	13	0.1
Unknown	231	2.4
Total	9733	100

Table 4-14 Surgery-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pT0	23	0.2
pTis	336	3.5
pT1a	208	2.1
pT1b	889	9.1
pT1 (NOS)	89	0.9
pT2	1336	13.7
pT3	4399	45.2
pT4a	1572	16.2
pT4b	505	5.2
Unknown	376	3.9
Total	9733	100

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

Number of invaded organs	Number	Percentage
0	2012	20.7
1	459	4.7
2	98	1
3 or more	52	0.5
Unknown	7112	73.1
Total	9733	100

Table 4-16 Surgery-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	4123	42.4
ly1	3344	34.4
ly2	1335	13.7
ly3	466	4.8
Unknown	465	4.8
Total	9733	100

Table 4-17 Surgery-Venous invasion

Venous invasion	Number	Percentage
v0	3174	32.6
v1	3322	34.1
v2	1942	20
v3	830	8.5
Unknown	465	4.8
Total	9733	100

Table 4-18 Surgery-Interstitium

Interstitium	Number	Percentage
Medullary pattern	579	5.9
Intermediate pattern	6539	67.2
Scirrhous pattern	144	1.5
Unknown	2471	25.4
Total	9733	100

Table 4-19 Surgery-Infiltrative growth pattern

Infiltrative growth pattern	Number	Percentage
INF α	696	7.2
INF β	7545	77.5
INF γ	311	3.2
Unknown	1181	12.1
Total	9733	100

Table 4-20 Surgery-Perineural invasion

Perineural invasion	Number	Percentage
PN0	4517	46.4
PN1a	1214	12.5
PN1b	748	7.7
Unknown	3254	33.4
Total	9733	100

Table 4-21 Surgery-EX

EX	Number	Percentage
Absent	6158	63.3
Tumor deposits predominantly confined to the perineural space	104	1.1
Tumor deposits predominantly confined to the vascular space	107	1.1
Tumor nodule (ND)	432	4.4
ND(v+)	130	1.3
ND (PN+)	80	0.8
Unknown	2722	28
Total	9733	100

Table 4-22 Surgery-Budding

Perineural invasion	Number	Percentage
Grade 1	1418	14.6
Grade 2	412	4.2
Grade 3	231	2.4
Unknown	7670	78.8
Total	9733	100

Table 4-23 Surgery-Proximal margin

Proximal margin	Number	Percentage
PM0	9384	96.4
PM1	23	0.2
Unknown	326	3.3
Total	9733	100

Table 4-24 Surgery-Distal margin

Distal margin	Number	Percentage
DM0	9364	96.2
DM1	39	0.4
Unknown	330	3.4
Total	9733	100

Table 4-25 Surgery-Circumferential resection margin

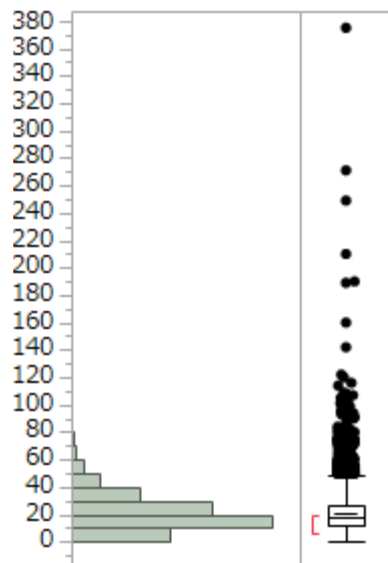
Circumferential resection margin	Number	Percentage
RM0	8058	82.8
RM1	216	2.2
Unknown	1459	15
Total	9733	100

Table 4-26 Surgery-lymph node metastasis

Lymph node metastasis	Number	Percentage
pN0	5333	54.8
pN1	2454	25.2
pN2	1016	10.4
pN3	453	4.7
Unknown	477	4.9
Total	9733	100

Table 4-27 Surgery-number of lymph node retrieved (N = 8335)

Number of lymph node retrieved (median)	18 (0-375)
Number of lymph node retrieved (mean)	21.2 ± 15.1



* 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 = 8247)

Number of positive node (median)	0 (0-59)
Number of positive node (mean)	1.6 ± 3.4

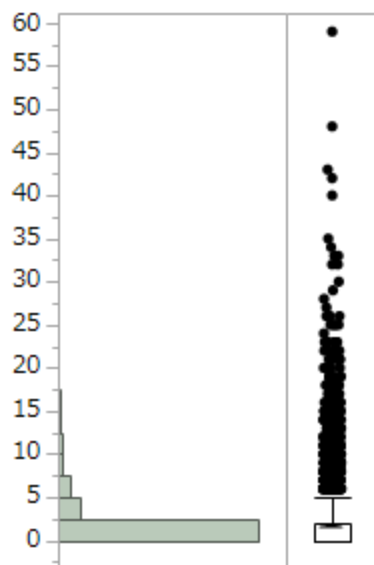


Table 4-29 Surgery-number of paracolic lymph node retrieved (N = 8183)

Number of lymph node retrieved (median)	10 (0-375)
Number of lymph node retrieved (mean)	12.6 ± 10.7

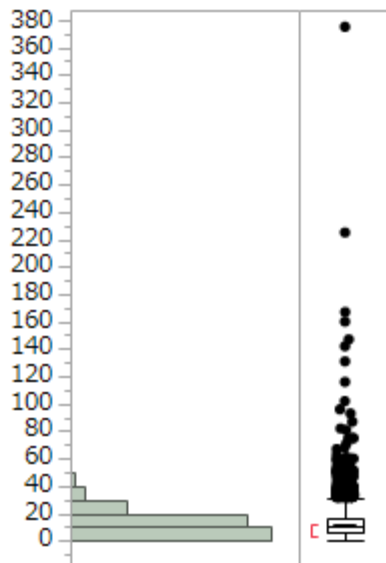


Table 4-30 Surgery-number of positive paracolic lymph node (N = 8087)

Number of positive node (median)	0 (0-54)
Number of positive node (mean)	1.2 ± 2.7

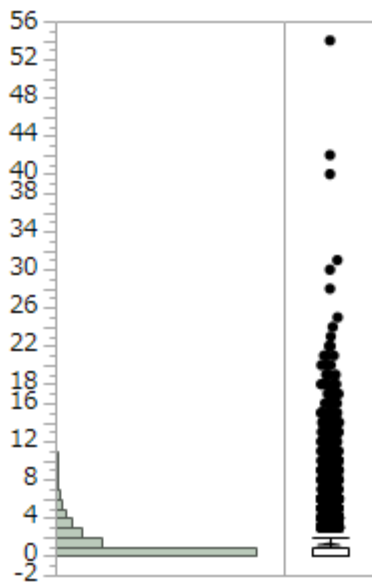


Table 4-31 Surgery-number of intermediate lymph node retrieved (N = 7950)

Number of lymph node retrieved (median)	5 (0-233)
Number of lymph node retrieved (mean)	5.6 ± 5.1

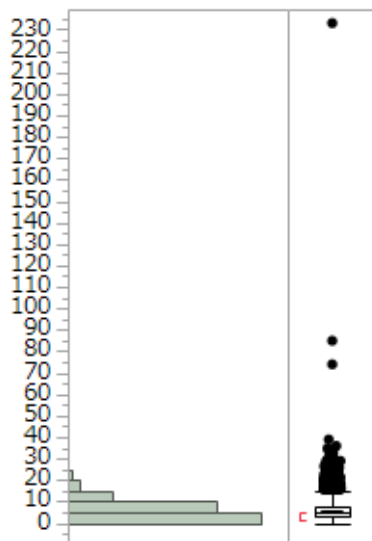


Table 4-32 Surgery-number of positive intermediate lymph node (N = 7880)

Number of positive node (median)	0 (0-25)
Number of positive node (mean)	0.3 ± 1.0

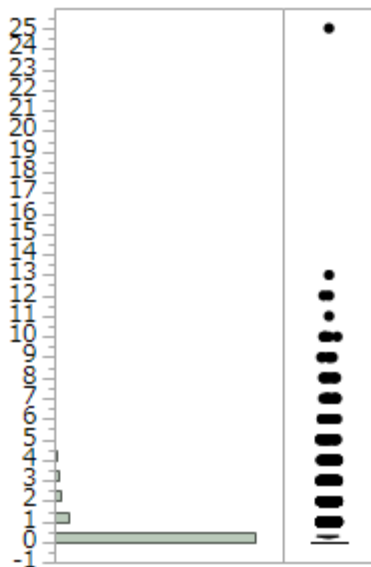


Table 4-33 Surgery-number of main lymph node retrieved (N = 6083)

Number of lymph node retrieved (median)	3 (0-47)
Number of lymph node retrieved (mean)	3.4 ± 3.5

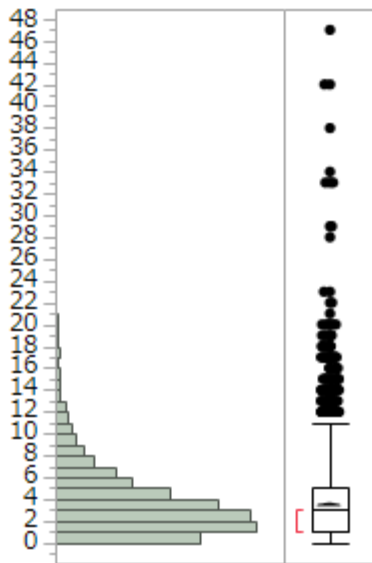


Table 4-34 Surgery-number of positive main lymph node (N = 6033)

Number of positive node (median)	0 (0-16)
Number of positive node (mean)	0.1 ± 0.5

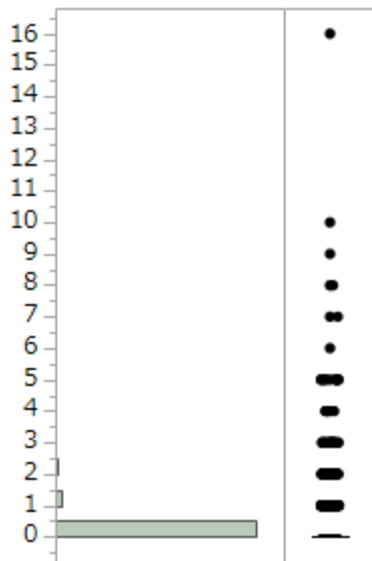


Table 4-35 Surgery-number of lateral pelvic lymph node retrieved (N = 691)

Number of lymph node retrieved (median)	7 (0-62)
Number of lymph node retrieved (mean)	9.2 ± 10.4

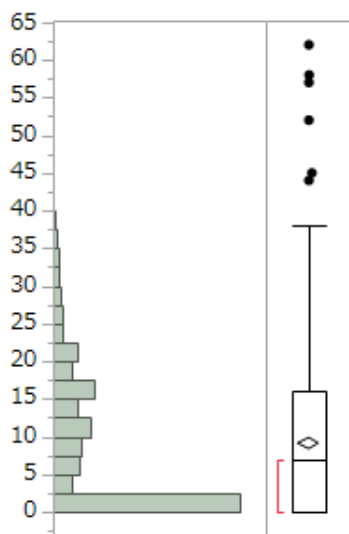


Table 4-36 Surgery-number of positive lateral pelvic lymph node (N = 691)

Number of positive node (median)	0 (0-7)
Number of positive node (mean)	0.4 ± 1.1

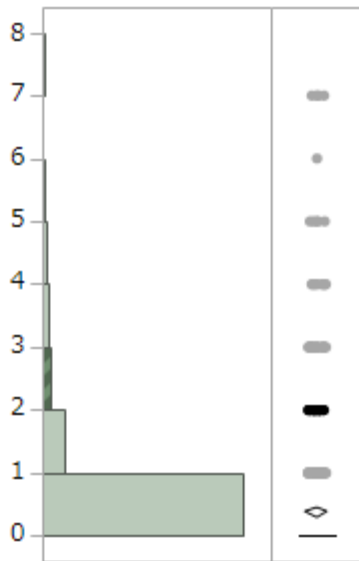


Table 4-37 Surgery-liver metastasis

Liver metastasis	Number	Percentage
H0	5139	52.8
H1	307	3.2
H2	195	2.0
H3	130	1.3
Unknown	3962	40.7
Total	9733	100

Table 4-38 Surgery-Peritoneal metastasis

Peritoneal metastasis	Number	Percentage
P0	5539	56.9
P1	146	1.5
P2	75	0.8
P3	83	0.9
Unknown	3890	40.0
Total	9733	100

Table 4-39 Surgery-Distant metastasis other than liver

Distant metastasis	Number	Percentage
M0	5345	54.9
M1a	657	6.8
M1b	266	2.7
Unknown	3465	35.6
Total	9733	100

Table 4-40 Surgery-Lung metastasis

Lung metastasis	Number	Percentage
PUL0	5474	56.2
PUL1	100	1
PUL2	77	0.8
Unknown	4082	41.9
Total	9733	100

Table 4-41 Surgery-Curability after surgery

Curability	Number	Percentage
pCur A	7787	80.0
pCur B	380	3.9
pCur C	1096	11.3
Unknown	470	4.8
Total	9733	100

Table 4-42 Surgery-Recurrence after surgery

recurrence	Number	Percentage
Absent	7044	72.3
Present	1811	18.6
Unknown	878	9
Total	9733	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	292 (89.3)	1715 (90.2)	2240 (79.2)	1431 (68.4)	560 (53.3)	514 (48.7)	292 (61.3)	7044 (72.4)
Present	12 (3.7)	100 (5.3)	411 (14.5)	520 (24.9)	377 (35.9)	322 (30.5)	69 (14.5)	1811 (18.6)
Unknown	23 (7.0)	87 (4.6)	179 (6.3)	141 (6.7)	113 (10.8)	220 (20.8)	115 (24.2)	878 (9.0)
Total	327	1902	2830	2092	1050	1056	476	9733

Table 4-44 Surgery-Recurrence site after surgery

First recurrence site	Number
Anastomosis	97
Regional lymph node	196
Local	151
Lymph node (not regional)	133
Liver	665
Lung	508
Peritoneum	292
Bone	55
Brain	30
Adrenal gland	9
Skin	4
Others	72
(overlapping+)	

Table 4-45 Surgery-Treatment after recurrence

Treatment for recurrence	Number	Percentage
None	344	19.0
Curative surgery	551	30.4
Palliative surgery	33	1.8
Radiation	76	4.2
Chemotherapy	723	39.9
Others	22	1.2
Unknown	50	2.8
Total	1811	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	327	96.4	93.1	91.1	88.4	86.0
Stage I	1902	97.8	96.0	94.4	92.9	91.0
Stage II	2830	97.1	94.0	90.5	87.4	84.2
Stage IIIa	2092	96.0	91.4	86.8	82.5	78.3
Stage IIIb	1050	89.6	79.2	70.5	65.3	61.4
Stage IV	1056	79.7	61.5	46.0	36.3	31.2
Unknown	476					
All	9733	94.2	88.5	83.3	79.3	75.9

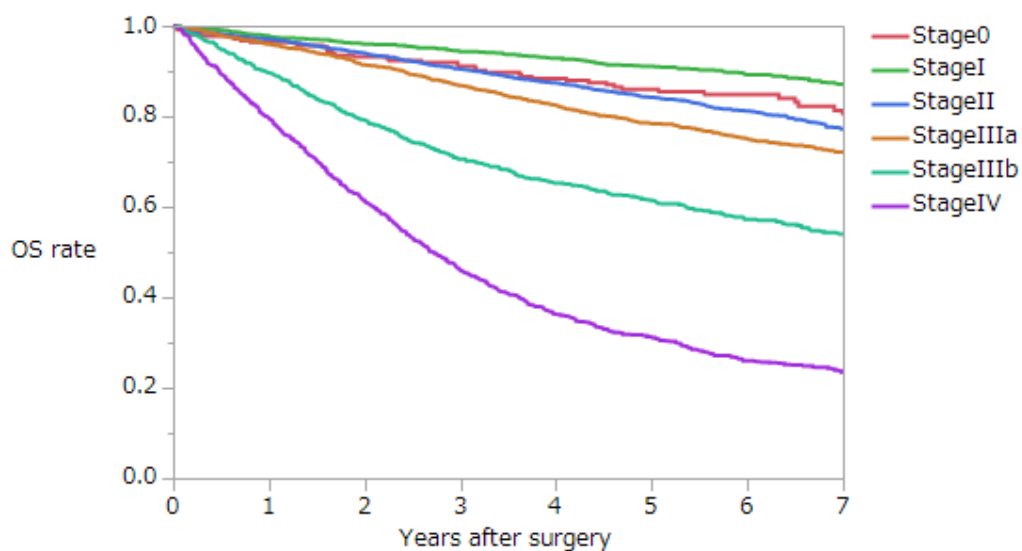


Table 4-47 Surgery-Overall survival rates after surgery (colon) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	232	94.9	90.3	87.9	86.1	84.1
Stage I	1093	97.6	95.9	94.4	93.0	91.3
Stage II	1923	96.8	93.7	90.1	86.8	83.9
Stage IIIa	1301	95.8	90.9	86.5	81.7	77.9
Stage IIIb	580	87.7	77.3	68.6	63.2	59.2
Stage IV	687	77.4	58.9	44.3	34.4	29.9
All	5816	93.5	87.7	82.6	78.4	75.3

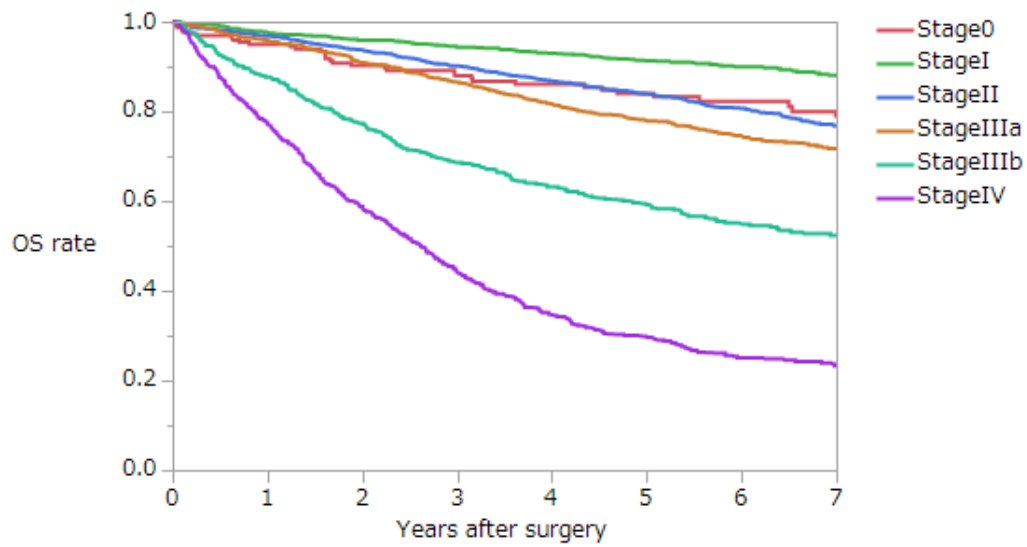


Table 4-48 Surgery-Overall survival rates after surgery (rectum) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	94	100.0	100.0	98.5	93.9	90.6
Stage I	796	98.1	96.2	94.5	92.7	90.7
Stage II	886	97.7	94.6	91.3	88.7	85.2
Stage IIIa	770	96.4	92.2	87.4	83.7	79.1
Stage IIIb	465	91.8	81.1	73.1	68.0	64.1
Stage IV	361	84.0	67.0	49.5	39.9	34.1
All	3372	95.3	89.9	84.5	80.8	77.1

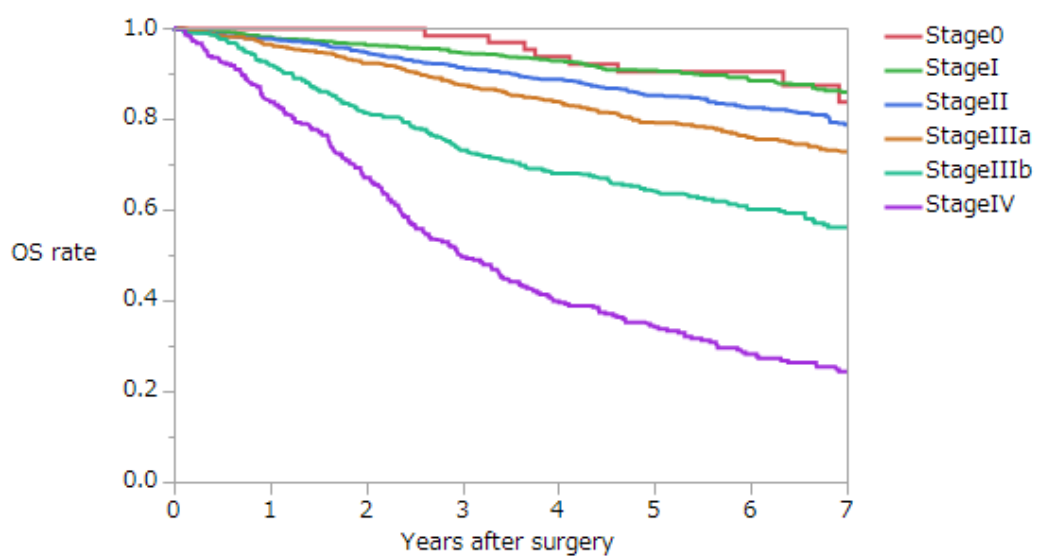


Table 4-49 Surgery-Overall survival rates according to liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
H0	5139	96.0	91.9	87.8	84.6	81.4
H1	307	88.9	73.5	59.5	53.2	46.6
H2	195	77.2	62.1	45.1	31.2	26.2
H3	130	57.9	35.1	20.8	12.3	7.6
Unknown	3962					
All except for unknown	5771	94.2	88.8	83.5	79.7	76.3

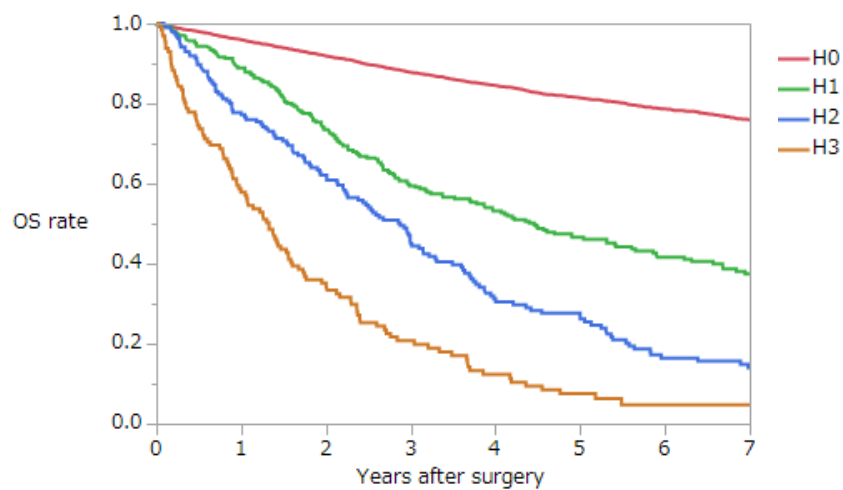


Table 4-50 Surgery-Overall survival rates according to peritoneal metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
P0	5539	95.2	90.5	85.8	82.3	78.8
P1	146	74.3	58.8	39.0	30.1	26.4
P2	75	73.8	52.3	31.5	19.9	13.6
P3	83	65.6	38.3	27.1	19.5	18.0
Unknown	3890					
All except for unknown	5843	94.0	88.6	83.2	79.4	75.9

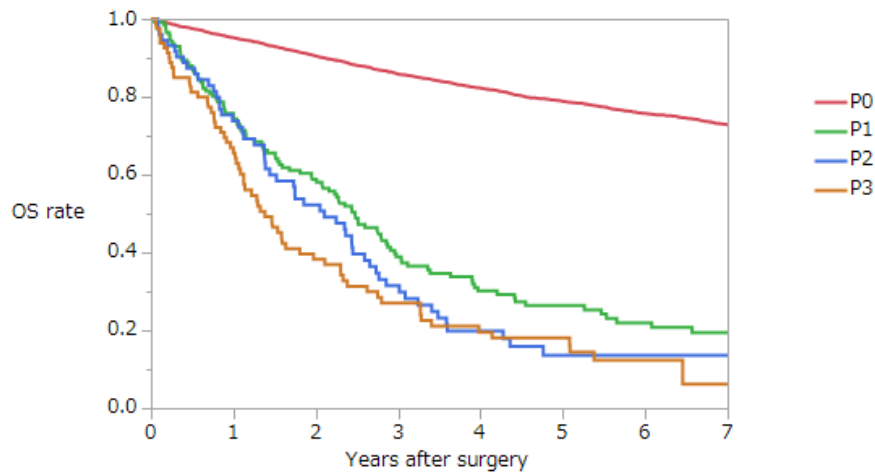


Table 4-52 Surgery-Overall survival rates according to distant metastasis other than liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
M0	5345	96.6	92.9	89.3	86.4	83.0
M1a	657	84.6	67.8	52.4	41.5	35.2
M1b	266	65.3	43.8	24.9	17.4	14.0
Unknown	3465					
All except for unknown	6268	94.0	88.3	83.0	79.1	75.5

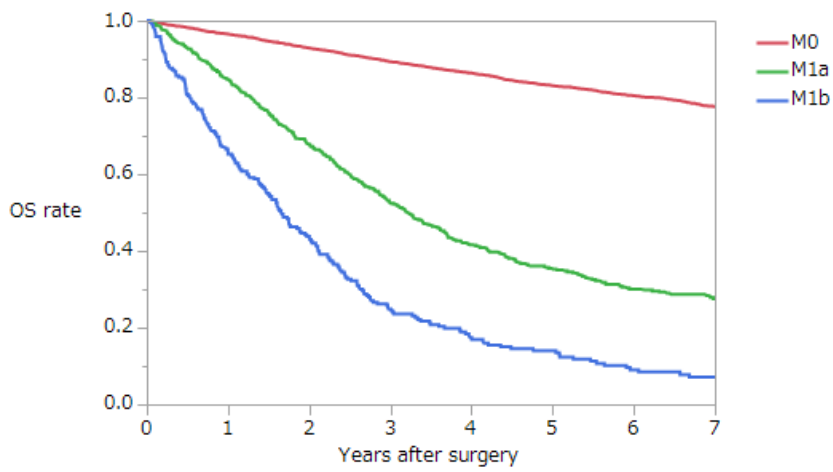


Table 4-52 Surgery-Overall survival rates according to distant metastasis other than liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
M0	5345	96.6	92.9	89.3	86.4	83.0
M1a	657	84.6	67.8	52.4	41.5	35.2
M1b	266	65.3	43.8	24.9	17.4	14.0
Unknown	3465					
All except for unknown	6268	94.0	88.3	83.0	79.1	75.5

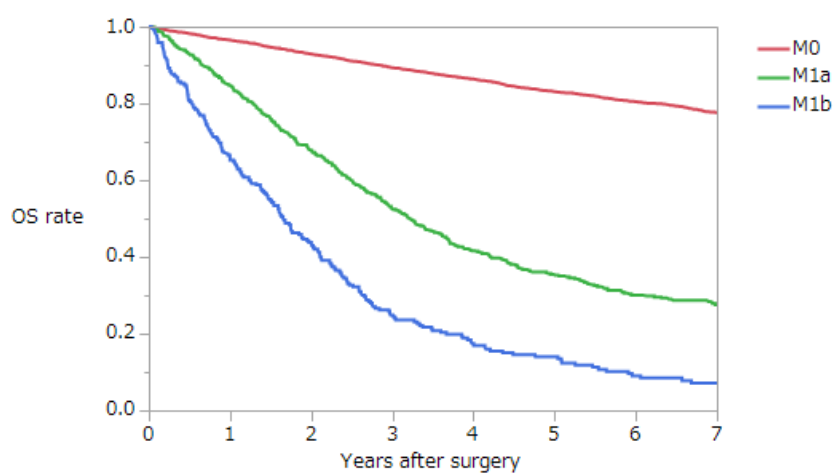
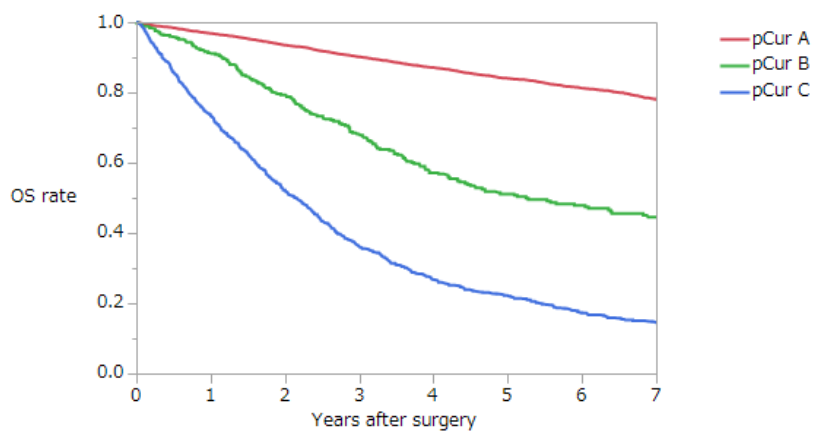


Table 4-53 Surgery-Overall survival rates according to curability (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
pCur A	7787	96.9	93.5	90.1	87.1	84.0
pCur B	380	91.1	79.3	68.2	57.1	51.1
pCur C	1096	73.4	52.3	36.1	26.8	22.0
Unknown	470					
All except for unknown	9263	94.0	88.3	83.2	79.2	75.8



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