

図 6.4.d.4 IPMC-MH 切除例におけるリンパ節郭清の程度と生存率 Survival of patients with IPMC-MH according to the extent of lymph node dissection

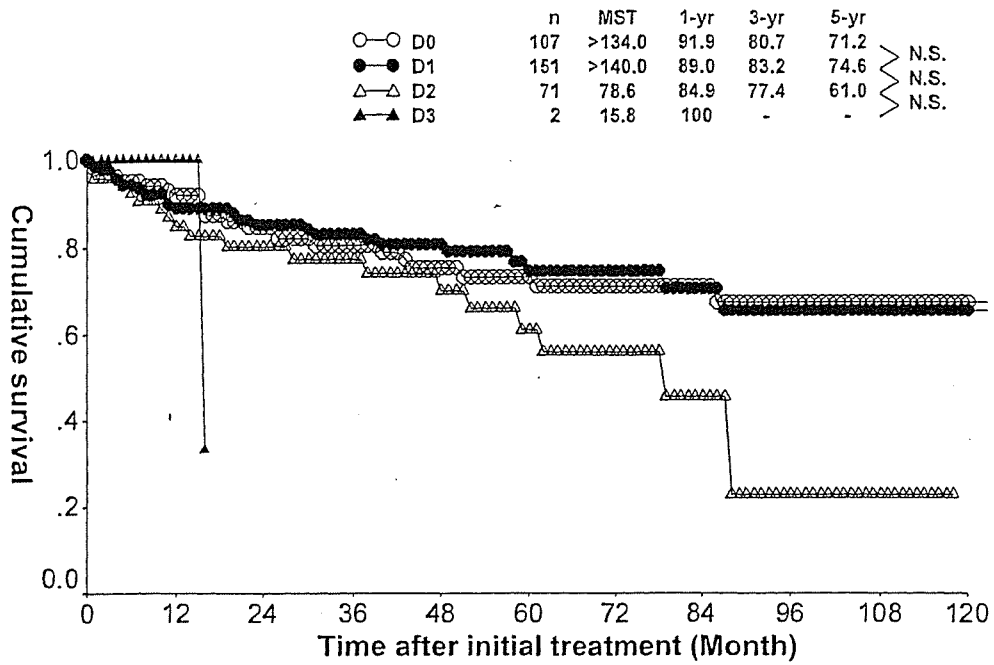
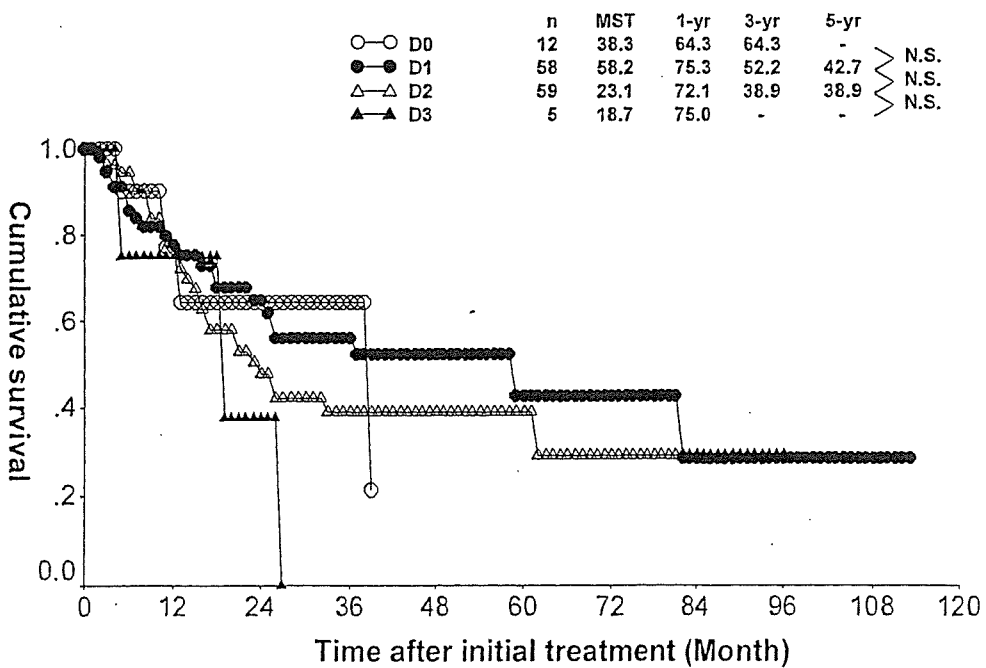


図 6.4.d.5 IVC-IT 切除例におけるリンパ節郭清の程度と生存率 Survival of patients with IVC-IT according to the extent of lymph node dissection



V. 病理学的所見 Pathological findings
a. 組織学的進展度 Histological extent

略語 Abbreviations

IPMA-MH:	03a. 膵管内乳頭腺腫 粘液高産生性 Intraductal papillary mucinous adenoma with mucin hypersecretion
IPMA-noM:	03b. 膵管内乳頭腺腫 粘液非高産生性 Intraductal papillary mucinous adenoma without mucin hypersecretion
IPMC-MH:	03c. 膵管内乳頭腺癌 粘液高産生性 Intraductal papillary mucinous adenocarcinoma with mucin hypersecretion
IPMC-noM:	03d. 膵管内乳頭腺癌 粘液非高産生性 Intraductal papillary mucinous adenocarcinoma without mucin hypersecretion
ITA:	04a. 膵管内管状腺腫 Intraductal tubular adenoma
ITC:	04b. 膵管内管状腺癌 Intraductal tubular adenocarcinoma
AH-CIS:	05. 異型過形成および上皮内癌 Atypical hyperplasia and carcinoma in situ
INV-IT:	15. 膵管内乳頭腺癌由来の浸潤癌 Invasive carcinoma originating in an intraductal tumor

a. 組織学的進展度 Histological extent

表 6.5.a.1 癌の質と間質比 Cancer-stroma relationship

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
1. 髄様型 Medullary type	4 (50.0%)	1 (33.3%)	71 (47.3%)	3 (21.4%)	0 (0.0%)	1 (12.5%)	3 (100%)	16 (14.3%)	99 (33.2%)
2. 中間型 Intermediate type	3 (37.5%)	2 (66.7%)	67 (44.7%)	9 (64.3%)	0 (0.0%)	6 (75.0%)	0 (0.0%)	80 (71.4%)	167 (56.0%)
3. 硬性型 Scirrhous type	1 (12.5%)	0 (0.0%)	12 (8.0%)	2 (14.3%)	0 (0.0%)	1 (12.5%)	0 (0.0%)	16 (14.3%)	32 (10.7%)
Total	8 (100%)	3 (100%)	150 (100%)	14 (100%)	0 (0.0%)	8 (100%)	3 (100%)	112 (100%)	298 (100%)

表 6.5.a.2 癌の周囲組織に対する浸潤増殖様式 Growth patterns of tumors infiltrating surrounding tissue

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
1. INF α	9 (81.8%)	6 (85.7%)	131 (68.6%)	8 (53.3%)	1 (100%)	2 (28.6%)	5 (100%)	23 (18.5%)	185 (51.2%)
2. INF β	2 (18.2%)	1 (14.3%)	49 (25.7%)	5 (33.3%)	0 (0.0%)	3 (42.9%)	0 (0.0%)	77 (62.1%)	137 (38.0%)
3. INF γ	0 (0.0%)	0 (0.0%)	11 (5.8%)	2 (13.3%)	0 (0.0%)	2 (28.6%)	0 (0.0%)	24 (19.4%)	39 (10.8%)
Total	11 (100%)	7 (100%)	191 (100%)	15 (100%)	1 (100%)	7 (100%)	5 (100%)	124 (100%)	361 (100%)

表 6.5.a.3 リンパ管侵襲 Lymphatic invasion

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
0. ly0 No lymphatic invasion	44 (95.7%)	19 (95.0%)	278 (87.4%)	29 (93.5%)	6 (100%)	11 (73.3%)	18 (100%)	55 (40.4%)	460 (78.0%)
1. ly1 Slight lymphatic invasion	2 (4.3%)	0 (0.0%)	26 (8.2%)	0 (0.0%)	0 (0.0%)	2 (13.3%)	0 (0.0%)	47 (34.6%)	77 (13.1%)
2. ly2 Moderate lymphatic invasion	0 (0.0%)	1 (5.0%)	9 (2.8%)	1 (3.2%)	0 (0.0%)	1 (6.7%)	0 (0.0%)	25 (18.4%)	37 (6.3%)
3. ly3 Marked lymphatic invasion	0 (0.0%)	0 (0.0%)	5 (1.6%)	1 (3.2%)	0 (0.0%)	1 (6.7%)	0 (0.0%)	9 (6.6%)	16 (2.7%)
Total	46 (100%)	20 (100%)	318 (100%)	31 (100%)	6 (100%)	15 (100%)	18 (100%)	136 (100%)	590 (100%)

表 6.5.a.4 静脈侵襲 venous invasion

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
0. v0 No venous invasion	47 (97.9%)	19 (95.0%)	285 (89.9%)	29 (93.5%)	6 (100%)	11 (73.3%)	18 (100%)	71 (52.2%)	486 (82.2%)
1. v1 Slight venous invasion	1 (2.1%)	0 (0.0%)	25 (7.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	41 (30.1%)	67 (11.3%)
2. v2 Moderate venous invasion	0 (0.0%)	0 (0.0%)	5 (1.6%)	1 (3.2%)	0 (0.0%)	3 (20.0%)	0 (0.0%)	21 (15.4%)	30 (5.1%)
3. v3 Marked venous invasion	0 (0.0%)	1 (5.0%)	2 (0.6%)	1 (3.2%)	0 (0.0%)	1 (6.7%)	0 (0.0%)	3 (2.2%)	8 (1.4%)
Total	48 (100%)	20 (100%)	317 (100%)	31 (100%)	6 (100%)	15 (100%)	18 (100%)	136 (100%)	591 (100%)

表 6.5.a.5 膵内神経浸潤 Intrapaneatic nerve invasion

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
0. ne0 No neural invasion	46 (97.9%)	18 (94.7%)	288 (90.6%)	29 (93.5%)	6 (100%)	9 (64.3%)	18 (100%)	63 (47.7%)	477 (81.5%)
1. ne1 Slight neural invasion	1 (2.1%)	1 (5.3%)	17 (5.3%)	0 (0.0%)	0 (0.0%)	3 (21.4%)	0 (0.0%)	35 (26.5%)	57 (9.7%)
2. ne2 Moderate neural invasion	0 (0.0%)	0 (0.0%)	8 (2.5%)	1 (3.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	24 (18.2%)	33 (5.6%)
3. ne3 Marked neural invasion	0 (0.0%)	0 (0.0%)	5 (1.6%)	1 (3.2%)	0 (0.0%)	2 (14.3%)	0 (0.0%)	10 (7.6%)	18 (3.1%)
Total	47 (100%)	19 (100%)	318 (100%)	31 (100%)	6 (100%)	14 (100%)	18 (100%)	132 (100%)	585 (100%)

表 6.5.a.6 主膵管内進展 Spread within the main pancreatic duct

	IPMA-MH	IPMA-noM	IPMC-MH	IPMC-noM	ITA	ITC	AH-CIS	INV-IT	Total
0. MPD (-) No evidence of spread	36 (75.0%)	19 (82.6%)	120 (39.5%)	16 (53.3%)	6 (100%)	7 (58.3%)	13 (72.2%)	40 (31.0%)	257 (45.1%)
1. MPD (+) Spread present	12 (25.0%)	2 (8.7%)	177 (58.2%)	14 (46.7%)	0 (0.0%)	5 (41.7%)	5 (27.8%)	84 (65.1%)	299 (52.5%)
2. MPD (b) Borderline	0 (0.0%)	2 (8.7%)	7 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (3.9%)	14 (2.5%)
Total	48 (100%)	23 (100%)	304 (100%)	30 (100%)	6 (100%)	12 (100%)	18 (100%)	129 (100%)	570 (100%)

b. 組織型分類と生存率 Histological classification and the survival

図 6.5.b.1 膵管内腫瘍切除例における実質・間質量比と生存率 Survival of patients with intraductal tumor according to cancer-stroma relationship

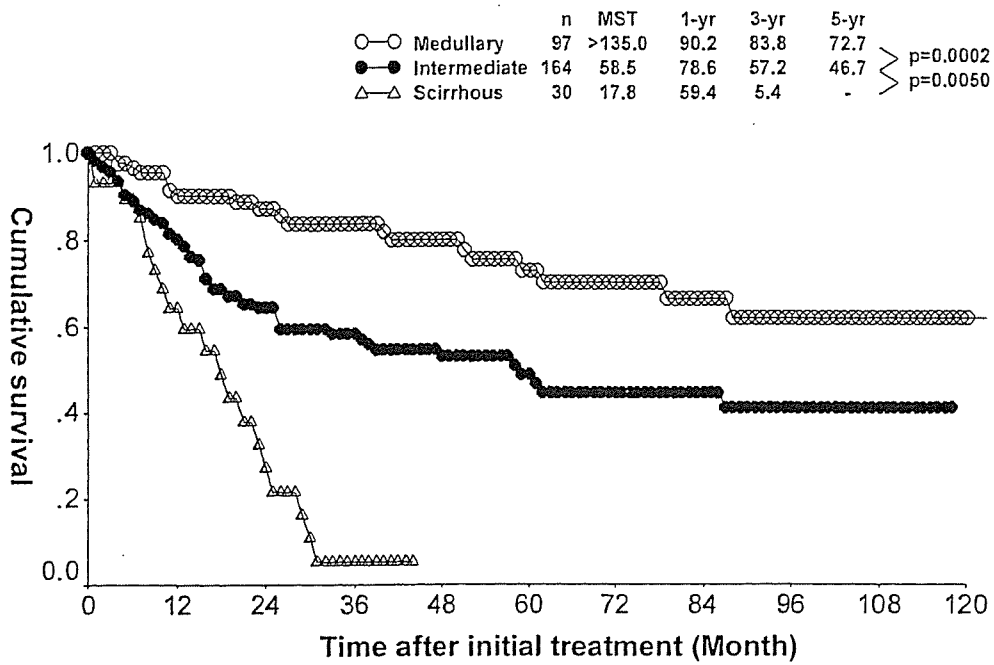


図 6.5.b.2 膵管内腫瘍切除例における浸潤増殖様式と生存率 Survival of patients with intraductal tumor according to growth patterns of tumors infiltrating surrounding tissue

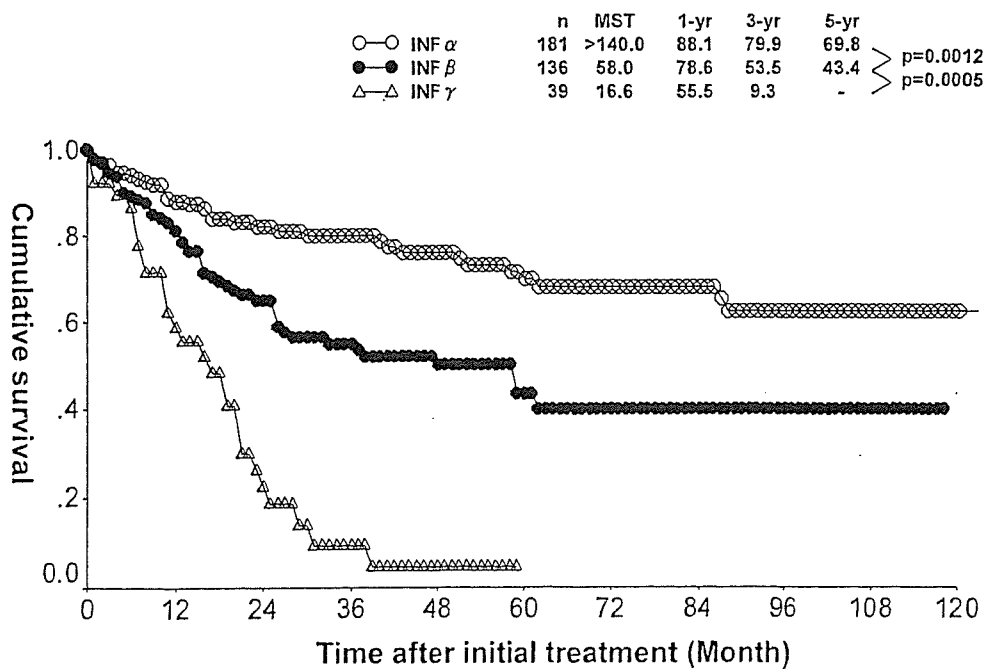


図 6.5.b.3 臍管内腫瘍切除例におけるリンパ管侵襲と生存率 Survival of patients with intraductal tumor according to lymphatic invasion

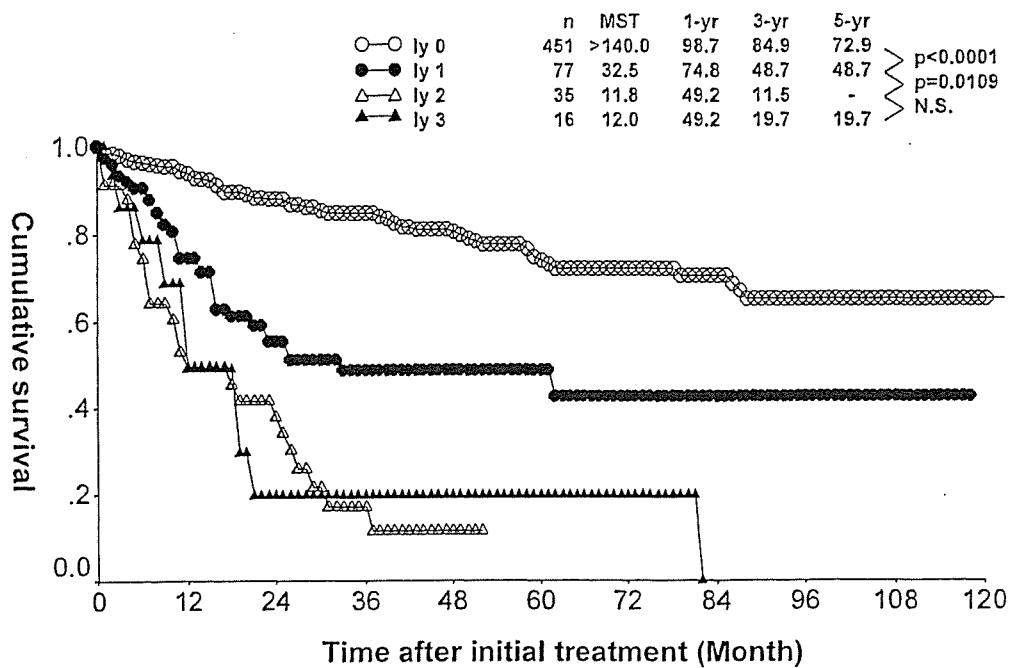


図 6.5.b.4 臍管内腫瘍切除例における静脈侵襲と生存率 Survival of patients with intraductal tumor according to venous invasion

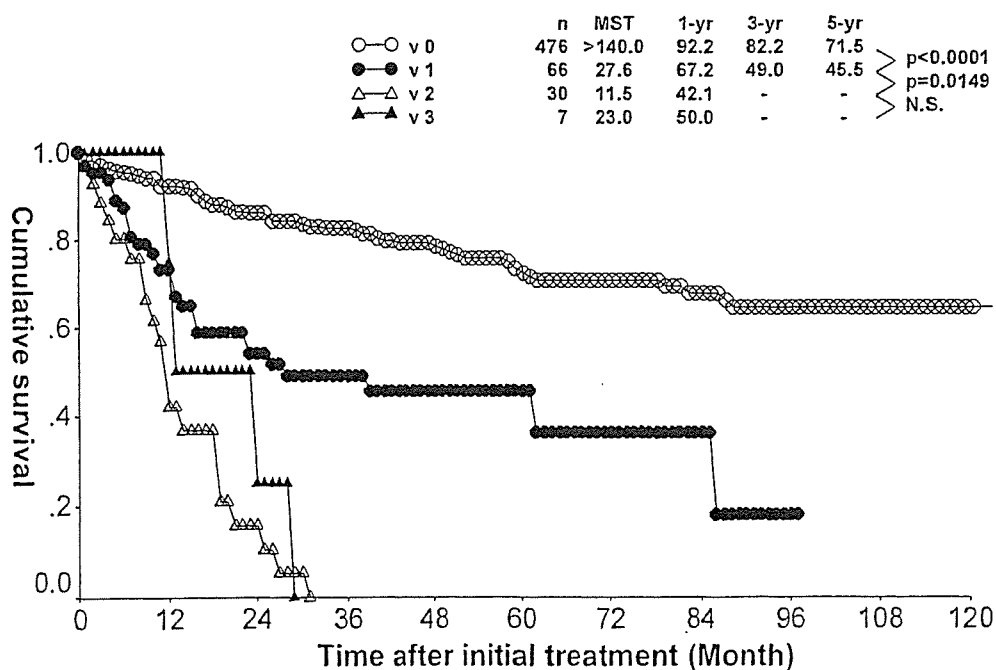


図 6.5.b.5 膵管内腫瘍切除例における膵内神経浸潤と生存率 Survival of patients with intraductal tumor according to intrapancreatic nerve invasion

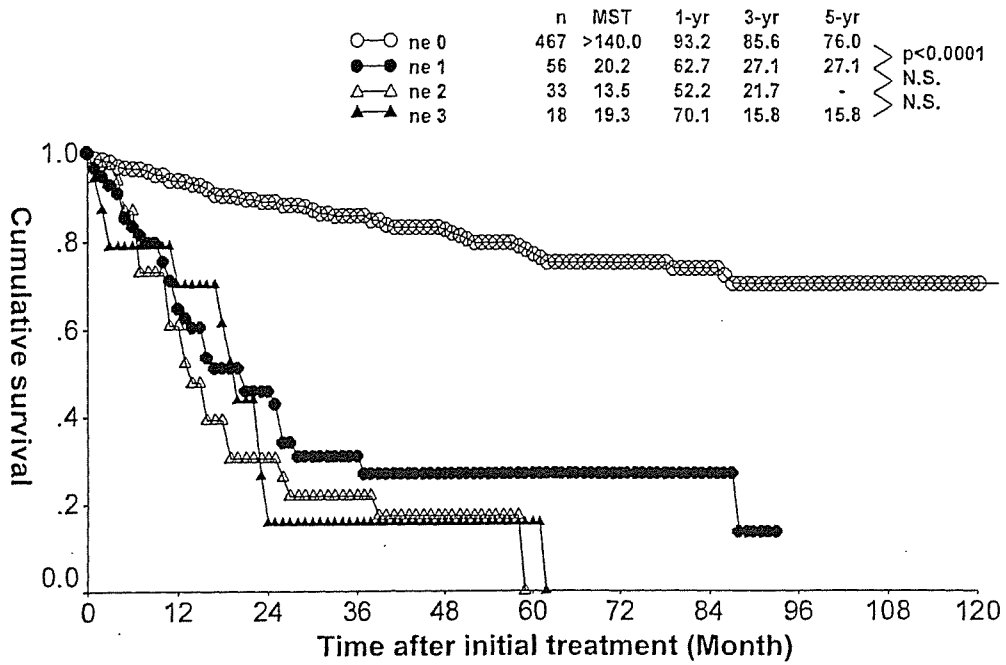
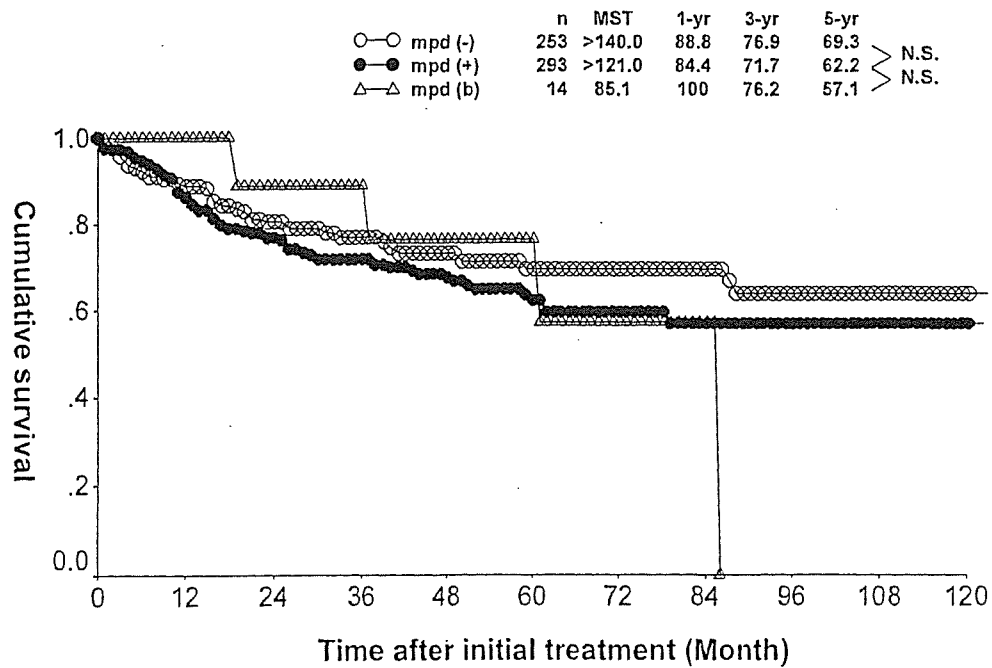


図 6.5.b.6 膵管内腫瘍切除例における主膵管内進展と生存率 Survival of patients with intraductal tumor according to spread within the main pancreatic duct



VI. 合併症 Complications

a. 術後合併症 Complications after pancreatotomy

表 6.6.a.1 術式と術後合併症 Operative procedures and complications (With overlap)

	TP	PD, subtotal PD, PPPD, SSPPD	DPPHR	DP, subtotal DP, spleen preserving DP	MP, PR	Total
術後早期合併症 Early abdominal complications						
消化管出血 GI bleeding	3 (7.9%)	10 (2.4%)	0 (0.0%)	0 (0.0%)	3 (6.4%)	16 (2.4%)
腹腔内出血 Intraperitoneal bleeding	0 (0.0%)	13 (3.2%)	0 (0.0%)	1 (0.6%)	3 (6.4%)	17 (2.6%)
膵空腸吻合不全 Pancreatic anastomosis insufficiency	0 (0.0%)	34 (8.3%)	4 (33.3%)	0 (0.0%)	7 (14.9%)	45 (6.8%)
胆管空腸吻合不全 Biliary anastomosis insufficiency	0 (0.0%)	14 (3.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	14 (2.1%)
胃空腸吻合不全 Gastric anastomosis insufficiency	0 (0.0%)	6 (1.5%)	0 (0.0%)	1 (0.6%)	0 (0.0%)	7 (1.1%)
胃排出遅延 Delayed gastric emptying	1 (5.3%)	17 (8.9%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	19 (5.8%)
吻合部狭窄 Anastomotic stenosis	0 (0.0%)	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)
急性膵炎 Acute pancreatitis	0 (0.0%)	7 (1.7%)	1 (8.3%)	0 (0.0%)	1 (2.1%)	9 (1.4%)
膵液瘻 Pancreatic fistula	0 (0.0%)	27 (6.6%)	5 (41.7%)	16 (10.2%)	10 (21.3%)	58 (8.7%)
胆汁瘻 Biliary fistula	0 (0.0%)	12 (2.9%)	1 (9.1%)	1 (0.6%)	0 (0.0%)	14 (2.1%)
腹膜炎 Peritonitis	2 (5.3%)	10 (2.4%)	0 (0.0%)	1 (0.6%)	1 (2.1%)	14 (2.1%)
術後早期全身合併症 Early systemic complications						
肝不全 Liver failure	0 (0.0%)	4 (1.0%)	0 (0.0%)	0 (0.0%)	1 (2.1%)	5 (0.8%)
腎不全 Renal failure	1 (2.6%)	5 (1.2%)	0 (0.0%)	0 (0.0%)	1 (2.1%)	7 (1.1%)
低血糖 Hypoglycemia	3 (7.9%)	4 (1.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (1.1%)
肺合併症 Pulmonary complication	1 (2.6%)	14 (3.4%)	0 (0.0%)	2 (1.3%)	1 (2.1%)	18 (2.7%)
心不全 Heart failure	1 (2.6%)	4 (1.0%)	0 (0.0%)	0 (0.0%)	2 (4.3%)	7 (1.1%)
術後晚期合併症 Late complications						
イレウス Ileus	1 (2.6%)	11 (2.7%)	0 (0.0%)	8 (5.2%)	0 (0.0%)	20 (3.1%)
糖尿病 Diabetes mellitus	24 (61.5%)	34 (8.4%)	1 (9.1%)	13 (8.4%)	0 (0.0%)	72 (11.0%)
頑固な下痢 Persistent diarrhea	1 (2.6%)	5 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (0.9%)
栄養不良 Malnutrition	8 (20.0%)	10 (2.5%)	0 (0.0%)	4 (2.6%)	0 (0.0%)	22 (3.3%)
Total	43 (100%)	427 (100%)	12 (100%)	164 (100%)	50 (100%)	696 (100%)

それぞれの%は有効症例数に対する割合のため、Totalに対する割合とは一致しない。Each percentage is the ratio to the informative cases and does not match the total number of cases.

第7章 女性の粘液性嚢胞腫瘍 Mucinous cystic neoplasms in female

1. 背景因子 Background of the patients with intraductal tumors and subsequent invasive cancer

a. 症例数の推移 Trend of number of cases

略語 Abbreviations

MCN: Mucinous cystic neoplasms

MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma

MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma

INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.1.a.1 粘液性嚢胞腫瘍と浸潤性嚢胞腺癌症例数の推移 Annual trend of cases with mucinous cystic neoplasms and invasive mucinous cystadenocarcinoma (MCA was registered from 2001 cases)

Year	MCA	MCC	INV-MCC	Total
1981	0	6	0	6
1982	0	2	1	3
1983	0	7	0	7
1984	0	9	2	11
1985	0	6	0	6
1986	0	8	2	10
1987	0	12	2	14
1988	0	8	0	8
1989	0	10	0	10
1990	0	7	0	7
1991	0	3	0	3
1992	0	9	0	9
1993	0	8	4	12
1994	0	11	2	13
1995	0	12	2	14
1996	0	8	2	10
1997	0	5	1	6
1998	0	8	2	10
1999	0	4	1	5
2000	0	3	1	4
2001	7	7	8	22
2002	12	1	4	17
2003	11	3	4	18
2004	14	5	1	20
Total	44	162	39	245

表 7.1.a.2 粘液性嚢胞腫瘍と浸潤性嚢胞腺癌年齢分布 Age distribution of cases with mucinous cystic neoplasms and invasive mucinous cystadenocarcinoma

Year	MCA	MCC	INV-MCC	Total
10-19	0 (0.0%)	1 (0.6%)	0 (0.0%)	1 (0.4%)
20-29	7 (15.9%)	3 (1.9%)	0 (0.0%)	10 (4.1%)
30-39	7 (15.9%)	13 (8.0%)	3 (7.7%)	23 (9.4%)
40-49	9 (20.5%)	19 (11.7%)	4 (10.3%)	32 (13.1%)
50-59	10 (22.7%)	43 (26.5%)	8 (20.5%)	61 (24.9%)
60-69	6 (13.6%)	40 (24.7%)	10 (25.6%)	56 (22.9%)
70-79	4 (9.1%)	33 (20.4%)	8 (20.5%)	45 (18.4%)
80-89	1 (2.3%)	6 (3.7%)	2 (5.1%)	9 (3.7%)
90-99	0 (0.0%)	1 (0.6%)	1 (2.6%)	2 (0.8%)
Unknown	0 (0.0%)	3 (1.9%)	3 (7.7%)	6 (2.4%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)

表 7.1.a.3 粘液性嚢胞腫瘍と浸潤性嚢胞腺癌における卵巣様間質の有無 Ovarian like stroma in mucinous cystic neoplasms and invasive mucinous cystadenocarcinoma (OLS was registered from 2001 cases)

	MCA	MCC	INV-MCC	Total
OLS (-)	6 (22.2%)	1 (12.5%)	7 (63.6%)	14 (30.4%)
OLS (+)	21 (77.8%)	7 (87.5%)	4 (36.4%)	32 (69.6%)
Total	27 (100.0%)	8 (100.0%)	11 (100.0%)	46 (100.0%)

b. 家族歴 Family history

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.1.b.1 癌の家族歴 Family history of cancer

Family history	MCA	MCC	INV-MCC	Total
0. なし No family history	33 (78.6%)	94 (63.9%)	20 (62.5%)	147 (66.5%)
1. あり(膵癌) Family history of pancreatic cancer	0 (0.0%)	7 (4.8%)	1 (3.1%)	8 (3.6%)
2. あり(膵癌以外) Family history of other cancer	9 (21.4%)	46 (31.3%)	11 (34.4%)	66 (29.9%)
3. あり(膵癌を含む癌の家族歴) Including pancreatic cancer	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	42 (100.0%)	147 (100.0%)	32 (100.0%)	221 (100.0%)

表 7.1.b.2 家族内膵癌 Pancreatic cancer in the kindred

Pancreatic cancer in the kindred	MCA	MCC	INV-MCC	Total
0. なし No member	18 (94.7%)	6 (85.7%)	2 (100.0%)	26 (92.9%)
1. 家族内に1人 One family member with pancreatic cancer	1 (5.3%)	1 (14.3%)	0 (0.0%)	2 (7.1%)
2. 家族内に2人 Two family member with pancreatic cancer	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
3. 家族内に3人以上 More than three	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	19 (100.0%)	7 (100.0%)	2 (100.0%)	28 (100.0%)

c. 既往歴 Past history

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.1.c.1 重複癌 Past history of cancer in the other organ

Past history of cancer in the other organ	MCA	MCC	INV-MCC	Total
0. なし No past history of other cancer	35 (83.3%)	145 (90.6%)	33 (86.8%)	213 (88.8%)
1. あり(同時性) Synchronous multiple cancer	3 (7.1%)	8 (5.0%)	2 (5.3%)	13 (5.4%)
2. あり(異時性) Metachronous multiple cancer	4 (9.5%)	7 (4.4%)	3 (7.9%)	14 (5.8%)
Total	42 (100.0%)	160 (100.0%)	38 (100.0%)	240 (100.0%)

表 7.1.c.2 膵癌と関係ありそうな既往歴 Past history which seems to be related to pancreatic cancer

Past history	既往歴を有する症例数/有効回答数 Cases / Informative cases	有効回答数に対する% % of informative cases
1. 膵石症 Pancreatic stone	4/237	1.7%
2. 急性膵炎 Acute pancreatitis	7/236	3.0%
3. 慢性膵炎 Chronic pancreatitis	6/236	2.5%
4. 膵嚢胞(非腫瘍性) Pancreatic cyst, non-neoplastic	4/232	1.6%
5. 膵嚢胞(腫瘍性) Pancreatic cyst, neoplastic	28/233	12.0%
6. 糖尿病 Diabetes Mellitus	32/237	13.5%
7. 胆石症 Biliary stone	13/235	5.5%
8. 慢性下痢 Chronic diarrhea	1/234	0.4%
9. 慢性アルコール中毒 Chronic alcoholism	1/235	0.4%
10. 消化性潰瘍 Peptic ulcer	10/236	4.2%

d. 喫煙と飲酒 Smoking and drinking

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.1.d.1 喫煙習慣 Smoking habit

	MCA	MCC	INV-MCC	Total
0. 喫煙せず No smoking	19 (86.4%)	7 (87.5%)	2 (50.0%)	28 (82.4%)
1. 20年前から禁煙 Abstain from smoking for more than 20 years.	1 (4.5%)	1 (12.5%)	0 (0.0%)	2 (5.9%)
2. 10年前から禁煙 Abstain from smoking for 10 years.	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
3. 5年前から禁煙 Abstain from smoking for 5 years	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
4. 最近禁煙 Abstain from smoking recently	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
5. 1日20本以内 Less than 20 cigarettes/day	2 (9.1%)	0 (0.0%)	2 (50.0%)	4 (11.8%)
6. 1日20本以上 More than 20 cigarettes/day	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	22 (100.0%)	8 (100.0%)	4 (100.0%)	34 (100.0%)

表 7.1.d.2 飲酒習慣 Drinking frequency

	MCA	MCC	INV-MCC	Total
0. 飲酒せず No drinking	10 (50.0%)	4 (57.1%)	4 (100.0%)	18 (58.1%)
1. 数か月に1回程度の飲酒 Once in several months	3 (15.0%)	1 (14.3%)	0 (0.0%)	4 (12.9%)
2. 数週間に1回程度の飲酒 Once in several weeks	3 (15.0%)	1 (14.3%)	0 (0.0%)	4 (12.9%)
3. 数日に1回 Once in few days	2 (10.0%)	0 (0.0%)	0 (0.0%)	2 (6.5%)
4. 毎日 Everyday	2 (10.0%)	1 (14.3%)	0 (0.0%)	3 (9.7%)
Total	20 (100.0%)	7 (100.0%)	4 (100.0%)	31 (100.0%)

II. 診断 Diagnosis

a. 主訴 Chief complaint

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.2.a.1 訪医理由 Reason to visit clinic

	MCA	MCC	INV-MCC	Total
1. 健康診断 Health check	12 (27.3%)	13 (8.0%)	1 (2.6%)	26 (10.6%)
2. 症状あり With symptom	18 (40.9%)	121 (74.7%)	30 (76.9%)	169 (69.0%)
3. 糖尿病の増悪 Deterioration of diabetes mellitus	0 (0.0%)	9 (5.6%)	1 (2.6%)	10 (4.1%)
4. 集団検診後の精検 Mass screening	4 (9.1%)	9 (5.6%)	3 (7.7%)	16 (6.5%)
5. その他 Other	10 (22.7%)	5 (3.1%)	2 (5.1%)	17 (6.9%)
9. 不明 Unknown	0 (0.0%)	5 (3.1%)	2 (5.1%)	7 (2.9%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)

表 7.2.a.2 初発症状 Initial symptoms

	MCA	MCC	INV-MCC	Total
00. なし No symptom	24 (54.5%)	29 (17.9%)	7 (17.9%)	60 (24.5%)
01. 腹痛 Abdominal pain	11 (25.0%)	58 (35.8%)	10 (25.6%)	79 (32.2%)
02. 体重減少 Body weight loss	0 (0.0%)	6 (3.7%)	0 (0.0%)	6 (2.4%)
03. 嘔吐 Vomiting	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
04. 食思不振 Appetite loss	0 (0.0%)	3 (1.9%)	5 (12.8%)	8 (3.3%)
05. 黄疸 Jaundice	0 (0.0%)	3 (1.9%)	3 (7.7%)	6 (2.4%)
06. 全身倦怠 General fatigue	1 (2.3%)	6 (3.7%)	0 (0.0%)	7 (2.9%)
07. 腫瘍 Abdominal tumor	1 (2.3%)	15 (9.3%)	5 (12.8%)	21 (8.6%)
08. 腰背部痛 Back pain	3 (6.8%)	12 (7.4%)	2 (5.1%)	17 (6.9%)
09. 糖尿病の増悪 Deterioration of diabetes mellitus	0 (0.0%)	15 (9.3%)	3 (7.7%)	18 (7.3%)
10. その他 Other	3 (6.8%)	2 (1.2%)	1 (2.6%)	6 (2.4%)
99. 不明 Unknown	1 (2.3%)	13 (8.0%)	3 (7.7%)	17 (6.9%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)

b. 画像診断 Imaging diagnosis

略語 Abbreviations

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MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.2.b.1 最初の原発巣診断に用いられた診断法 Initial method of diagnosis for primary tumor detection.

	MCA	MCC	INV-MCC	Total
01. 臨床所見 Clinical signs	1 (2.3%)	5 (3.1%)	1 (2.6%)	7 (2.9%)
02. 消化管造影 Barium meal	0 (0.0%)	6 (3.7%)	0 (0.0%)	6 (2.4%)
03. DIC	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
04. ERCP	0 (0.0%)	10 (6.2%)	1 (2.6%)	11 (4.5%)
05. Angiography	0 (0.0%)	2 (1.2%)	0 (0.0%)	2 (0.8%)
06. CT	16 (36.4%)	47 (29.0%)	14 (35.9%)	77 (31.4%)
07. US	18 (40.9%)	73 (45.1%)	17 (43.6%)	108 (44.1%)
08. PTCD	0 (0.0%)	0 (0.0%)	1 (2.6%)	1 (0.4%)
09. MRI	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
10. 内視鏡 Endoscopic findings	1 (2.3%)	0 (0.0%)	0 (0.0%)	1 (0.4%)
11. 腹腔鏡 Laparoscopic findings	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
12. 臓シンチ Scintigraphy	0 (0.0%)	1 (0.6%)	0 (0.0%)	1 (0.4%)
13. SPIO-MRI	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
14. CTAP	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
15. EUS	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
16. IDUS	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
17. PET	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
18. その他 Other	0 (0.0%)	2 (1.2%)	0 (0.0%)	2 (0.8%)
99. 不明 Unknown	8 (18.2%)	16 (9.9%)	5 (12.8%)	29 (11.8%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)

c. 生化学検査 Biochemical examination

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.2.c.1 血中膵酵素濃度 Serum pancreatic enzymes

	異常値を有した症例数/有効回答数 Cases with abnormal values/ Informative cases	有効回答数に対する% % of informative cases
アミラーゼ Serum amylase	47/239	19.7
リパーゼ Serum lipase	22/91	24.2
エラスターゼ I Serum elastase I	9/39	23.1
Total	245	100

表7.2.c.2 膵機能試験 Pancreatic function

	異常値を有した症例数/有効回答数 Cases with abnormal values/ Informative cases	有効回答数に対する% % of informative cases
PS テスト Pancreatic secretin test	7/15	46.7
PFID Pancreatic functional diagnosis test	18/54	33.3
Total	245	100

d. 腫瘍マーカー Tumor markers

略語 Abbreviations

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MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.2.d.1 腫瘍マーカーの異常値頻度 Frequency of abnormal values in tumor markers

	MCA	MCC	INV-MCC	Total
CA19-9	6/40 (15.0%)	24/51 (47.1%)	20/27 (74.1%)	50/118 (42.4%)
CEA	0/36 (0.0%)	48/127 (37.8%)	13/31 (41.9%)	61/194 (31.4%)
DUPAN2	1/15 (6.7%)	2/7 (28.6%)	4/4 (100.0%)	7/26 (26.9%)
SPAN1	2/10 (20.0%)	2/7 (28.6%)	5/5 (100.0%)	9/22 (40.9%)
Total	44	162	39	245

異常値を有した症例数/有効回答数 Cases with abnormal values/ Informative cases

図 7.2.d.2 粘液性嚢胞腫瘍における CEA と CA19-9 との相関 Correlation of CEA with CA19-9 in patients with MCN

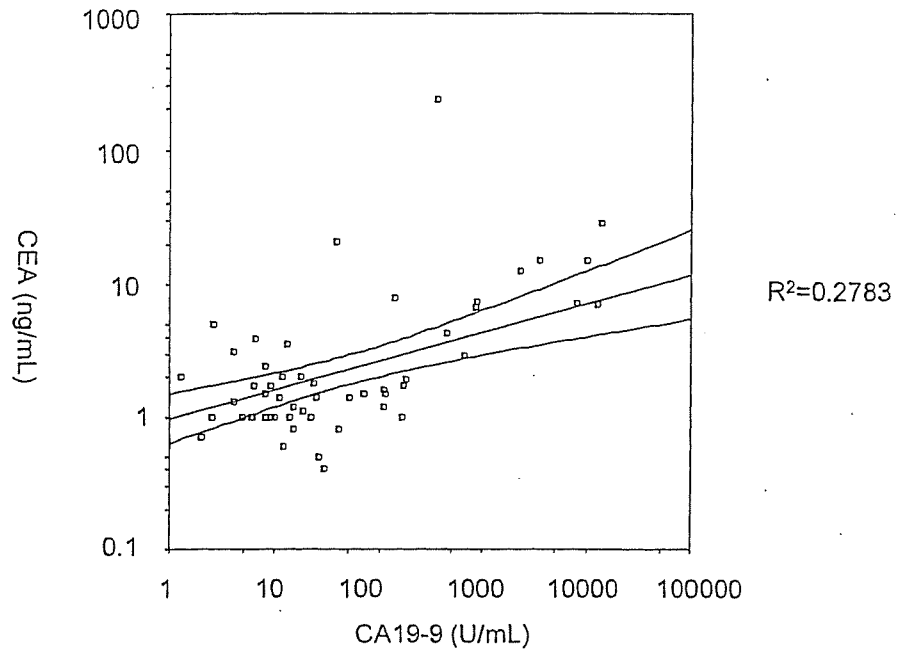


図 7.2.d.3 粘液性嚢胞腫瘍における DUPAN2 と CA19-9 との相関 Correlation of DUPAN2 with CA19-9 in patients with MCN

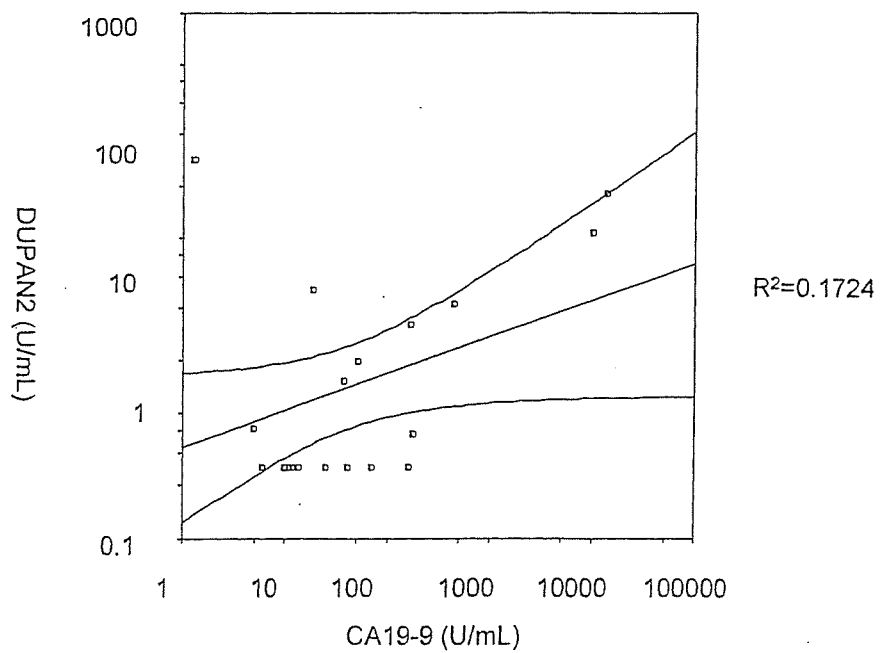


図 7.2.d.4 粘液性囊胞腫瘍における SPAN1 と CA19-9 との相関 Correlation of SPAN1 with CA19-9 in patients with MCN

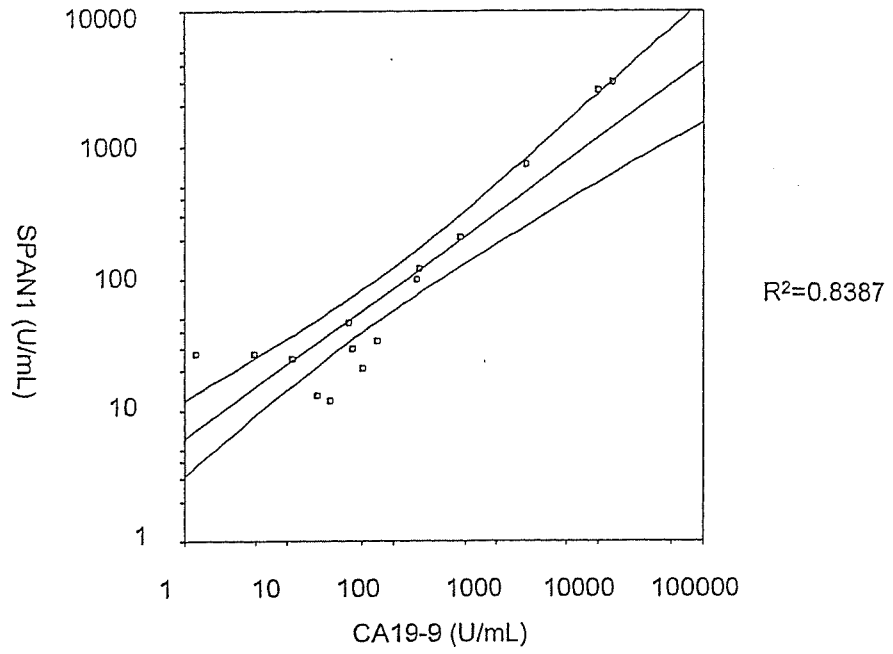


図 7.2.d.5 CA19-9 と膵管内腫瘍組織型分類の相関 Correlation of CA19-9 and histological classification of MCN

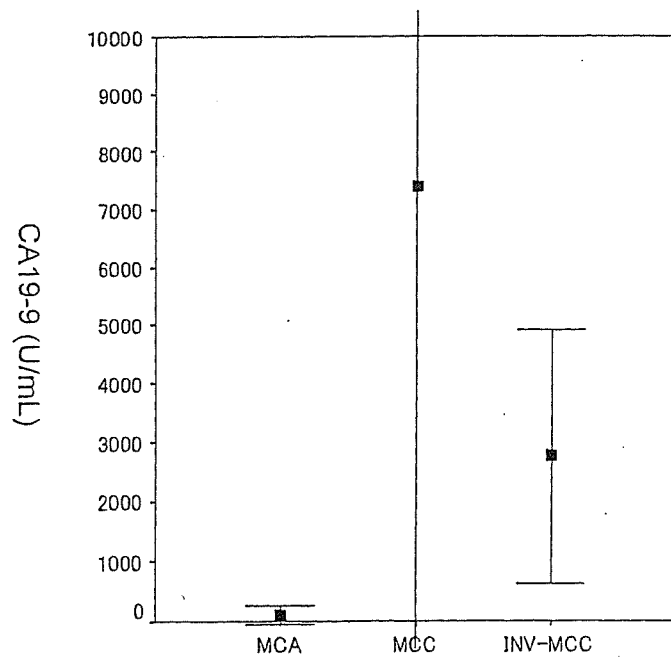


図 7.2.d.6 CEA と膵管内腫瘍組織型分類の相関 Correlation of CEA and histological classification of MCN

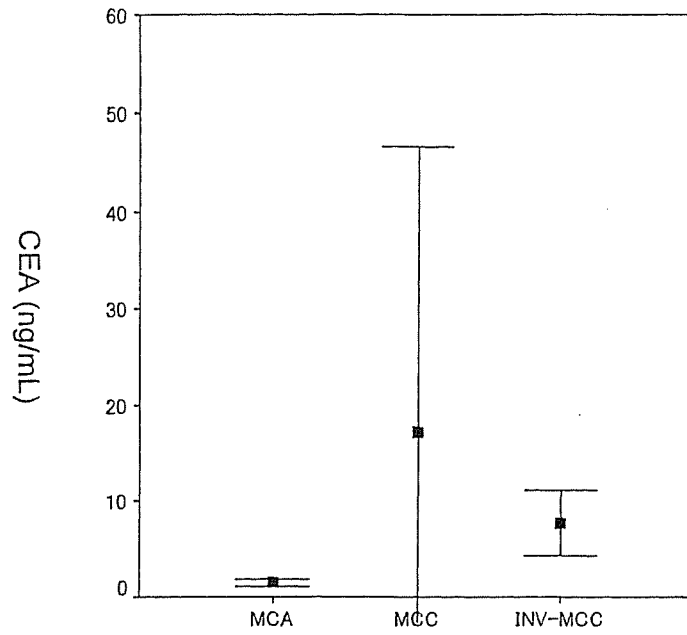


図 7.2.d.7 DUPAN2 と膵管内腫瘍組織型分類の相関 Correlation of DUPAN2 and histological classification of MCN

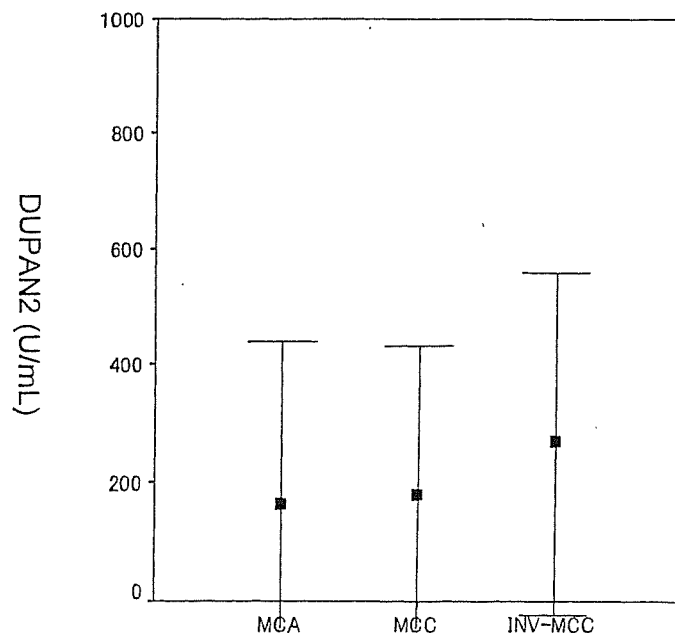
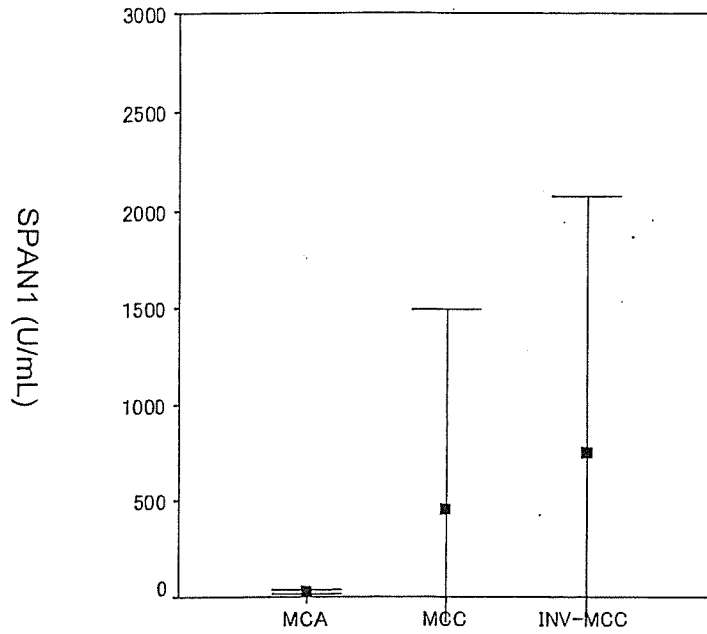


図 7.2.d.8 SPAN1 と膵管内腫瘍組織型分類の相関 Correlation of SPAN1 and histological classification of MCN



III. 進展度 Extend of the tumor

a. 病巣の数と占拠部位 Number and locus of the primary tumor

略語 Abbreviations

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MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma

MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma

INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.3.a.1 病巣の数 Number of the primary tumor

	MCA	MCC	INV-MCC	Total
1. 単発 Single lesion	42 (100.0%)	139 (93.3%)	33 (94.3%)	214 (94.7%)
2. 多発 Multiple lesions	0 (0.0%)	10 (6.7%)	2 (5.7%)	12 (5.3%)
Total	42 (100.0%)	149 (100.0%)	35 (100.0%)	226 (100.0%)

表 7.3.a.2 腫瘍の占拠部位 Locus of the main tumor

	MCA	MCC	INV-MCC	Total
膵頭部 Pancreatic head	5 (11.4%)	49 (31.6%)	11 (30.6%)	65 (27.7%)
膵体尾部 Body and tail	35 (79.5%)	62 (40.0%)	16 (44.4%)	113 (48.1%)
2 区域以上 Two areas	4 (9.1%)	38 (24.5%)	7 (19.4%)	49 (20.9%)
膵全体 Whole pancreas	0 (0.0%)	6 (3.9%)	2 (5.6%)	8 (3.4%)
Total	44 (100.0%)	155 (100.0%)	36 (100.0%)	235 (100.0%)

b. 局所進展度 Local extent

略語 Abbreviations

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 MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
 MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
 INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.3.b.1 浸達度 Depth of infiltration

	MCA	MCC	INV-MCC	Total
1. 上皮内 In situ carcinoma	17 (100.0%)	14 (28.6%)	0 (0.0%)	31 (29.5%)
2. 微小浸潤あり Microscopic invasion	0 (0.0%)	13 (26.5%)	0 (0.0%)	13 (12.4%)
3. 浸潤癌 Invasive cancer	0 (0.0%)	22 (44.9%)	39 (100.0%)	61 (58.1%)
Total	17 (100.0%)	49 (100.0%)	39 (100.0%)	105 (100.0%)

表 7.3.b.2 腫瘍の大きさ Size of the primary tumor

	MCA	MCC	INV-MCC	Total
1. TS1 (≤ 2.0 cm)	5 (12.8%)	13 (9.1%)	2 (6.3%)	20 (9.3%)
2. TS2 (2.1- 4.0 cm)	11 (28.2%)	31 (21.7%)	4 (12.5%)	46 (21.5%)
3. TS3 (4.1- 6.0 cm)	12 (30.8%)	27 (18.9%)	13 (40.6%)	52 (24.3%)
4. TS4 (> 6.0 cm)	11 (28.2%)	72 (50.3%)	13 (40.6%)	96 (44.9%)
Total	39 (100.0%)	143 (100.0%)	32 (100.0%)	214 (100.0%)

表 7.3.b.3 嚢胞の大きさ Size of the cystic lesion

	MCA	MCC	INV-MCC	Total
0.1- 1.0 cm	2 (5.1%)	0 (0.0%)	0 (0.0%)	2 (3.3%)
1.1- 2.0 cm	5 (12.8%)	2 (16.7%)	1 (11.1%)	8 (13.3%)
2.0- 3.0 cm	3 (7.7%)	2 (16.7%)	0 (0.0%)	5 (8.3%)
3.1- 4.0 cm	4 (10.3%)	0 (0.0%)	1 (11.1%)	5 (8.3%)
4.1- 5.0 cm	11 (28.2%)	1 (8.3%)	1 (11.1%)	13 (21.7%)
5.1- 6.0 cm	1 (2.6%)	0 (0.0%)	3 (33.3%)	4 (6.7%)
6.1-10.0 cm	9 (23.1%)	4 (33.3%)	2 (22.2%)	15 (25.0%)
> 10.1 cm	4 (10.3%)	3 (25.0%)	1 (11.1%)	8 (13.3%)
Total	39 (100.0%)	12 (100.0%)	9 (100.0%)	60 (100.0%)

図 7.3.b.4 嚢胞の大きさ分布 Distribution of the size of the cystic lesion

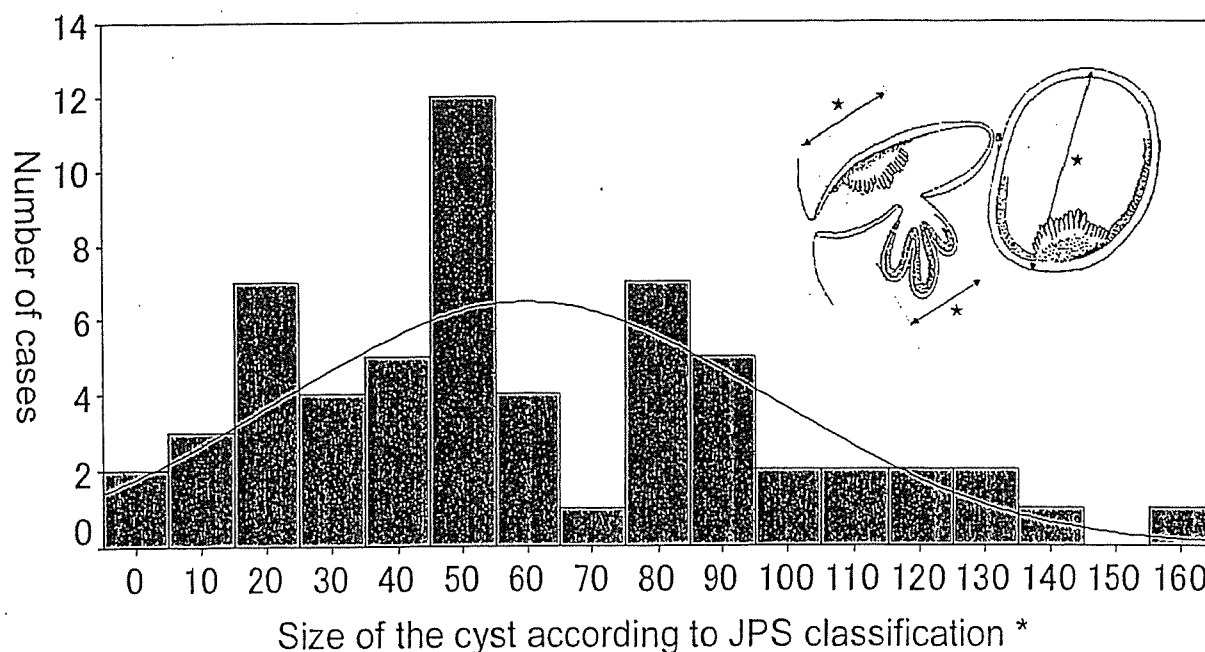


表 7.3.b.5 腫瘍の肉眼的形態 Macroscopic appearance of the primary tumor

	MCA	MCC	INV-MCC	Total
1. 潜在型 Masked	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
2. 結節型 Nodular	1 (2.5%)	9 (12.5%)	8 (28.6%)	18 (12.9%)
3. 浸潤型 Invasive	0 (0.0%)	3 (4.2%)	2 (7.1%)	5 (3.6%)
4. 嚢胞型 Cystic	39 (97.5%)	53 (73.6%)	18 (64.3%)	110 (78.6%)
5. 膵管拡張型 Ductectatic	0 (0.0%)	2 (2.8%)	0 (0.0%)	2 (1.4%)
6. 混合型 Mixed	0 (0.0%)	4 (5.6%)	0 (0.0%)	4 (2.9%)
7. 分類不能 Unclassified	0 (0.0%)	1 (1.4%)	0 (0.0%)	1 (0.7%)
Total	40 (100.0%)	72 (100.0%)	28 (100.0%)	140 (100.0%)

表 7.3.b.6 膵内胆管浸潤 Bile duct infiltration

	MCA	MCC	INV-MCC	Total
0. CH(-) Without invasion	40 (97.6%)	130 (90.9%)	20 (62.5%)	190 (88.0%)
1. CH(+) With invasion	1 (2.4%)	13 (9.1%)	12 (37.5%)	26 (12.0%)
Total	41 (100.0%)	143 (100.0%)	32 (100.0%)	216 (100.0%)

表 7.3.b.7 十二指腸浸潤 Duodenal infiltration

	MCA	MCC	INV-MCC	Total
0. CH(-) Without invasion	42 (100.0%)	132 (94.3%)	27 (79.4%)	201 (93.1%)
1. CH(+) With invasion	0 (0.0%)	8 (5.7%)	7 (20.6%)	15 (6.9%)
Total	42 (100.0%)	140 (100.0%)	34 (100.0%)	216 (100.0%)

表 7.3.b.8 膵前面被膜浸潤 Serosal infiltration

	MCA	MCC	INV-MCC	Total
0. S(-) Without invasion	41 (100.0%)	94 (63.9%)	12 (35.3%)	147 (66.2%)
1. S(+) With invasion	0 (0.0%)	53 (36.1%)	22 (64.7%)	75 (33.8%)
Total	41 (100.0%)	147 (100.0%)	34 (100.0%)	222 (100.0%)

表 7.3.b.9 膵後方組織浸潤 Retroperitoneal infiltration

	MCA	MCC	INV-MCC	Total
0. RP(-) Without invasion	41 (100.0%)	101 (74.3%)	14 (41.2%)	156 (73.9%)
1. RP(+) With invasion	0 (0.0%)	35 (25.7%)	20 (58.8%)	55 (26.1%)
Total	41 (100.0%)	136 (100.0%)	34 (100.0%)	211 (100.0%)

表 7.3.b.10 門脈系静脈浸潤 Portal venous system infiltration

	MCA	MCC	INV-MCC	Total
0. PV(-) Without invasion	41 (100.0%)	119 (83.2%)	20 (58.8%)	180 (82.6%)
1. PV(+) With invasion	0 (0.0%)	24 (16.8%)	14 (41.2%)	38 (17.4%)
Total	41 (100.0%)	143 (100.0%)	34 (100.0%)	218 (100.0%)

表 7.3.b.11 動脈浸潤 Arterial infiltration

	MCA	MCC	INV-MCC	Total
0. A(-) Without invasion	41 (100.0%)	117 (83.6%)	28 (82.4%)	186 (86.5%)
1. A(+) With invasion	0 (0.0%)	23 (16.4%)	6 (17.6%)	29 (13.5%)
Total	41 (100.0%)	140 (100.0%)	34 (100.0%)	215 (100.0%)

表 7.3.b.12 神経叢浸潤 Plexus infiltration

	MCA	MCC	INV-MCC	Total
0. PL(-) Without invasion	41 (100.0%)	110 (93.2%)	25 (83.3%)	176 (93.1%)
1. PL(+) With invasion	0 (0.0%)	8 (6.8%)	5 (16.7%)	13 (6.9%)
Total	41 (100.0%)	118 (100.0%)	30 (100.0%)	189 (100.0%)

表 7.3.b.13 他臓器浸潤 Infiltration to the other organs

	MCA	MCC	INV-MCC	Total
0. OO(-) Without invasion	41 (100.0%)	123 (82.6%)	22 (62.9%)	186 (82.7%)
1. OO(+) With invasion	0 (0.0%)	26 (17.4%)	13 (37.1%)	39 (17.3%)
Total	41 (100.0%)	149 (100.0%)	35 (100.0%)	225 (100.0%)

表 7.3.b.14 JPS T 因子 JPS T factor

	MCA	MCC	INV-MCC	Total
JPS-Tis	17 (41.5%)	13 (9.6%)	0 (0.0%)	30 (14.2%)
JPS-T1	0 (0.0%)	8 (5.9%)	1 (2.9%)	9 (4.3%)
JPS-T2	23 (56.1%)	56 (41.5%)	2 (5.7%)	81 (38.4%)
JPS-T3	1 (2.4%)	17 (12.6%)	8 (22.9%)	26 (12.3%)
JPS-T4	0 (0.0%)	41 (30.4%)	24 (68.6%)	65 (30.8%)
Total	41 (100.0%)	135 (100.0%)	35 (100.0%)	211 (100.0%)

表 7.3.b.15 UICC T 因子 UICC T factor

	MCA	MCC	INV-MCC	Total
UICC-Tis				
UICC-T1				
UICC-T2				
UICC-T3				
UICC-T4				
Total				

図 7.3.b.16 JPS T 因子ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by JPS T factors

	n	MST	1-yr	3-yr	5-yr	
○-○ JPS T0	30	>138.0	100	89.2	76.4	} N.S.
●-● JPS T1	9	>140.0	100	100	100	
△-△ JPS T2	80	>140.0	94.5	90.0	86.4	} p=0.0003
▲-▲ JPS T3	25	60.2	79.8	61.2	45.7	
□-□ JPS T4	65	10.0	42.8	19.5	19.5	} p=0.0006

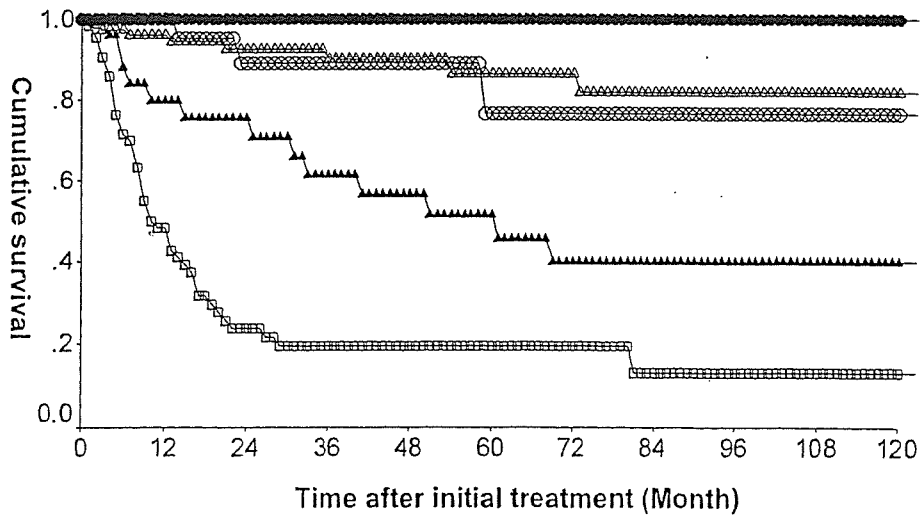
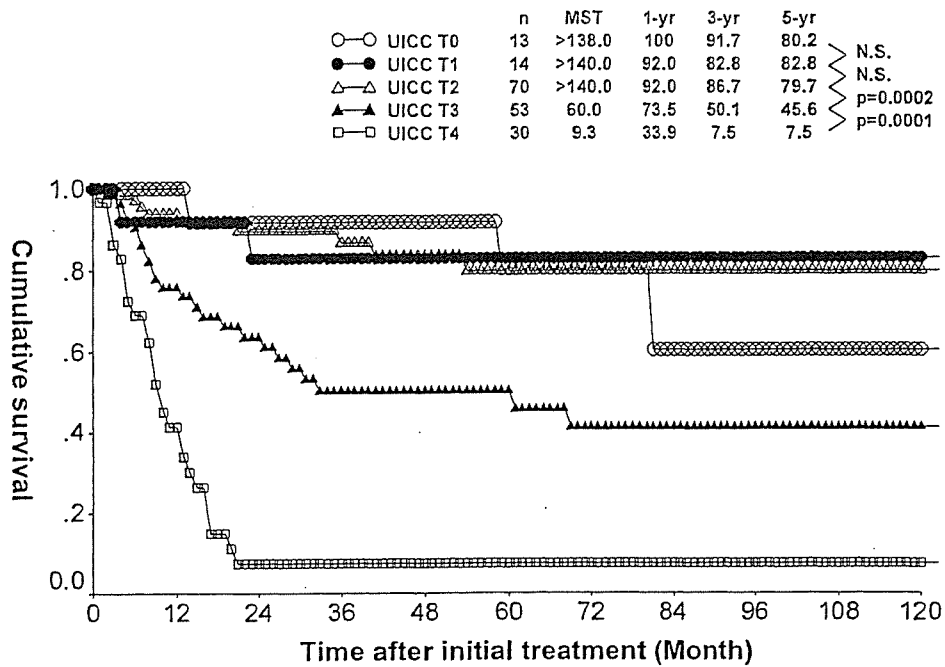


図 7.3.b.17 UICC T 因子ごとにみた粘液性嚢胞腫瘍の生存率 Survival of the patients with MCN by UICC T factors



c. リンパ節転移 Lymph node metastasis

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.3.c.1 JPS N 因子 JPS N factor

	MCA	MCC	INV-MCC	Total
JPS-N0	38 (97.4%)	82 (76.6%)	12 (50.0%)	132 (77.6%)
JPS-N1	1 (2.6%)	3 (2.8%)	6 (25.0%)	10 (5.9%)
JPS-N2	0 (0.0%)	4 (3.7%)	4 (16.7%)	8 (4.7%)
JPS-N3	0 (0.0%)	18 (16.8%)	2 (8.3%)	20 (11.8%)
Total	39 (100.0%)	107 (100.0%)	24 (100.0%)	170 (100.0%)

表 7.3.c.2 UICC N 因子 UICC N factor

	MCA	MCC	INV-MCC	Total
UICC-N0	40 (97.6%)	85 (77.3%)	14 (53.8%)	139 (78.5%)
UICC-N1	1 (2.4%)	25 (22.7%)	12 (46.2%)	38 (21.5%)
Total	41 (100.0%)	110 (100.0%)	26 (100.0%)	177 (100.0%)

図 7.3.c.3 JPS N 因子ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by JPS N factors

	n	MST	1-yr	3-yr	5-yr	
○-○ JPS N0	129	>140	93.3	84.0	76.3	} p=0.00128. } N.S. } N.S.
●-● JPS N1	10	21.1	88.9	19.5	-	
△-△ JPS N2	8	4.8	43.3	-	-	
▲-▲ JPS N3	20	10.0	40.0	11.7	-	

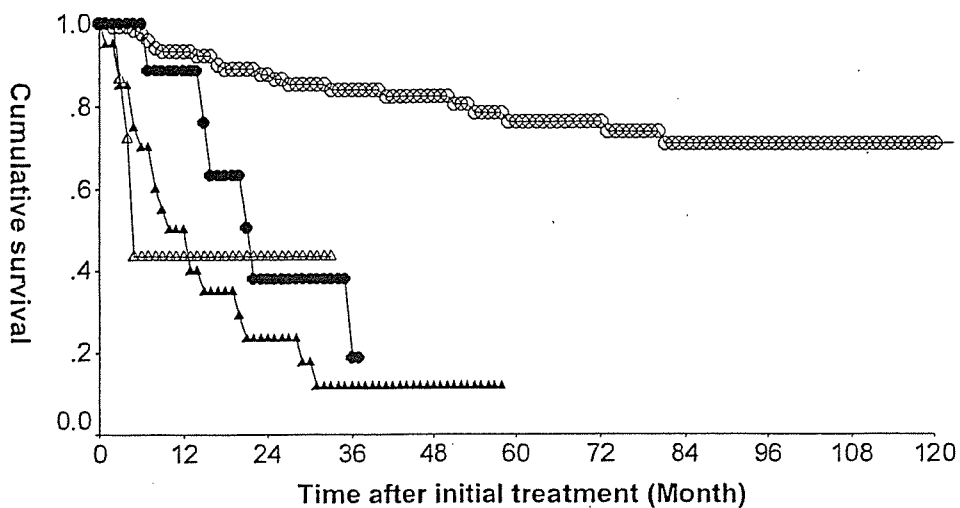
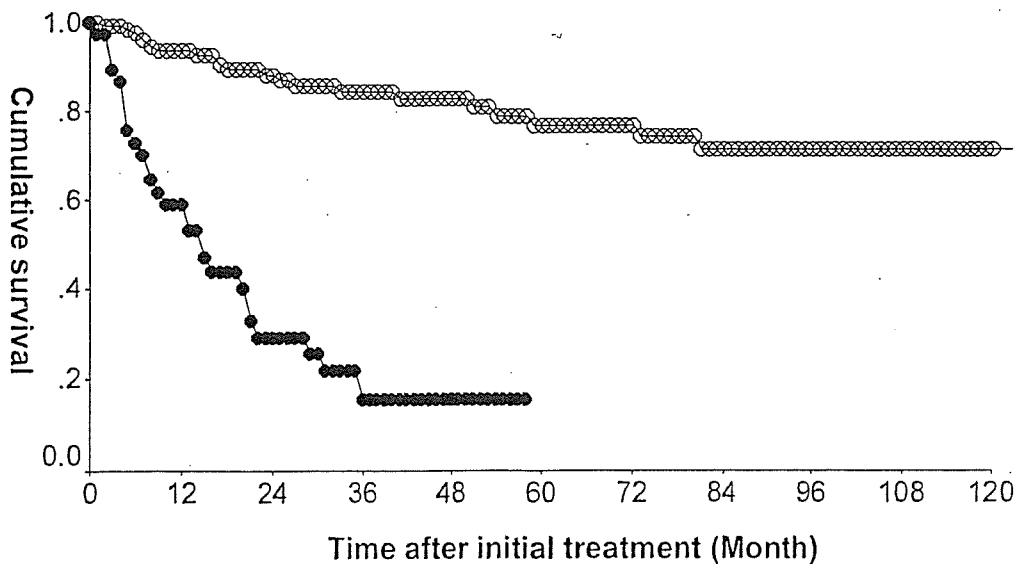


図 7.3.c.4 UICC N 因子ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by UICCN factors

	n	MST	1-yr	3-yr	5-yr	
○-○ UICC N0	136	>140	93.5	84.3	76.6	} p<0.0001
●-● UICC N1	38	>14.5	53.0	15.6	-	



d. 遠隔転移 Distant metastasis

略語 Abbreviations

MCN: Mucinous cystic neoplasms
MCA: 02a. 粘液性嚢胞腺腫 Mucinous cystadenoma
MCC: 02b. 粘液性嚢胞腺癌 Mucinous cystadenocarcinoma
INV-MCC: 14. 浸潤性粘液性嚢胞腺癌 Invasive mucinous cystadenocarcinoma

表 7.3.d.1 JPS M 因子 JPS M factor

	MCA	MCC	INV-MCC	Total
JPS-M0	44 (100.0%)	119 (76.3%)	26 (72.2%)	189 (80.1%)
JPS-M1	0 (0.0%)	37 (23.7%)	10 (27.8%)	47 (19.9%)
Total	44 (100.0%)	156 (100.0%)	36 (100.0%)	236 (100.0%)

表 7.3.d.2 UICC M 因子 UICC M factor

	MCA	MCC	INV-MCC	Total
UICC-M0	43 (100.0%)	117 (75.0%)	27 (73.0%)	187 (79.2%)
UICC-M1	0 (0.0%)	39 (25.0%)	10 (27.0%)	49 (20.8%)
Total	43 (100.0%)	156 (100.0%)	37 (100.0%)	236 (100.0%)

図 7.3.d.3 JPS M 因子ごとにみた粘液性嚢胞腫瘍の生存率 Survival of the patients with MCN by JPS M factors

