

**Multi-Institutional Registry of Large Bowel Cancer in Japan**

**Vol. 41**

**Cases treated in 2015**

**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 41 号 (Multi-Institutional Registry of Large Bowel Cancer in Japan, Vol. 41) をお届けします。本号は 2015 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 12804 例の調査報告書です。皆様のご協力のお陰で、昨年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。

2024 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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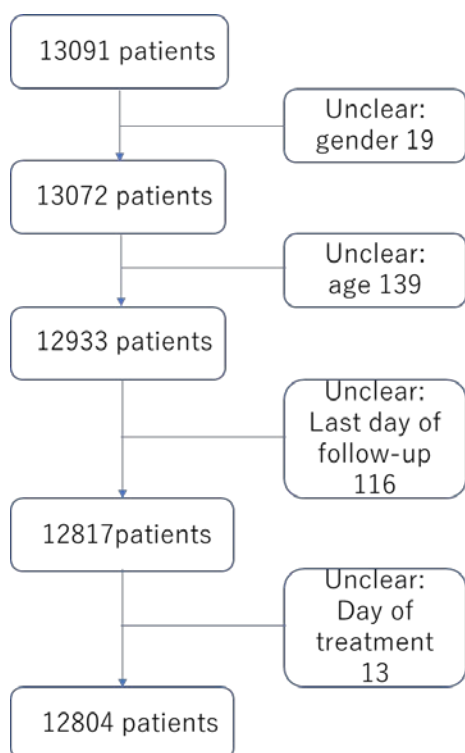
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**Data-flow chart (Algorithm of data cleaning)**

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	983	7.7
Surgery after endoscopic excision	734	5.7
Surgery	10884	85.0
Non-surgery	203	1.6
Total	12804	100

Table 2-1 Endoscopic excision-Gender

Gender	Number	Percentage
Male	618	62.9
Female	365	37.1
Total	983	100

Table 2-2 Endoscopic excision-Age

Age (median) 68 (22-93)

Age (mean) 67.1 ± 11.7

Table 2-3 Endoscopic excision-Age classification

Age classification	Number	Percentage
20-29	3	0.3
30-39	13	1.3
40-49	63	6.4
50-59	156	15.9
60-69	297	30.2
70-79	313	31.8
80-89	132	13.4
90=<	6	0.6
Total	983	100

Table 2-4 Endoscopic excision-Tumor location

Tumor location	Number	Percentage
Cecum	31	3.2
Ascending	130	13.2
Transverse	100	10.2
Descending	60	6.1
Sigmoid	336	34.2
Rectosigmoid	94	9.6
Upper rectum	87	8.9
Lower rectum	119	12.1
Unknown	26	2.6
Total	983	100

Table 2-5 Endoscopic excision-Procedure

Procedure	Number	Percentage
Polypectomy	121	12.3
EMR	561	57.1
ESD	261	26.6
Unknown	40	4.1
Total	983	100

Table 2-6 Endoscopic excision-En bloc or piecemeal

Resection type	Number	Percentage
En bloc	869	88.4
Piecemeal	59	6.0
Unknown	55	5.6
Total	983	100



Table 2-7 Endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	212	21.6
Isp	283	28.8
Is	114	11.6
Ila	146	14.9
Ilb	0	0
Ilc	3	0.3
Ila+Ilc	29	3.0
Ilc+Ila	3	0.3
Others	84	8.5
Unknown	109	11.1
Total	983	100

Table 2-8 Endoscopic excision-Tumor size

Median	15 (3-115) mm
Mean	18.4 ± 12.4 mm

Table 2-9 Endoscopic excision-Tumor size 2

Tumor size	Number	Percentage
≤5 mm	36	4.0
6-10 mm	237	26.4
11-15 mm	215	23.9
16-20 mm	180	20.0
21-30 mm	144	16.0
31-40 mm	37	4.1
>40 mm	49	5.5
Unknown	85	
Total	983	100

Table 2-10 Endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	820	83.4
Moderately differentiated	90	9.2
Poorly differentiated	2	0.2
Neuroendocrine tumor	24	2.4
Others	5	0.5
Unknown	42	4.3
Total	983	100

Table 2-11 Endoscopic excision-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pTis	784	79.8
pT1a	108	11
pT1b	61	6.2
pT1(NOS)	4	0.4
pT2	2	0.2
pT3	0	0
Unknown	24	2.4
Total	983	100

Table 2-12 Endoscopic excision-Distance of submucosal invasion

Distance of submucosal invasion	
Median 800 $\mu$ m (0-12000)	(N = 102)
Mean 1389 $\mu$ m $\pm$ 1944	

Table 2-13 Endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	923	93.9
ly1	15	1.5
ly2	1	0.1
ly3	2	0.2
ly+ grade unknown	2	0.2
Unknown	40	4.1
Total	983	100

Table 2-14 Endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	920	93.6
v1	21	2.1
v2	2	0.2
v3	0	0
v+ grade unknown	1	0.1
Unknown	39	4.0
Total	703	100

Table 2-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	265	27.0
Grade 2	4	0.4
Grade 3	1	0.1
Unknown	713	72.5
Total	983	100

Table 2-16 Endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	874	88.9
HM1	20	20.4
Unknown	89	9.1
Total	983	100

Table 2-17 Endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	902	91.8
VM1	7	0.7
Unknown	74	7.5
Total	983	100

Table 2-18 Endoscopic excision-Curability

Curability	Number	Percentage
CurE A	866	88.1
CurE B	37	37.6
CurE C	30	3.1
Unknown	50	5.1
Total	983	100

Table 3-1 Surgery after endoscopic excision-Gender

Gender	Number	Percentage
Male	442	60.2
Female	292	39.8
Total	734	100

Table 3-2 Surgery after endoscopic excision-Age

Age (median)	66 (17-97)
Age (mean)	64.4 ± 11.4

Table 3-3 Surgery after endoscopic excision-Age classification

Age classification	Number	Percentage
<20	1	0.1
20-29	0	0.0
30-39	23	3.1
40-49	50	6.8
50-59	145	19.8
60-69	261	35.6
70-79	198	27.0
80-89	55	7.5
90=<	1	0.1
Total	734	100

Table 3-4 Surgery after endoscopic excision-Tumor location

Tumor location	Number	Percentage
Cecum	37	5
Ascending	80	10.9
Transverse	51	6.9
Descending	40	5.5
Sigmoid	276	37.6
Rectosigmoid	84	11.4
Upper rectum	63	8.6
Lower rectum	96	13.1
Proctos	1	0.1
Unknown	6	0.8
Total	734	100

Table 3-5 Surgery after endoscopic excision-Endoscopic procedure

Procedure	Number	Percentage
Polypectomy	39	5.3
EMR	403	54.9
ESD	207	28.2
Unknown	85	11.6
Total	734	100

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

Resection	Number	Percentage
En bloc	496	67.6
Piecemeal	71	9.7
Unknown	167	22.8
Total	734	100

Table 3-7 Surgery after endoscopic excision-Macroscopic type

Macroscopic type	Number	Percentage
Ip	113	15.4
Isp	171	23.3
Is	110	15
Ila	89	12.1
Ilb	2	0.3
Ilc	11	1.5
Ila+Ilc	47	6.4
Ilc+Ila	2	0.3
Others	32	4.4
Unknown	157	21.4
Total	734	100

Table 3-8 Surgery after endoscopic excision-Tumor size

Median	15 (4-150) mm
Mean	19.0 ± 13.5 mm

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

Tumor size	Number	Percentage
<=5 mm	6	1.4
6-10 mm	92	20.7
11-15 mm	126	28.4
16-20 mm	98	22.1
21-30 mm	84	18.9
31-40 mm	20	4.5
>40 mm	18	4.1
Unknown	290	
Total	734	100

Table 3-10 Surgery after endoscopic excision-Histologic type

Histologic type	Number	Percentage
Well differentiated	417	56.8
Moderately differentiated	176	24
Poorly differentiated	5	0.7
Mucinous	4	0.5
Signet ring cell	0	0
Neuroendocrine tumor	13	1.8
Others	7	0.1
Unknown	112	15.3
Total	734	100



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

Depth of tumor invasion	Number	Percentage
pTis	61	8.3
pT1a	76	10.4
pT1b	456	62.1
pT1(NOS)	23	3.1
pT2	25	3.4
pT3	20	2.7
pT4a	1	0.1
pT4b	1	0.1
Unknown	71	9.7
Total	734	100

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

Distance of submucosal invasion	
Median 2000 $\mu$ m (0-15000)	(N = 373)
Mean 2524 $\mu$ m $\pm$ 1908	

Table 3-13 Surgery after endoscopic excision-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	431	58.7
ly1	151	20.6
ly2	18	2.5
ly3	6	0.8
ly+ grade unknown	15	2
Unknown	113	15.4
Total	734	100

Table 3-14 Surgery after endoscopic excision-Venous invasion

Venous invasion	Number	Percentage
v0	434	59.1
v1	151	20.6
v2	15	2
v3	3	0.4
v+ grade unknown	17	2.3
Unknown	114	15.5
Total	734	100

Table 3-15 Endoscopic excision-Budding

Budding	Number	Percentage
Grade 1	280	38.1
Grade 2	40	5.5
Grade 3	30	4.1
Unknown	384	52.3
Total	734	100

Table 3-16 Surgery after endoscopic excision-Horizontal margin

Horizontal margin	Number	Percentage
HM0	495	67.4
HM1	53	7.2
Unknown	186	25.3
Total	734	100

Table 3-17 Surgery after endoscopic excision-Vertical margin

Vertical margin	Number	Percentage
VM0	422	57.5
VM1	114	15.5
Unknown	198	27.0
Total	734	100

Table 3-18 Surgery after endoscopic excision-Endoscopic curability

Curability	Number	Percentage
CurE A	323	44.0
CurE B	78	10.6
CurE C	147	20
Unknown	186	25.3
Total	734	100

Table 3-19 Surgery after endoscopic excision-Operative approach

Operative approach	Number	Percentage
Transanal	2	0.3
Laparoscopic	658	89.6
Open	67	9.1
Unknown	7	1.0
Total	734	100

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

Type of anastomosis	Number	Percentage
D0	8	1.1
D1	16	2.2
D2	423	57.6
D3	255	34.7
Unknown	32	4.4
Total	734	100

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

Histologic type	Number	Percentage
Well differentiated	420	57.2
Moderately differentiated	179	24.4
Poorly differentiated	2	0.3
Mucinous	3	0.4
Signet ring cell	0	0
Neuroendocrine tumor	13	1.8
Others	7	0.1
Unknown	110	15.0
Total	734	100

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

Depth of tumor invasion	Number	Percentage
pT0	36	4.9
pTis	25	3.4
pT1a	76	10.3
pT1b	456	62.1
pT1 (NOS)	23	3.1
pT2	25	3.4
pT3	20	2.7
pT4a	1	0.1
pT4b	1	0.1
Unknown	71	9.7
Total	734	100

Table 3-23 Surgery after endoscopic excision-Perineural invasion

Perineural invasion	Number	Percentage
PN0	255	34.7
PN1a	12	1.6
PN1b	3	0.4
Unknown	464	63.2
Total	734	100

Table 3-24 Surgery after endoscopic excision-EX

EX	Number	Percentage
Absent	447	60.9
Tumor deposits predominantly confined to the perineural space	0	0
Tumor deposits predominantly confined to the vascular space	5	0.7
Tumor nodule (ND)	7	1.0
ND(v+)	1	0.1
ND (PN+)	0	0.0
Unknown	274	37.3
Total	734	100

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

Lymph node metastasis	Number	Percentage
pN0	640	87.2
pN1	71	9.7
pN2	8	1.1
pN3	2	0.3
Unknown	13	1.8
Total	734	100

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

Number of lymph node retrieved (median)	13 (0-71)
Number of lymph node retrieved (mean)	14.7 ± 9.3
N = 642	

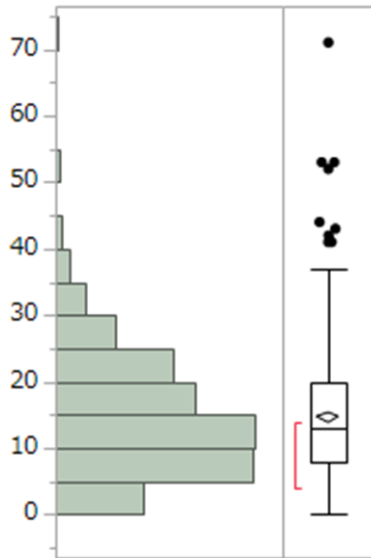


Table 3-27 Surgery after endoscopic excision-Number of positive lymph node

Number of positive node (median)	0 (0-9)
Number of positive node (mean)	0.2 ± 0.8

N = 642

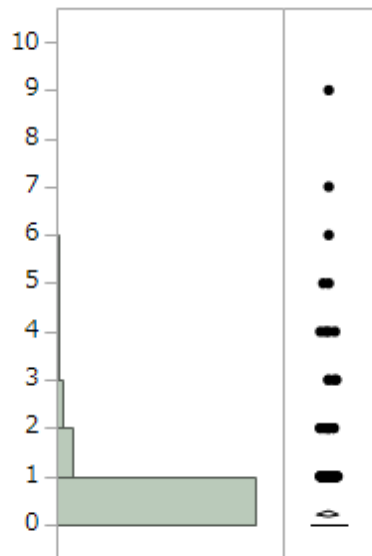




Table 3-28 Surgery after endoscopic excision-Curability after surgery

Curability	Number	Percentage
pCur A	677	92.2
pCur B	7	1.0
pCur C	1	0.1
Unknown	49	6.7
Total	734	100

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

Recurrence	Number	Percentage
Absent	684	93.2
Present	23	3.1
Unknown	27	3.7
Total	734	100

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

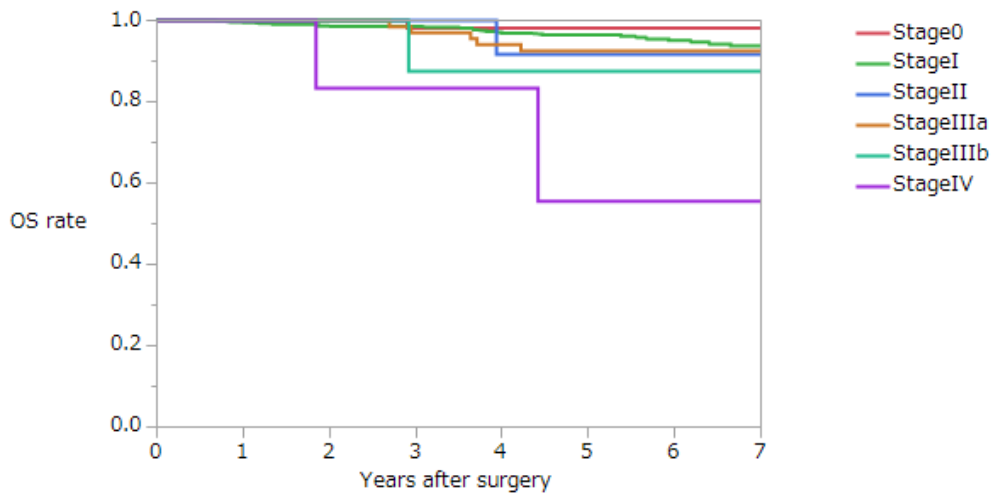
First recurrence site	Number
Anastomosis	1
Regional lymph node	3
Local	1
Peritoneal	1
Liver	8
Lung	8
Lymph node (not regional)	1
Bone	1
Brain	1
Adrenal gland	0
Skin	0
Others	2
(overlapping+)	

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

Treatment for recurrence	Number
None	6
Curative surgery	11
Palliative surgery	0
Radiotherapy	0
Chemotherapy	6
Others	0
Unknown	0
Total	23

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	63	100	100	98.2	98.2	98.2
Stage I	564	99.5	98.3	98.3	97.0	96.3
Stage II	13	100	100	100	91.7	91.7
Stage IIIa	71	100	100	97.1	94.1	92.5
Stage IIIb	9	100	100	87.5	87.5	87.5
Stage IV	6	100	83.3	83.3	83.3	55.6
Unknown	8					
All	734	99.6	98.6	98.0	96.4	95.6



Overall survival of all patients with surgery after endoscopic excision

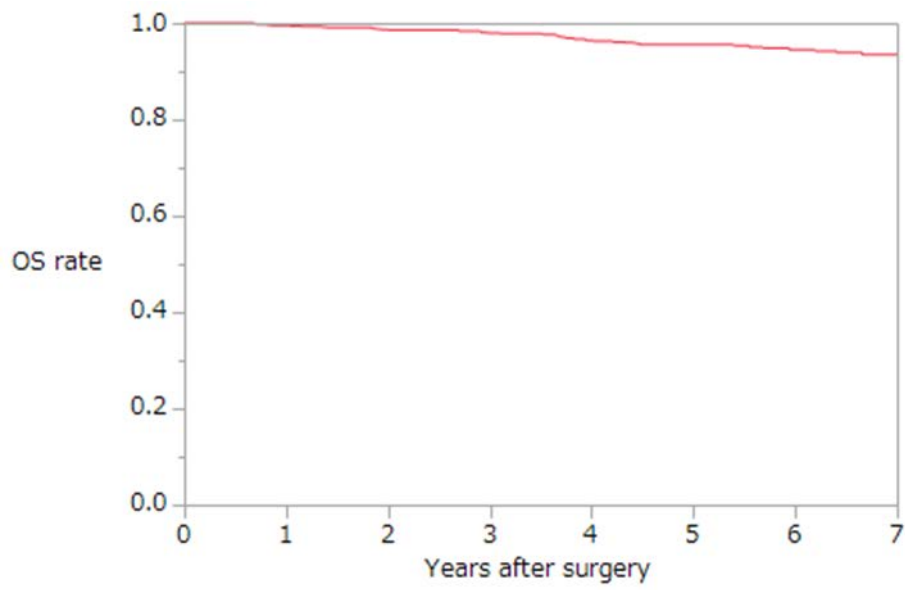


Table 4-1 Surgery-Gender

Gender	Number	Percentage
Male	6235	57.3
Female	4649	42.7
Total	10884	100

Table 4-2 Surgery-Age

Age (median)	70 (13-101)
Age (mean)	68.4 ± 12.0

Table 4-3 Surgery-Age classification

Age classification	Number	Percentage
<20	6	0.06
20-29	38	0.3
30-39	161	1.5
40-49	593	5.4
50-59	1373	12.6
60-69	3264	30.0
70-79	3530	32.4
80-89	1743	16.0
90= $\leq$	176	1.6
Total	10884	100

Table 4-4 Surgery-Tumor location

Tumor location	Number	Percentage
Vermiformis appendix	70	0.6
Cecum	782	7.2
Ascending	1723	15.8
Transverse	1030	9.5
Descending	504	4.6
Sigmoid	2619	24.1
Rectosigmoid	1409	12.9
Upper rectum	1105	10.2
Lower rectum	1411	13.0
Proctos (anal canal)	84	0.8
Unknown	147	1.4
Total	10884	100

Table 4-5 Surgery-Preoperative serum CEA value

Preoperative serum CEA value	Number	Percentage
Normal	5798	53.3
<2 x ULN	1898	17.4
<4 x ULN	891	8.2
<8 x UNL	576	5.3
>=8 x UNL	858	7.9
Unknown	863	7.9
Total	10884	100

Table 4-6 Surgery-Multiple primary cancers

Multiple primary cancers	Number	Percentage
Absent	8897	81.7
Synchronous	509	4.7
Metachronous	918	8.4
Synchronous and metachronous	61	0.6
Unknown	499	4.6
Total	10884	100

Table 4-7 Surgery-Synchronous multiple colorectal cancers

Synchronous multiple CRC	Number	Percentage
Absent	9825	90.3
Present: early cancer	303	2.8
Present: advanced cancer	238	2.2
Present: early and advanced cancer	196	1.8
Unknown	322	3.0
Total	10884	100

Table 4-8 Surgery-Metachronous multiple colorectal cancers

Metachronous multiple CRC	Number	Percentage
Absent	10121	93.0
Present: early cancer	78	0.7
Present: advanced cancer	152	1.4
Present: early and advanced cancer	21	0.2
Unknown	512	4.7
Total	10884	100

Table 4-9 Operative procedure

Operative procedure	Number	Percentage
Polypectomy	2	0.02
Tumorectomy	41	0.4
Local excision	27	0.2
Appendectomy	7	0.06
Ileocecal resection	1126	10.3
Partial colectomy	921	8.5
Right hemicolectomy	1617	14.9
Left hemicolectomy	387	3.6
Sigmoidectomy	2003	18.4
Subtotal colectomy	39	0.4
Total colectomy	11	0.1
Total proctocolectomy	45	0.4
High anterior resection	1001	9.2
Low anterior resection	1809	16.6
Ultra-low anterior resection	288	2.6
Intersphincteric resection	219	0.2
Hartmann procedure	361	0.3
Abdominoperineal resection	504	4.6
Total pelvic exenteration	64	0.6
Other types of colectomy	26	0.2
Bypass surgery	8	0.1
Colostomy, ileostomy	58	0.5
Exploratory laparotomy	6	0.1
Other palliative procedures	7	0.1
Unknown	307	2.8
Total	10884	100



Table 4-10 Surgery-Operative approach

Operative approach	Number	Percentage
Transanal	76	0.7
Laparoscopic	6913	63.5
Open	3642	33.5
Others	33	0.3
Unknown	220	2.0
Total	10884	100

Table 4-11 Surgery- Lymph node dissection

Lymph node dissection	Number	Percentage
D0	190	1.7
D1	364	3.3
D2	2324	21.4
D3	7194	66.1
Unknown	812	7.5
Total	10884	100

Table 4-12 Surgery-Tumor size

Tumor size	
Median	40 mm (0-250)
Mean	42.0 ± 22.9 mm
Unknown	1881
Total	10884

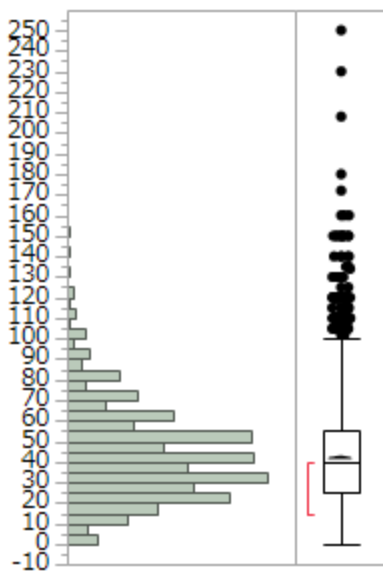


Table 4-13 Surgery-Histologic type

Histologic type	Number	Percentage
Well differentiated	3934	36.1
Moderately differentiated	5695	52.3
Poorly differentiated	321	2.9
Mucinous	386	3.6
Signet ring cell	30	0.3
Medullary carcinoma	11	0.1
Adenocarcinoma (NOS)	22	0.2
Medullary carcinoma	4	0.04
Squamous cell carcinoma	12	0.1
Carcinoid tumor	33	0.3
Endocrine cell carcinoma	23	0.2
Adenoendocrine cell carcinoma	0	0
Miscellaneous histological types of malignant epithelial tumors	17	0.2
Malignant lymphoma	5	0.05
Malignant melanoma	4	0.04
Other non-epithelial tumors	17	0.2
Unknown	370	3.8
Total	10884	100

Table 4-14 Surgery-Depth of tumor invasion

Depth of tumor invasion	Number	Percentage
pT0	31	0.3
pTis	360	3.3
pT1a	198	1.8
pT1b	1014	9.3
pT1 (NOS)	73	0.7
pT2	1557	14.3
pT3	4877	44.8
pT4a	1752	16.1
pT4b	588	5.4
Unknown	434	4.0
Total	10884	100

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

Number of invaded organs	Number	Percentage
0	2273	20.9
1	499	4.9
2	105	1.0
3	22	0.2
4 or more	13	0.1
Unknown	7972	73.2
Total	10884	100

Table 4-16 Surgery-Lymphatic invasion

Lymphatic invasion	Number	Percentage
ly0	4666	42.9
ly1	3977	36.5
ly2	1309	12
ly3	454	4.2
ly+ grade unknown	20	0.2
Unknown	458	4.2
Total	10884	100

Table 4-17 Surgery-Venous invasion

Venous invasion	Number	Percentage
v0	3517	32.3
v1	3855	35.4
v2	2186	20
v3	859	7.9
v+ grade unknown	19	0.2
Unknown	448	4.1
Total	10884	100

Table 4-18 Surgery-Interstitialium

Interstitialium	Number	Percentage
Medullary pattern	768	7.1
Intermediate pattern	7105	65.3
Scirrhus pattern	183	1.7
Unknown	2828	26
Total	10884	100

Table 4-19 Surgery-Infiltrative growth pattern

Infiltrative growth pattern	Number	Percentage
INF $\alpha$	645	59.3
INF $\beta$	8590	78.9
INF $\gamma$	337	3.1
Unknown	1312	12.1
Total	10884	100

Table 4-20 Surgery-Perineural invasion

Perineural invasion	Number	Percentage
PN0	5496	50.5
PN1a	1787	16.4
PN1b	1053	9.7
Unknown	2548	23.4
Total	10884	100

Table 4-21 Surgery-EX

EX	Number	Percentage
Absent	7339	67.4
Tumor deposits predominantly confined to the perineural space	152	1.4
Tumor deposits predominantly confined to the vascular space	152	1.4
Tumor nodule (ND)	476	4.4
ND(v+)	130	1.2
ND (PN+)	112	1.0
Unknown	2523	23.2
Total	10884	100

Table 4-22 Surgery-Budding

Perineural invasion	Number	Percentage
Grade 1	1591	14.6
Grade 2	374	3.4
Grade 3	255	2.3
Unknown	8664	79.6
Total	10884	100

Table 4-23 Surgery-Proximal margin

Proximal margin	Number	Percentage
PM0	10216	93.9
PM1	31	0.3
Unknown	637	5.9
Total	10884	100

Table 4-24 Surgery-Distal margin

Distal margin	Number	Percentage
DM0	10188	93.6
DM1	41	0.4
Unknown	655	6.0
Total	10884	100

Table 4-25 Surgery-Circumferential resection margin

Circumferential resection margin	Number	Percentage
RM0	8861	81.4
RM1	242	2.2
Unknown	1781	16.4
Total	10884	100

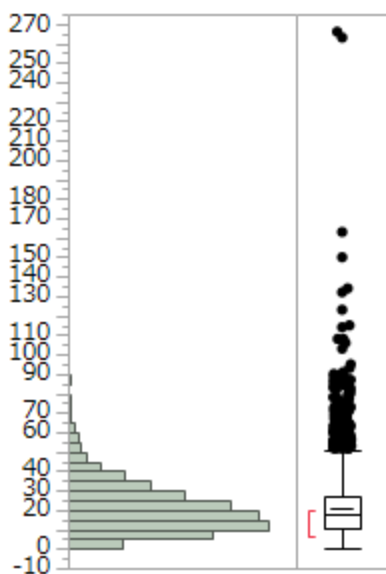
Table 4-26 Surgery-lymph node metastasis

Lymph node metastasis	Number	Percentage
pN0	6110	56.1
pN1	2659	24.4
pN2	1048	9.6
pN3	518	4.8
Unknown	549	5.0
Total	10884	100



Table 4-27 Surgery-number of lymph node retrieved (N = 9423)

Number of lymph node retrieved (median)	18 (0-266)
Number of lymph node retrieved (mean)	21.0 ± 14.0



\* 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 = 9426)

Number of positive node (median)	0 (0-65)
Number of positive node (mean)	1.5 ± 3.4

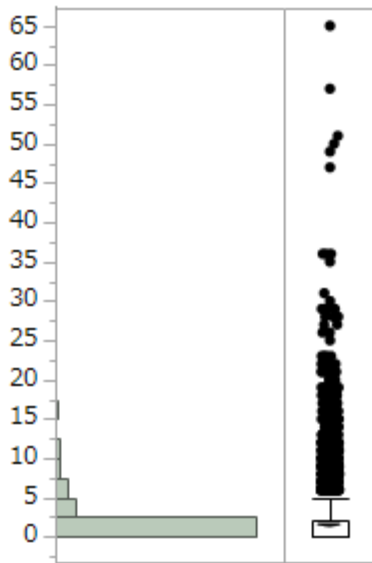


Table 4-29 Surgery-number of paracolic lymph node retrieved (N = 9385)

Number of lymph node retrieved (median)	10 (0-250)
Number of lymph node retrieved (mean)	12.3 ± 9.3

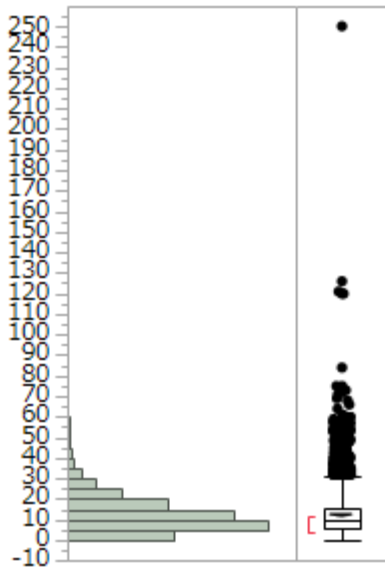


Table 4-30 Surgery-number of positive paracolic lymph node (N = 9372)

Number of positive node (median)	0 (0-63)
Number of positive node (mean)	1.2 ± 2.7

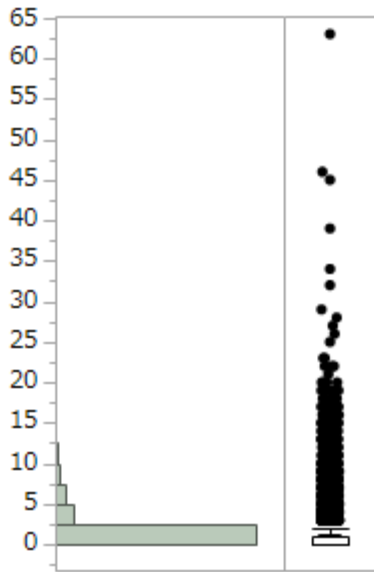


Table 4-31 Surgery-number of intermediate lymph node retrieved (N = 9038)

Number of lymph node retrieved (median)	5 (0-226)
Number of lymph node retrieved (mean)	5.5 ± 4.9

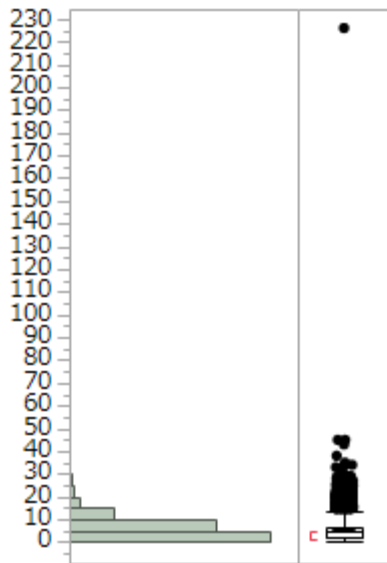


Table 4-32 Surgery-number of positive intermediate lymph node (N = 9023)

Number of positive node (median)	0 (0-29)
Number of positive node (mean)	0.3 ± 1.0

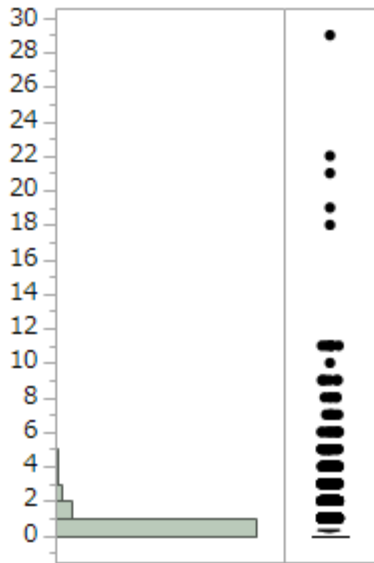


Table 4-33 Surgery-number of main lymph node retrieved (N = 7196)

Number of lymph node retrieved (median)	3 (0-42)
Number of lymph node retrieved (mean)	3.4 ± 3.2

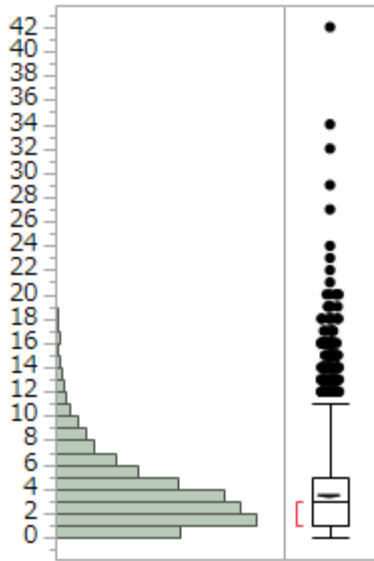


Table 4-34 Surgery-number of positive main lymph node (N = 7151)

Number of positive node (median)	0 (0-10)
Number of positive node (mean)	0.1 ± 0.5

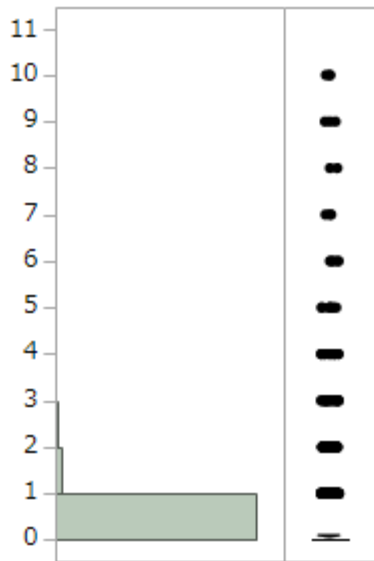




Table 4-35 Surgery-number of lateral pelvic lymph node retrieved (N = 737)

Number of lymph node retrieved (median)	8 (0-58)
Number of lymph node retrieved (mean)	10.0 ± 10.5

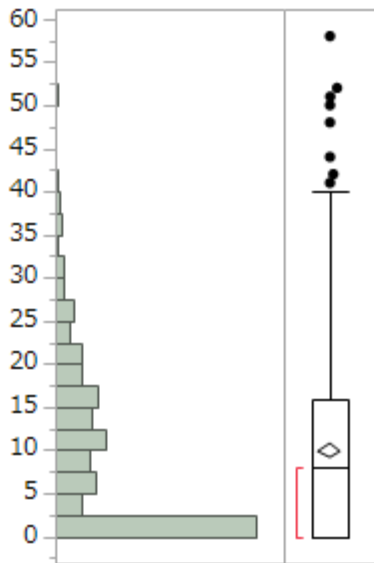


Table 4-36 Surgery-number of positive lateral pelvic lymph node (N = 705)

Number of positive node (median)	0 (0-13)
Number of positive node (mean)	0.5 ± 1.5

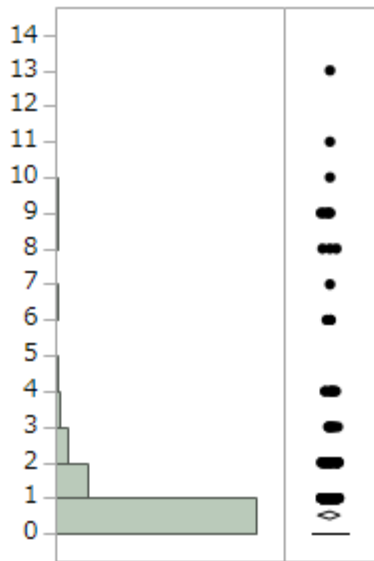


Table 4-37 Surgery-liver metastasis

Liver metastasis	Number	Percentage
H0	5219	48.0
H1	340	3.1
H2	184	1.7
H3	118	1.1
Unknown	5023	46.2
Total	10884	100

Table 4-38 Surgery-Peritoneal metastasis

Peritoneal metastasis	Number	Percentage
P0	5605	51.5
P1	142	1.3
P2	58	0.5
P3	84	0.8
Unknown	4995	45.9
Total	10884	100

Table 4-39 Surgery-Distant metastasis other than liver

Distant metastasis	Number	Percentage
M0	5256	48.3
M1a	694	6.4
M1b	242	2.2
Unknown	4692	43.1
Total	10884	100

Table 4-40 Surgery-Lung metastasis

Lung metastasis	Number	Percentage
PUL0	5724	52.6
PUL1	134	1.2
PUL2	73	0.7
Unknown	4953	45.5
Total	10884	100

Table 4-41 Surgery-Curability after surgery

Curability	Number	Percentage
pCur A	8454	77.7
pCur B	533	4.9
pCur C	1152	10.6
Unknown	745	6.8
Total	10884	100

Table 4-42 Surgery-Recurrence after surgery

recurrence	Number	Percentage
Absent	8110	74.5
Present	1772	16.3
Unknown	1002	9.2
Total	10884	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	358 (93.7)	1992 (91.3)	2589 (79.4)	1674 (72.8)	609 (53.6)	537 (48.7)	351 (67.6)	8110 (74.5)
Present	5 (1.3)	89 (4.1)	479 (14.7)	495 (21.5)	436 (38.4)	197 (17.9)	71 (13.7)	1772 (16.2)
Unknown	19 (5.0)	100 (4.6)	194 (6.0)	132 (5.7)	91 (8.0)	369 (33.5)	97 (18.7)	1002 (9.2)
Total	382	2181	3262	2301	1136	1103	519	10884

Table 4-44 Surgery-Recurrence site after surgery

Fisrt recurrence site	Number
Anastomosis	83
Regional lymph node	188
Local	140
Peritoneal	318
Liver	675
Lung	552
Lymph node (not regional)	110
Bone	54
Brain	18
Adrenal gland	18
Skin	8
Others	78

(overlapping+)

Table 4-45 Surgery-Treatment after recurrence

Treatment for recurrence	Number	Percentage
None	366	20.7
Curative surgery	568	32.1
Palliative surgery	33	1.9
Radiation	52	2.9
Chemotherapy	699	39.4
Others	28	1.6
Unknown	26	1.5
Total	1772	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	382	98.3	95.8	94.5	92.0	89.6
Stage I	2181	98.6	97.2	95.6	94.1	92.5
Stage II	3262	97.3	93.9	90.9	88.1	84.9
Stage IIIa	2301	96.9	92.5	88.4	84.7	81.7
Stage IIIb	1136	93.2	84.2	76.3	70.5	65.3
Stage IV	1103	82.0	65.0	51.4	40.9	35.7
Unknown	519					
All	10884	95.5	90.4	85.9	82.2	79.0

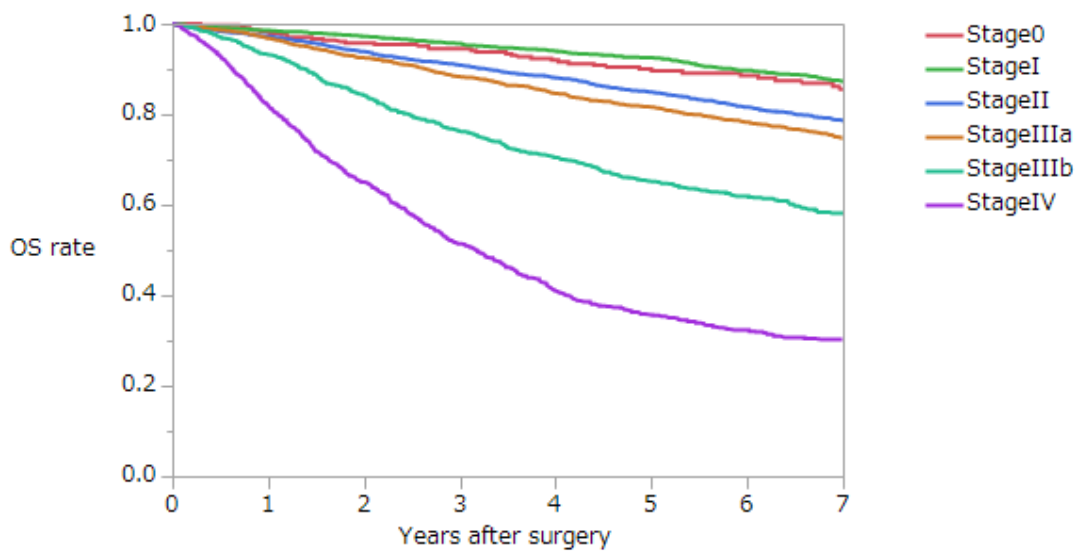


Table 4-47 Surgery-Overall survival rates after surgery (colon) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	265	98.7	95.6	95.1	92.4	89.4
Stage I	1257	98.1	96.8	95.0	93.4	92.0
Stage II	2178	96.8	93.3	90.4	87.9	84.6
Stage IIIa	1438	96.0	91.0	87.3	83.9	80.9
Stage IIIb	601	91.3	81.3	73.7	68.2	62.9
Stage IV	746	80.6	62.1	48.8	38.3	34.1
All	6485	94.7	89	84.8	81.1	78.0

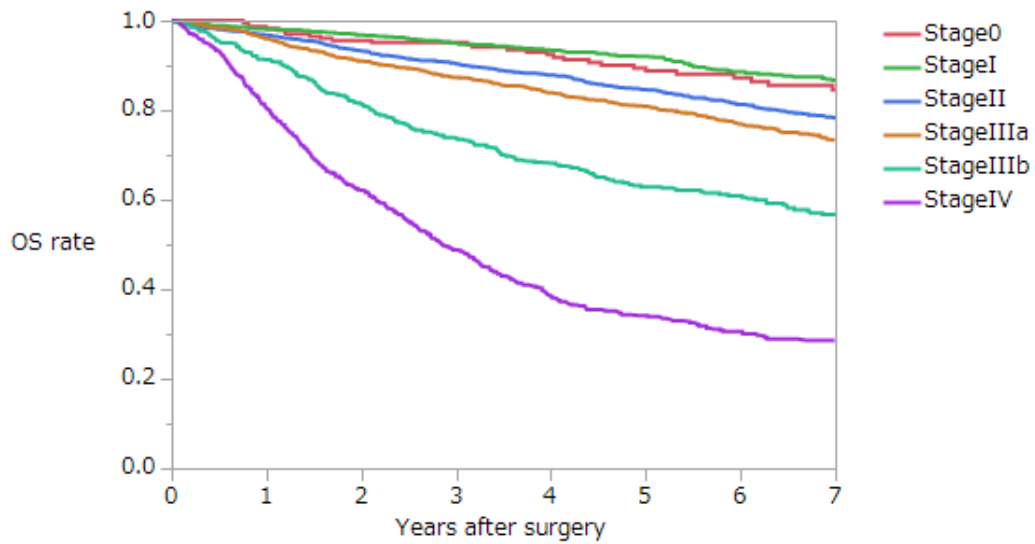




Table 4-48 Surgery-Overall survival rates after surgery (rectum) (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
Stage 0	112	97.1	96.1	94.0	91.7	91.7
Stage I	901	99.2	97.7	96.4	94.8	93.1
Stage II	1053	98.3	95.1	91.9	88.6	85.5
Stage IIIa	850	98.5	95.3	90.3	86.1	83.1
Stage IIIb	525	95.5	88.1	79.5	73.3	68.1
Stage IV	338	84.7	70.6	56.7	46.8	40.3
All	3779	97.0	92.7	88.0	84.0	80.9

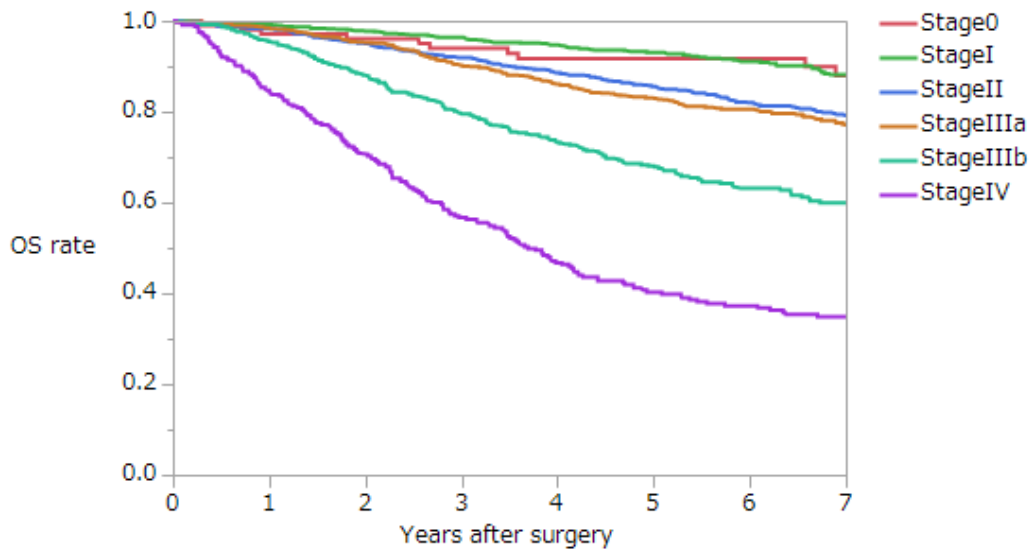


Table 4-49 Surgery-Overall survival rates according to liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
H0	5219	96.7	93.0	89.7	86.9	84.5
H1	340	91.2	77.8	66.6	56.2	48.4
H2	184	78.2	56.8	42.8	31.5	26.0
H3	118	63.7	46.8	32.5	20.9	17.6
Unknown	5023					
All except for unknown	5861	95.2	90.3	86.0	82.5	79.7

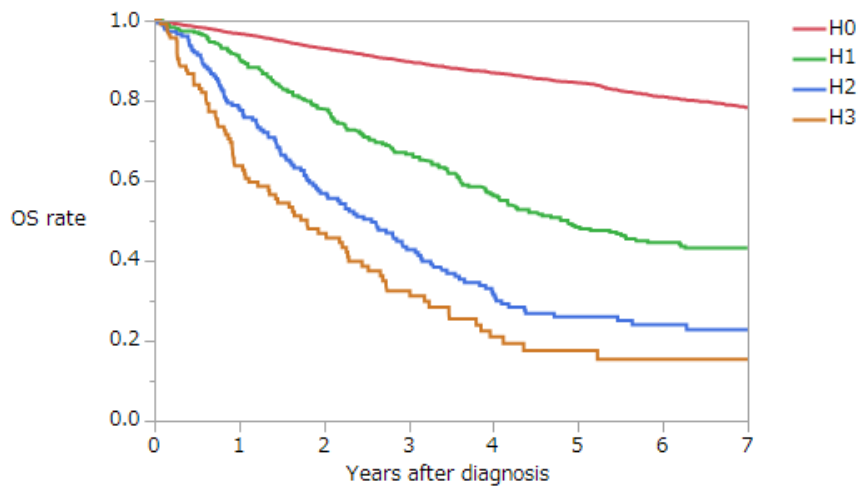


Table 4-50 Surgery-Overall survival rates according to peritoneal metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
P0	5605	96.1	91.8	87.9	84.5	81.8
P1	142	79.2	55.5	44.1	33.4	27.2
P2	58	79.2	45.5	20.5	9.1	9.1
P3	84	61.6	36.1	24.7	21.6	14.1
Unknown	4995					
All except for unknown	5889	95.0	89.8	85.5	81.9	79.0

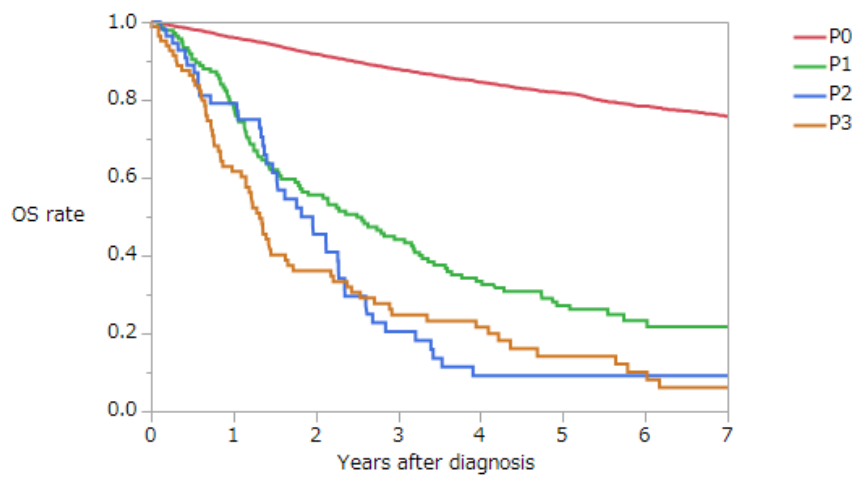


Table 4-51 Surgery-Overall survival rates according to lung metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
PUL0	5724	95.9	91.4	87.4	83.9	81.1
PUL1	134	84.2	62.9	49.9	44.0	41.9
PUL2	73	71.4	51.1	37.5	26.5	23.6
Unknown	4953					
All except for unknown	5931	95.4	90.3	86.1	82.5	79.7

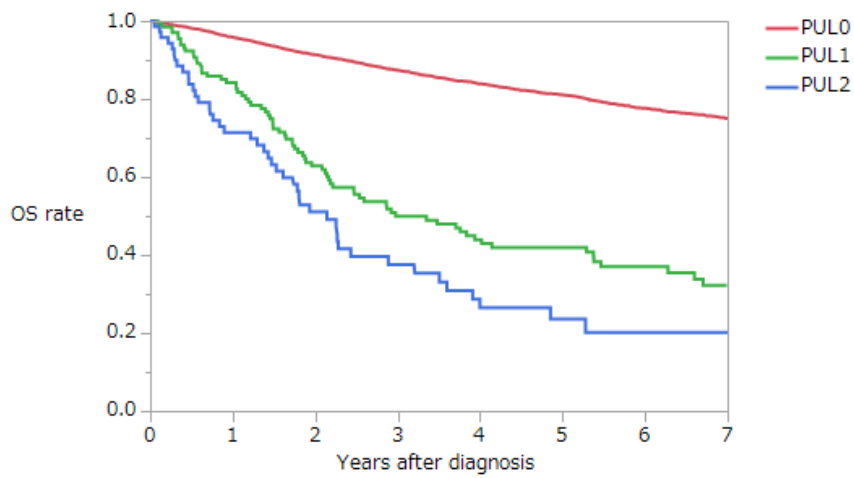


Table 4-52 Surgery-Overall survival rates according to distant metastasis other than liver metastasis (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
M0	5256	97.2	94.2	91.4	88.8	86.4
M1a	694	85.6	71.2	58.1	47.2	40.8
M1b	242	73.6	46.5	33.9	23.6	18.4
Unknown	4692					
All except for unknown	6192	95.1	90.1	85.9	82.2	79.4

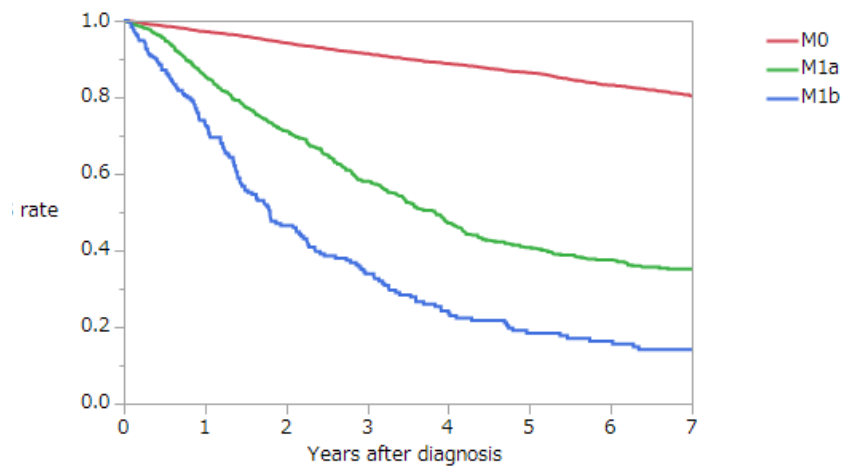
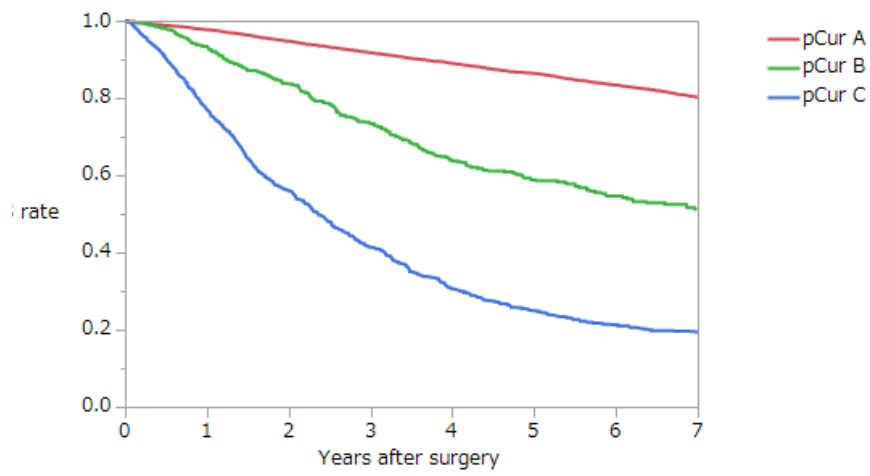


Table 4-53 Surgery-Overall survival rates according to curability (%)

Group	Number of patients	1 year	2 years	3 years	4 years	5 years
pCur A	8454	97.8	94.7	91.8	89.0	86.5
pCur B	533	93.4	83.7	73.4	63.7	58.8
pCur C	1152	77.1	56.1	41.4	30.6	25.0
Unknown	745					
All except for unknown	10139	95.3	90.1	85.6	81.7	78.8



## Participating institutions

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