

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	-	

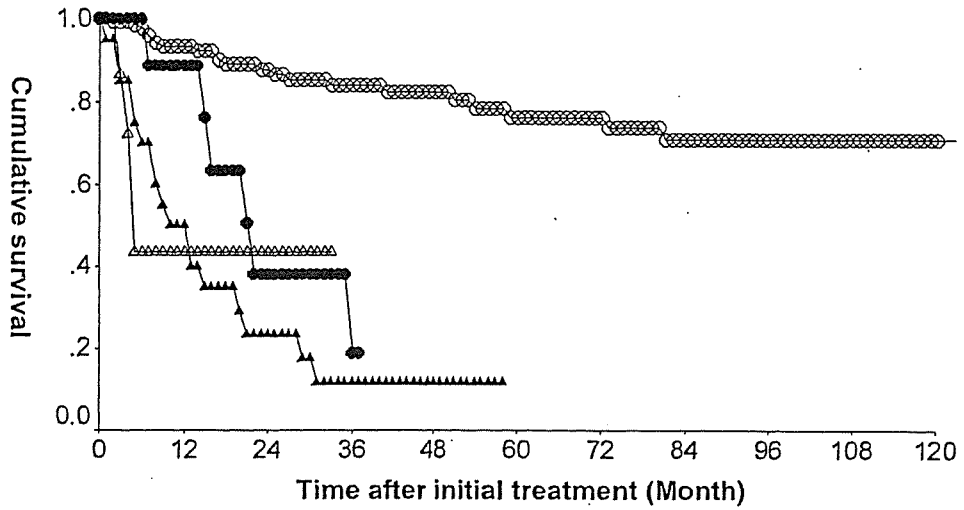
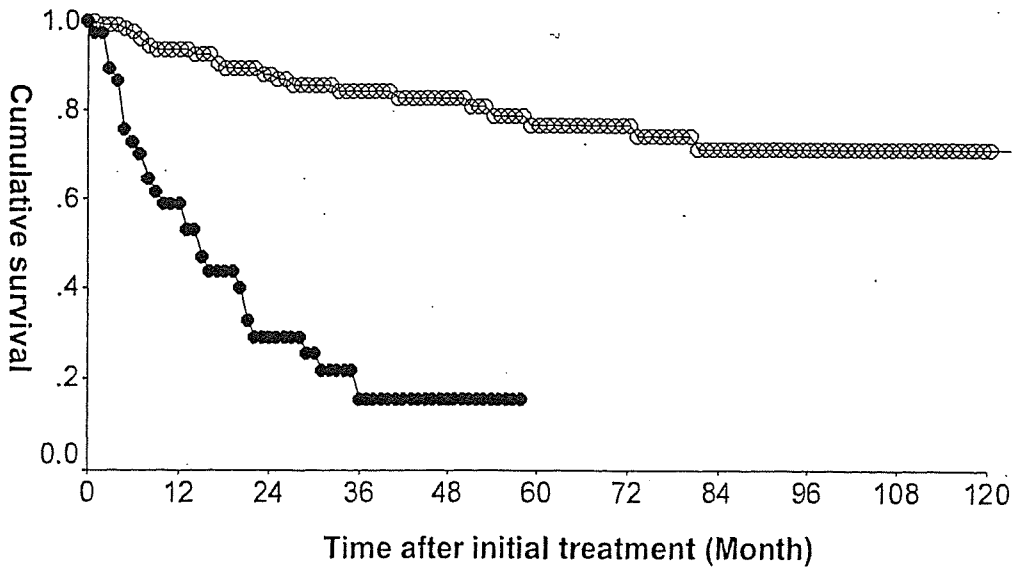


図 7.3.c.4 UICC N 因子ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by UICCN factors

	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

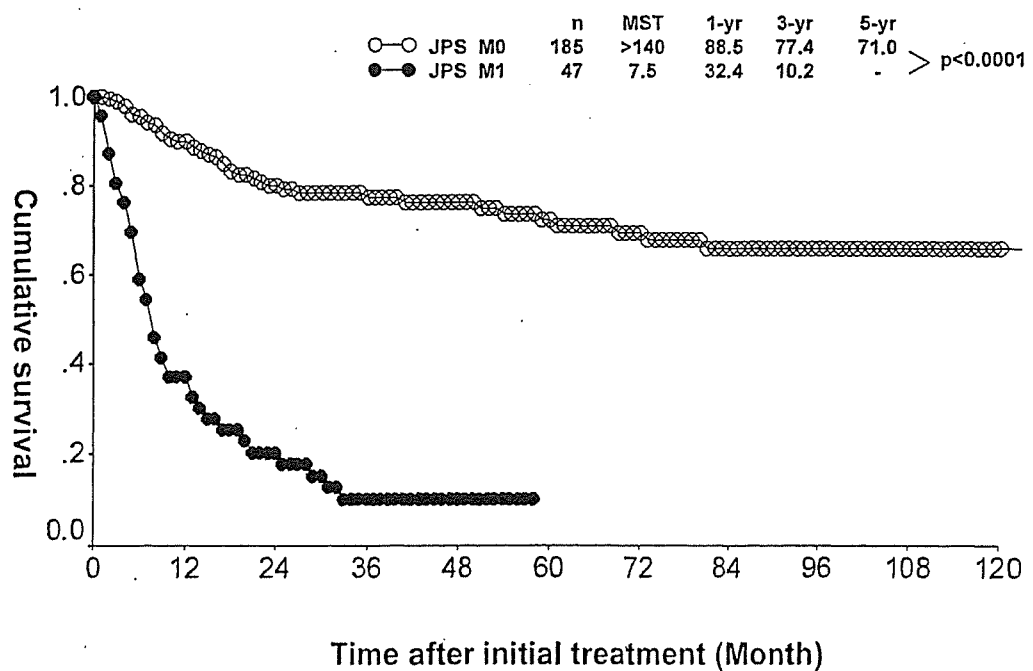
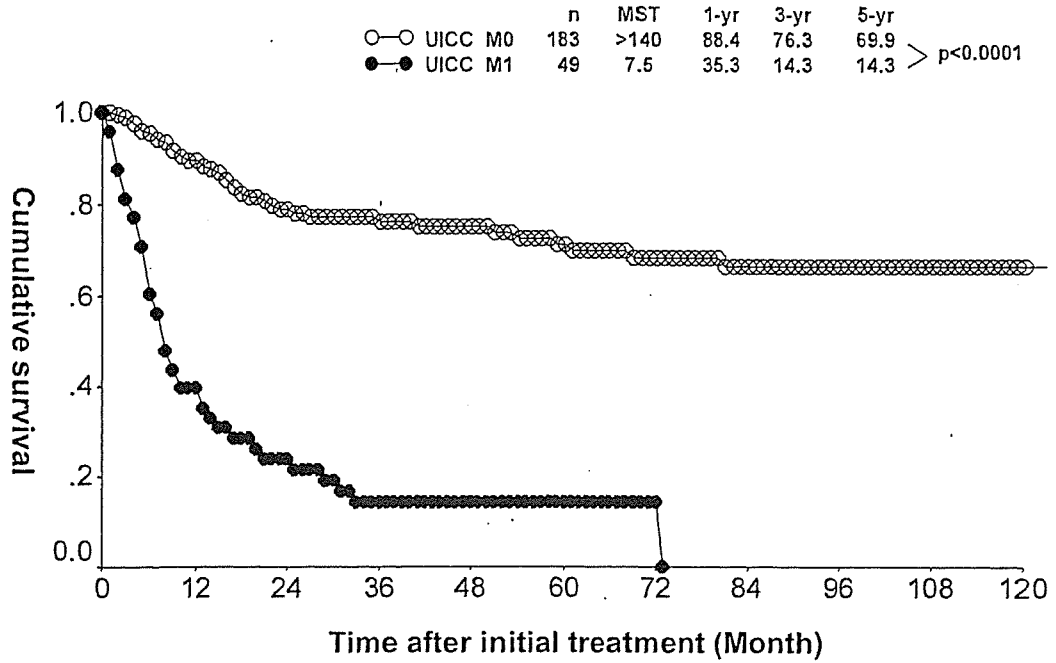


図 7.3.d.4 UICC M 因子ごとにみた粘液性嚢胞腫瘍の生存率 Survival of the patients with MCN by UICC M factors



e. 病期分類 Stage

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.e.1 JPS Stage

	MCA	MCC	INV-MCC	Total
JPS-Stage 0	14 (38.9%)	10 (8.9%)	0 (0.0%)	24 (13.6%)
JPS-Stage I	0 (0.0%)	8 (7.1%)	1 (3.4%)	9 (5.1%)
JPS-Stage II	21 (58.3%)	36 (32.1%)	1 (3.4%)	58 (32.8%)
JPS-Stage III	1 (2.8%)	12 (10.7%)	5 (17.2%)	18 (10.2%)
JPS-Stage IVa	0 (0.0%)	8 (7.1%)	10 (34.5%)	18 (10.2%)
JPS-Stage IVb	0 (0.0%)	38 (33.9%)	12 (41.4%)	50 (28.2%)
Total	36 (100.0%)	112 (100.0%)	29 (100.0%)	177 (100.0%)

JSTNUM ,AE hisgroup ,I,0%*¥

表 7.3.e.2 UICC Stage

	MCA	MCC	INV-MCC	Total
UICC-Stage 0	3 (12.5%)	8 (7.0%)	0 (0.0%)	11 (6.5%)
UICC-Stage Ia	4 (16.7%)	8 (7.0%)	0 (0.0%)	12 (7.1%)
UICC-Stage Ib	13 (54.2%)	32 (28.1%)	3 (9.4%)	48 (28.2%)
UICC-Stage IIa	3 (12.5%)	15 (13.2%)	7 (21.9%)	25 (14.7%)
UICC-Stage IIb	1 (4.2%)	4 (3.5%)	8 (25.0%)	13 (7.6%)
UICC-Stage III	0 (0.0%)	8 (7.0%)	4 (12.5%)	12 (7.1%)
UICC-Stage IV	0 (0.0%)	39 (34.2%)	10 (31.3%)	49 (28.8%)
Total	24 (100.0%)	114 (100.0%)	32 (100.0%)	170 (100.0%)

図 7.3.e.3 JPS Stage ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by JPS Stage

	n	MST	1-yr	3-yr	5-yr	
○-○ JPS Stage 0	24	>138.0	100	86.7	72.3	N.S.
●-● JPS Stage I	9	>140.0	100	100	100	
△-△ JPS Stage II	58	>140.0	98.2	98.2	92.1	p=0.0006
▲-▲ JPS Stage III	17	50.2	88.3	65.6	49.2	N.S.
□-□ JPS Stage IVa	18	26.2	81.3	44.3	44.3	p=0.0021
■-■ JPS Stage IVb	50	7.5	33.3	10.6	-	

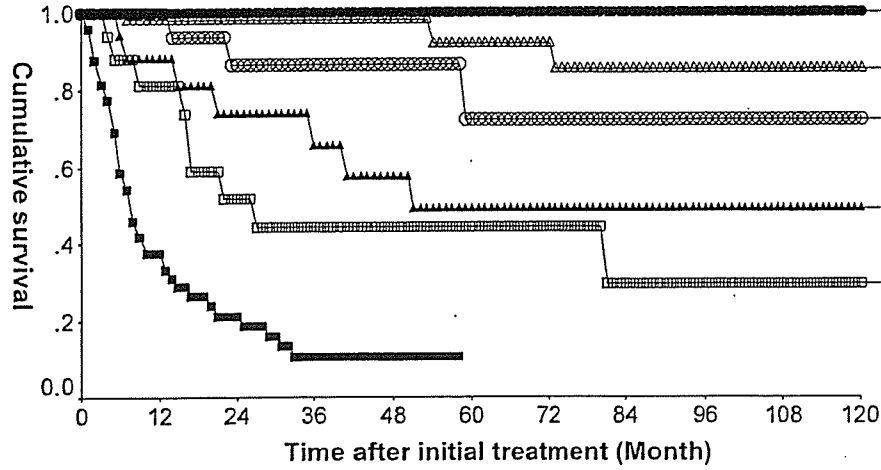
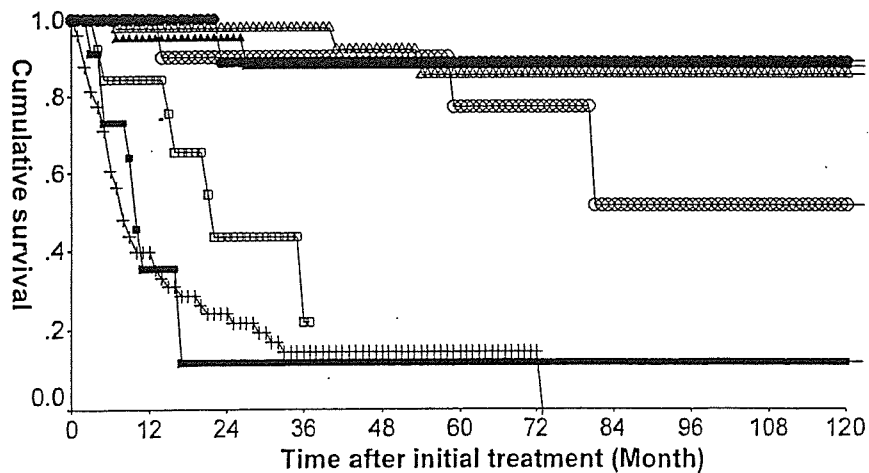


図 7.3.e.4 UICC Stage ごとにみた粘液性囊胞腫瘍の生存率 Survival of the patients with MCN by UICC Stage

	n	MST	1-yr	3-yr	5-yr	
○-○ UICC Stage 0	24	>138.0	100	86.7	72.3	N.S.
●-● UICC Stage Ia	9	>140.0	100	100	100	
△-△ UICC Stage Ib	58	>140.0	98.2	98.2	92.1	p=0.0006
▲-▲ UICC Stage IIa	17	50.2	88.3	65.6	49.2	N.S.
□-□ UICC Stage IIb	18	26.2	81.3	44.3	44.3	p=0.0021
■-■ UICC Stage III	50	7.5	33.3	10.6	-	
+ + UICC Stage IV	50	7.5	33.3	10.6	-	



IV. 手術治療 Surgical treatment

a. 治療法 Trend of treatment

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 7.4.a.1 組織型分類ごとの治療法 Treatment according to the histological classification

	MCA	MCC	INV-MCC	Total
1. 膵切除術 Pancreatectomy	41 (93.2%)	135 (83.3%)	32 (82.1%)	208 (84.9%)
2. 姑息手術 Palliative operation	0 (0.0%)	11 (6.8%)	2 (5.1%)	13 (5.3%)
3. 単開腹 Exploratory laparotomy	0 (0.0%)	5 (3.1%)	1 (2.6%)	6 (2.4%)
4. 非手術 No surgical treatment	3 (6.8%)	9 (5.6%)	3 (7.7%)	15 (6.1%)
5. 非手術剖検 Autopsy cases	0 (0.0%)	2 (1.2%)	1 (2.6%)	3 (1.2%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)
切除率 Rate of pancreatectomy	93.2%	83.3%	82.1%	84.9%

表 7.4.a.2 占拠部位別にみた治療法 Treatment according to the locus of primary tumor

	膵頭部 Pancreatic head	膵体尾部 Pancreatic body and tail	2区域 Two areas of the pancreas	膵全体 Whole pancreas	Total
1. 膵切除術 Pancreatectomy	56 (86.2%)	105 (92.9%)	42 (85.7%)	5 (62.5%)	208 (88.5%)
2. 姑息手術 Palliative operation	3 (4.6%)	4 (3.5%)	3 (6.1%)	2 (25.0%)	12 (5.1%)
3. 単開腹 Exploratory laparotomy	1 (1.5%)	2 (1.8%)	3 (6.1%)	0 (0.0%)	6 (2.6%)
4. 非手術 No surgical treatment	5 (7.7%)	2 (1.8%)	1 (2.0%)	1 (12.5%)	9 (3.8%)
Total	65 (100.0%)	113 (100.0%)	49 (100.0%)	8 (100.0%)	235 (100.0%)
切除率 Rate of pancreatectomy	86.2%	92.9%	85.7%	62.5%	88.5%

b. 膵切除術 Pancreatectomy

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 7.4.b.1 膵切除の種類 Method of pancreatectomy

	MCA	MCC	INV-MCC	Total
01. TP (total pancreatectomy)	0 (0.0%)	5 (3.1%)	4 (10.3%)	9 (3.7%)
02. PD (pancreaticoduodenectomy)	0 (0.0%)	28 (17.3%)	9 (23.1%)	37 (15.1%)
03. PD (subtotal 二区域以上)	0 (0.0%)	1 (0.6%)	0 (0.0%)	1 (0.4%)
04. PPPD (pylorus-preserving PD)	0 (0.0%)	11 (6.8%)	0 (0.0%)	11 (4.5%)
05. SSPPD (subtotal stomach-preserving PD)	0 (0.0%)	0 (0.0%)	1 (2.6%)	1 (0.4%)
06. DPPHR (duodenum-preserving pancreatic head resection)	0 (0.0%)	2 (1.2%)	0 (0.0%)	2 (0.8%)
07. DP (tail) (distal pancreatectomy)	9 (20.5%)	11 (6.8%)	3 (7.7%)	23 (9.4%)
08. DP (body-tail)	24 (54.5%)	63 (38.9%)	13 (33.3%)	100 (40.8%)
09. DP (subtotal 二区域以上)	2 (4.5%)	3 (1.9%)	2 (5.1%)	7 (2.9%)
10. SPDP (spleen-preserving DP)	2 (4.5%)	1 (0.6%)	0 (0.0%)	3 (1.2%)
11. MP (middle pancreatectomy)	1 (2.3%)	3 (1.9%)	0 (0.0%)	4 (1.6%)
12. PR (partial resection)	1 (2.3%)	0 (0.0%)	0 (0.0%)	1 (0.4%)
13. その他 Others	2 (4.5%)	3 (1.9%)	0 (0.0%)	5 (2.0%)
99. 不明 Unknown	3 (6.8%)	31 (19.1%)	7 (17.9%)	41 (16.7%)
Total	44 (100.0%)	162 (100.0%)	39 (100.0%)	245 (100.0%)

表 7.4.b.2 占拠部位別にみた膵切除の種類 Pancreatectomy according to the locus of primary tumor

	膵頭部 Pancreatic head	膵体尾部 Pancreatic body and tail	2区域 Two areas of the pancreas	膵全体 Whole pancreas	Total
01. TP (total pancreatectomy)	2 (3.1%)	1 (0.9%)	2 (4.1%)	4 (50.0%)	9 (3.8%)
02. PD (pancreaticoduodenectomy)	34 (52.3%)	1 (0.9%)	2 (4.1%)	0 (0.0%)	37 (15.7%)
03. PD (subtotal 二区域以上)	0 (0.0%)	1 (0.9%)	0 (0.0%)	0 (0.0%)	1 (0.4%)
04. PPPD (pylorus-preserving PD)	10 (15.4%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	11 (4.7%)
05. SSPPD (subtotal stomach-preserving PD)	1 (1.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.4%)
06. DPPHR (duodenum-preserving pancreatic head resection)	2 (3.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (0.9%)
07. DP (tail) (distal pancreatectomy)	0 (0.0%)	22 (19.5%)	1 (2.0%)	0 (0.0%)	23 (9.8%)
08. DP (body-tail)	0 (0.0%)	68 (60.2%)	31 (63.3%)	1 (12.5%)	100 (42.6%)
09. DP (subtotal 二区域以上)	0 (0.0%)	3 (2.7%)	4 (8.2%)	0 (0.0%)	7 (3.0%)
10. SPDP (spleen-preserving DP)	0 (0.0%)	3 (2.7%)	0 (0.0%)	0 (0.0%)	3 (1.3%)
11. MP (middle pancreatectomy)	2 (3.1%)	2 (1.8%)	0 (0.0%)	0 (0.0%)	4 (1.7%)
12. PR (partial resection)	1 (1.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.4%)
13. その他 Others	2 (3.1%)	2 (1.8%)	1 (2.0%)	0 (0.0%)	5 (2.1%)
99. 不明 Unknown	11 (16.9%)	10 (8.8%)	7 (14.3%)	3 (37.5%)	31 (13.2%)
Total	65 (100.0%)	113 (100.0%)	49(100.0%)	8 (100.0%)	235 (100.0%)

表 7.4.b.3 年別にみた膵切除の種類 Yearly trend of pancreatectomy

Year	TP	PD, subtotal PD, PPPD, SSPPD	DPPHR	DP, subtotal DP, spleen preserving DP	MP, PR	Total
1981	1	0	0	2	0	3
1982	0	0	0	1	0	1
1983	1	0	0	4	0	5
1984	1	2	0	4	0	7
1985	0	1	0	1	0	2
1986	2	3	0	4	0	9
1987	1	7	0	3	0	11
1988	0	2	0	6	0	8
1989	0	5	0	2	0	7
1990	0	2	0	4	0	6
1991	0	0	0	3	0	3
1992	0	2	0	6	0	8
1993	1	3	0	6	0	10
1994	0	3	0	7	0	10
1995	0	5	1	5	2	13
1996	0	5	0	4	1	10
1997	0	2	0	2	0	4
1998	2	2	1	4	0	9
1999	0	0	0	3	0	3
2000	0	1	0	1	0	2
2001	0	3	0	16	1	20
2002	0	0	0	13	0	13
2003	0	2	0	13	1	16
2004	0	0	0	19	0	19
Total	9	50	2	133	5	199

c. 癌遺残の評価 Evaluation of residual cancer

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 7.4.c.1 膵切除断端における癌浸潤 Infiltration of cancer cells at pancreatic cut end margin (PCM)

	MCA	MCC	INV-MCC	Total
0. PCM 陰性 PCM negative	36 (100.0%)	115 (93.5%)	25 (92.6%)	176 (94.6%)
1. PCM 陽性 PCM positive	0 (0.0%)	8 (6.5%)	2 (7.4%)	10 (5.4%)
Total	36 (100.0%)	123 (100.0%)	27 (100.0%)	186 (100.0%)

表 7.4.c.2 術式とPCM Procedure of pancreatectomy and PCM

	TP	PD, subtotal PD, PPPD, SSPPD	DPPHR	DP, subtotal DP, spleen preserving DP	MP, PR	Total
0. PCM 陰性 PCM negative	6 (100.0%)	43 (95.6%)	2 (100.0%)	116 (94.3%)	5 (100.0%)	172 (95.0%)
1. PCM 陽性 PCM positive	0 (0.0%)	2 (4.4%)	0 (0.0%)	7 (5.7%)	0 (0.0%)	9 (5.0%)
Total	6 (100.0%)	45 (100.0%)	2 (100.0%)	123 (100.0%)	5 (100.0%)	181 (100.0%)

表 7.4.c.3 胆管切除断端における癌浸潤 Infiltration of cancer cells at bile duct cut end margin (BCM)

	MCA	MCC	INV-MCC	Total
0. BCM 陰性 BCM negative	24 (100.0%)	89 (98.9%)	19 (100.0%)	132 (99.2%)
1. BCM 陽性 BCM positive	0 (0.0%)	1 (1.1%)	0 (0.0%)	1 (0.8%)
Total	24 (100.0%)	90 (100.0%)	19 (100.0%)	133 (100.0%)

表 7.4.c.4 膵周囲剥離面における癌浸潤 Infiltration of cancer cells at dissected pancreatic tissue margin (DPM)

	MCA	MCC	INV-MCC	Total
0. DPM 陰性 DPM negative	34 (100.0%)	114 (94.2%)	21 (84.0%)	169 (93.9%)
1. DPM 陽性 DPM positive	0 (0.0%)	7 (5.8%)	4 (16.0%)	11 (6.1%)
Total	34 (100.0%)	121 (100.0%)	25 (100.0%)	180 (100.0%)

表 7.4.c.5 術式とDPM Procedure of pancreatectomy and DPM

	TP	PD, subtotal PD, PPPD, SSPPD	DPPHR	DP, subtotal DP, spleen preserving DP	MP, PR	Total
0. DPM 陰性 DPM negative	5 (71.4%)	43 (97.7%)	2 (100.0%)	109 (93.2%)	5 (100.0%)	164 (93.7%)
1. DPM 陽性 DPM positive	2 (28.6%)	1 (2.3%)	0 (0.0%)	8 (6.8%)	0 (0.0%)	11 (6.3%)
Total	7 (100.0%)	44 (100.0%)	2 (100.0%)	117 (100.0%)	5 (100.0%)	175 (100.0%)

表 7.4.c.6 癌遺残度 Residual tumor

	MCA	MCC	INV-MCC	Total
0. R0	35 (100.0%)	38 (51.4%)	15 (62.5%)	88 (66.2%)
1. R1	0 (0.0%)	22 (29.7%)	2 (8.3%)	24 (18.0%)
2. R2	0 (0.0%)	14 (18.9%)	7 (29.2%)	21 (15.8%)
Total	35 (100.0%)	74 (100.0%)	24 (100.0%)	133 (100.0%)

表 7.4.c.7 術式と癌遺残度 Procedure of pancreatectomy and residual tumor

	TP	PD, subtotal PD, PPPD, SSPPD	DPPHR	DP, subtotal DP, spleen preserving DP	MP, PR	Total
0. R0	2 (50.0%)	22 (59.5%)	1 (50.0%)	60 (73.2%)	2 (50.0%)	87 (67.4%)
1. R1	0 (0.0%)	8 (21.6%)	1 (50.0%)	11 (13.4%)	2 (50.0%)	22 (17.1%)
2. R2	2 (50.0%)	7 (18.9%)	0 (0.0%)	11 (13.4%)	0 (0.0%)	20 (15.5%)
Total	4 (100.0%)	37 (100.0%)	2 (100.0%)	82 (100.0%)	4 (100.0%)	129 (100.0%)

図 7.4.c.8 膵切除断端における癌浸潤と生存率 Survival of patients with MCN after pancreatectomy according to the infiltration of cancer cells at pancreatic cut end margin (PCM)

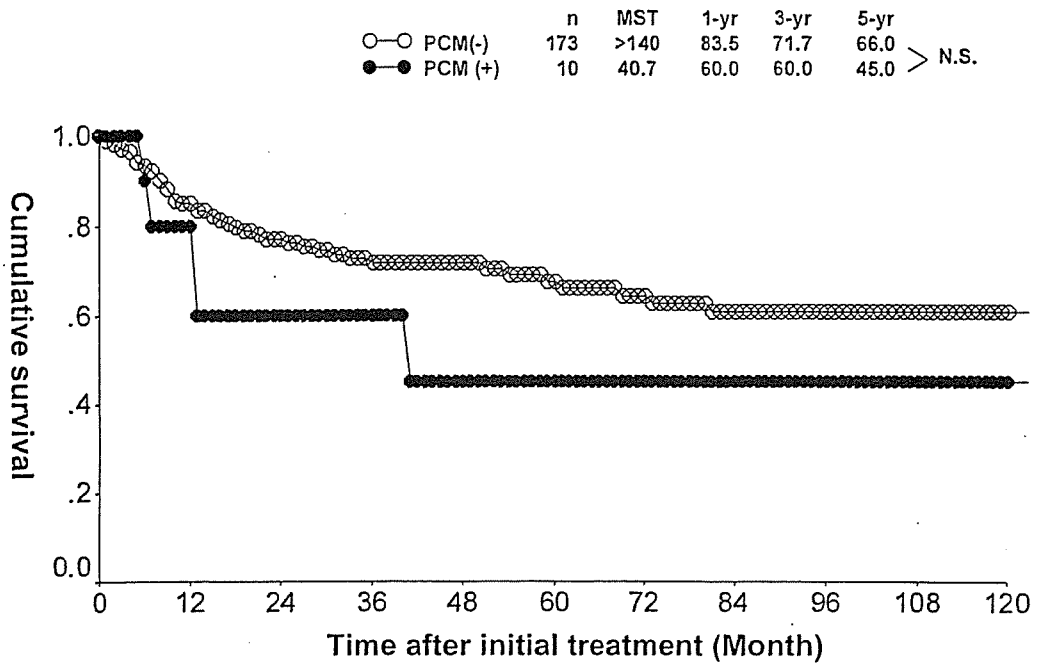


図 7.4.c.9 膵周囲剥離面における癌浸潤と生存率 Survival of patients with MCN after pancreatectomy according to the infiltration of cancer cells at dissected pancreatic tissue margin (DPM)

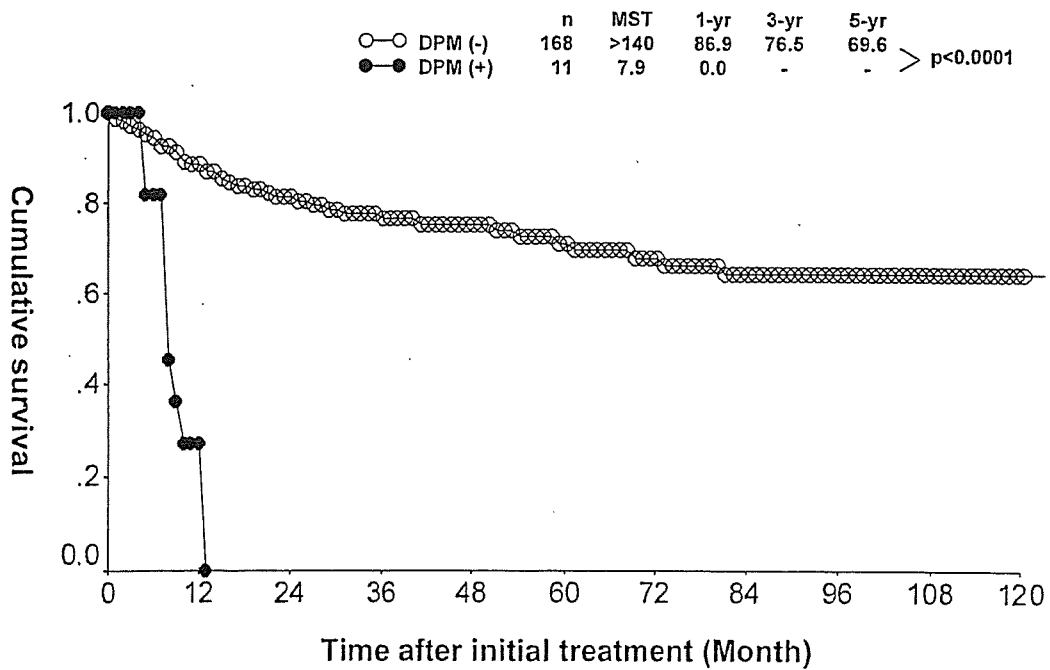
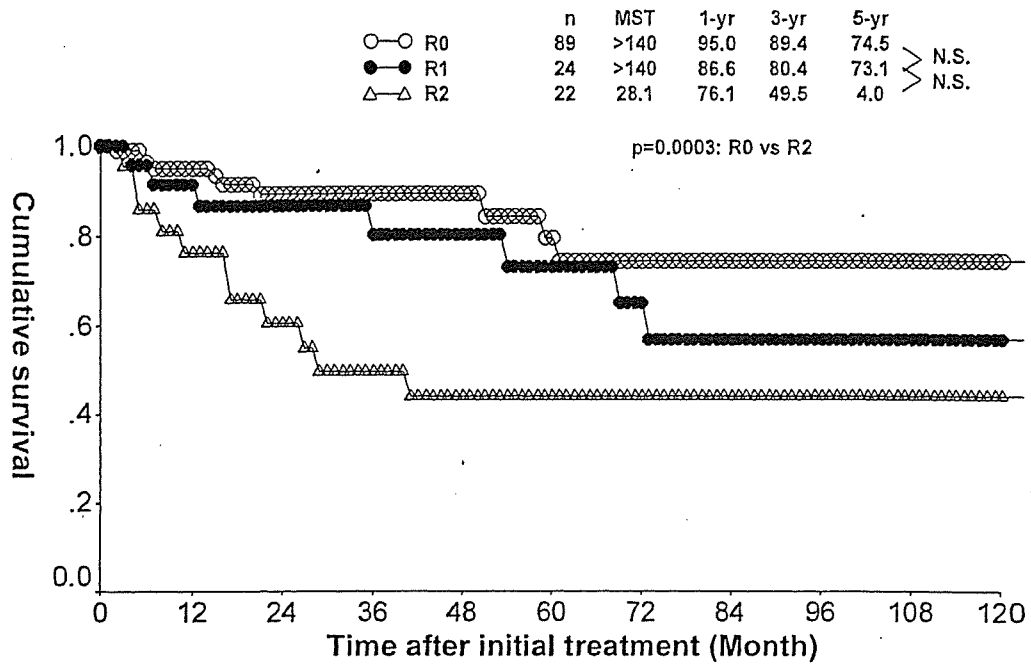


図 7.4.c.10 癌遺残度 と生存率 Survival of patients with MCN after pancreatectomy according to the residual tumor



V. 病理組織所見 Histological findings

a. 病理学的進展度 Histological extent

表 7.5.a.1 癌の実質と間質量比 Cancer-stroma relationship

	MCA	MCC	INV-MCC	Total
1. 髄様型 Medullary type	0 (0.0%)	25 (41.0%)	1 (4.5%)	26 (31.3%)
2. 中間型 Intermediate type	0 (0.0%)	32 (52.5%)	18 (81.8%)	50 (60.2%)
3. 硬性病 Scirrhou type	0 (0.0%)	4 (6.6%)	3 (13.6%)	7 (8.4%)
Total	0 (0.0%)	61 (100.0%)	22 (100.0%)	83 (100.0%)

表 7.5.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

	MCA	MCC	INV-MCC	Total
1. 髄様型 Medullary type	0 (0.0%)	47 (58.0%)	6 (20.0%)	53 (47.7%)
2. 中間型 Intermediate type	0 (0.0%)	26 (32.1%)	18 (60.0%)	44 (39.6%)
3. 硬性病 Scirrhou type	0 (0.0%)	8 (9.9%)	6 (20.0%)	14 (12.6%)
Total	0 (0.0%)	81 (100.0%)	30 (100.0%)	111 (100.0%)

表 7.5.a.3 リンパ管侵襲 Lymphatic invasion

	MCA	MCC	INV-MCC	Total
0. ly0 No lymphatic invasion	13 (100.0%)	88 (75.9%)	17 (53.1%)	118 (73.3%)
1. ly1 Slight lymphatic invasion	0 (0.0%)	10 (8.6%)	7 (21.9%)	17 (10.6%)
2. ly2 Moderate lymphatic invasion	0 (0.0%)	13 (11.2%)	6 (18.8%)	19 (11.8%)
3. ly3 Marked lymphatic invasion	0 (0.0%)	5 (4.3%)	2 (6.3%)	7 (4.3%)
Total	13 (100.0%)	116 (100.0%)	32 (100.0%)	161 (100.0%)

表 7.5.a.4 静脈侵襲 venous invasion

	MCA	MCC	INV-MCC	Total
0. v0 No venous invasion	13 (100.0%)	91 (79.1%)	18 (56.3%)	122 (76.3%)
1. v1 Slight venous invasion	0 (0.0%)	13 (11.3%)	7 (21.9%)	20 (12.5%)
2. v2 Moderate venous invasion	0 (0.0%)	6 (5.2%)	6 (18.8%)	12 (7.5%)
3. v3 Marked venous invasion	0 (0.0%)	5 (4.3%)	1 (3.1%)	6 (3.8%)
Total	13 (100.0%)	115 (100.0%)	32 (100.0%)	160 (100.0%)

表 7.5.a.5 膵内神経浸潤 Intrapancreatic nerve invasion

	MCA	MCC	INV-MCC	Total
0. ne0 No neural invasion	10 (100.0%)	78 (83.0%)	13 (46.4%)	101 (76.5%)
1. ne1 Slight neural invasion	0 (0.0%)	6 (6.4%)	5 (17.9%)	11 (8.3%)
2. ne2 Moderate neural invasion	0 (0.0%)	8 (8.5%)	6 (21.4%)	14 (10.6%)
3. ne3 Marked neural invasion	0 (0.0%)	2 (2.1%)	4 (14.3%)	6 (4.5%)
Total	10 (100.0%)	94 (100.0%)	28 (100.0%)	132 (100.0%)

表 7.5.a.6 主膵管内進展 Spread within the main pancreatic duct

	MCA	MCC	INV-MCC	Total
0. MPD (-) No evidence of spread	13 (100.0%)	75 (70.1%)	20 (76.9%)	108 (74.0%)
1. MPD (+) Spread present	0 (0.0%)	26 (24.3%)	6 (23.1%)	32 (21.9%)
2. MPD (b) Borderline	0 (0.0%)	6 (5.6%)	0 (0.0%)	6 (4.1%)
Total	13 (100.0%)	107 (100.0%)	26 (100.0%)	146 (100.0%)

b. 病理組織分類と生存率 Histological classification and the survival

図 7.5.b.1 組織型分類と粘液性嚢胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to the histological classification

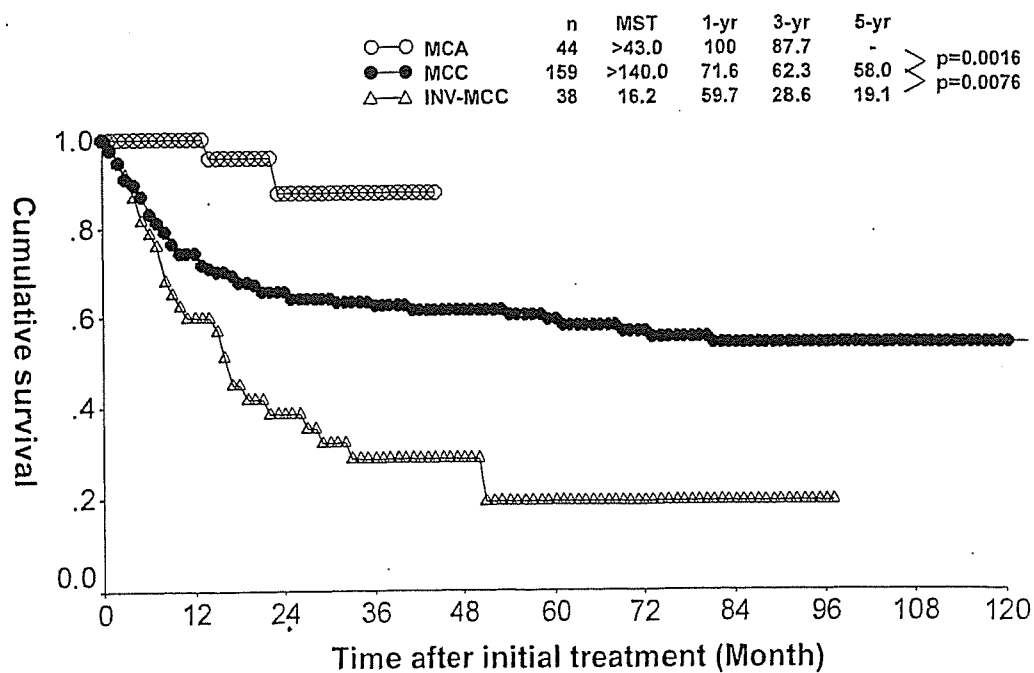


図 7.5.b.2 癌の実質間質量比と粘液性嚢胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to cancer-stroma relationship

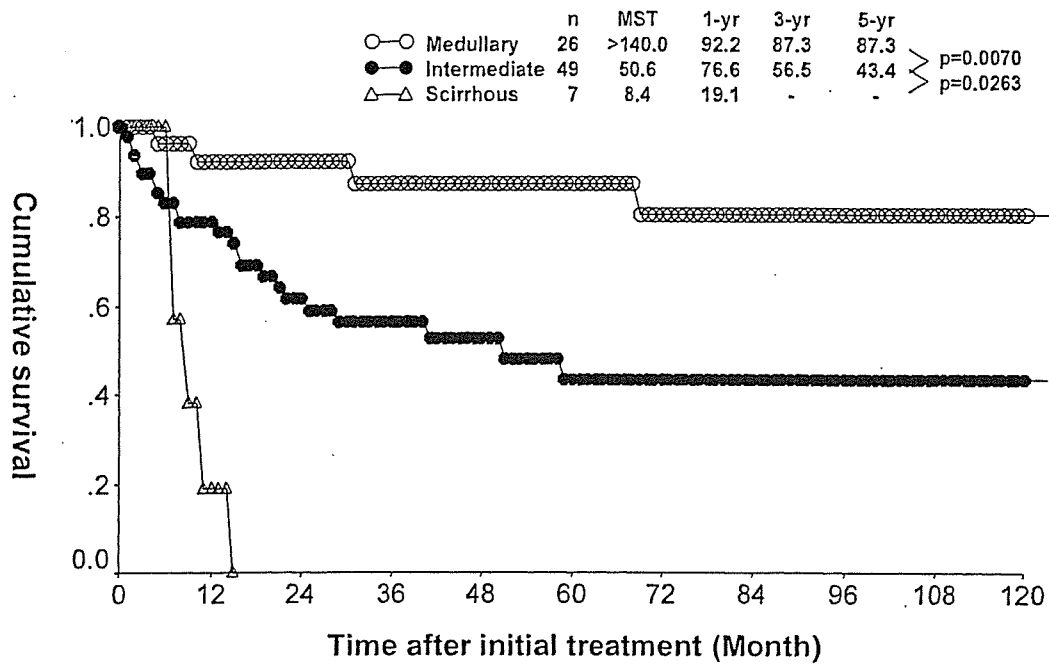


図 7.5.b.3 癌の周囲組織に対する浸潤増殖様式と粘液性嚢胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to growth patterns of tumors infiltrating surrounding tissue

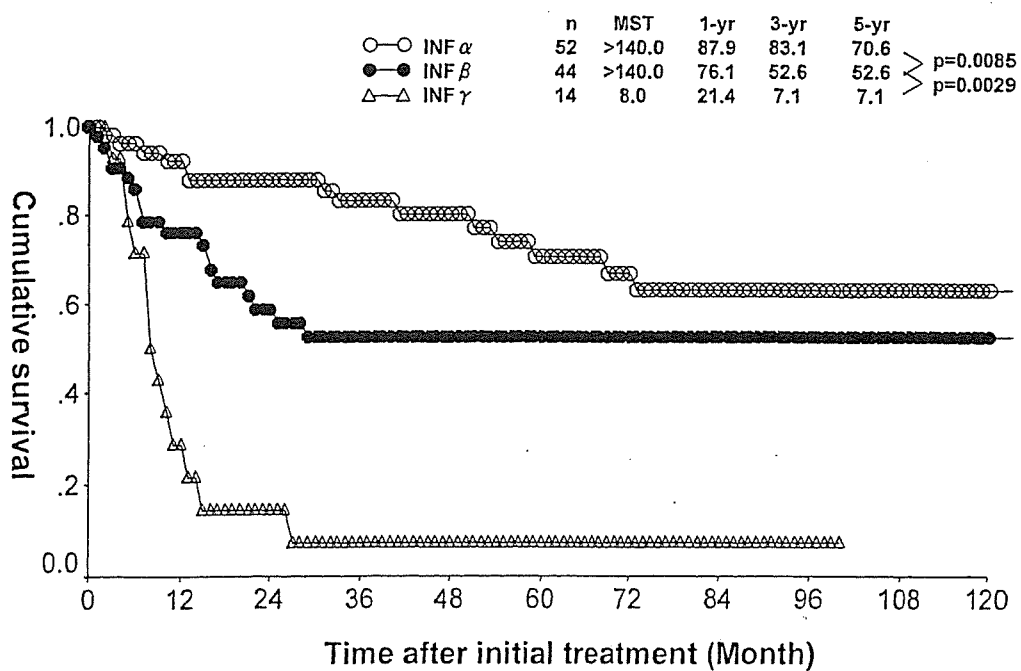


図 7.5.b.4 リンパ管侵襲と粘液性嚢胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to lymphatic invasion

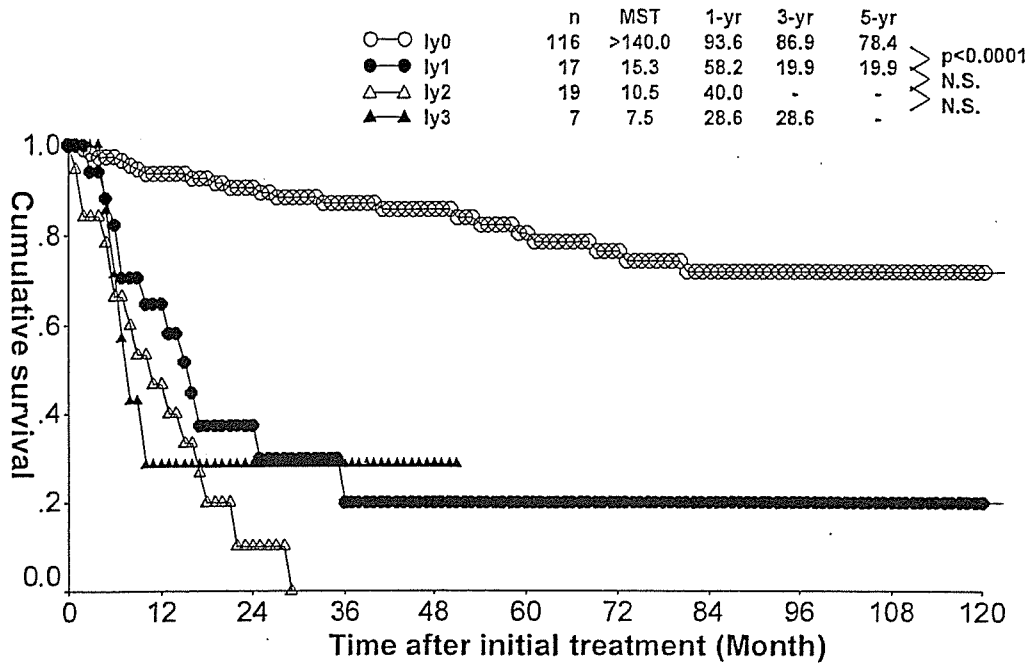


図 7.5.b.5 静脈侵襲と粘液性嚢胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to venous invasion

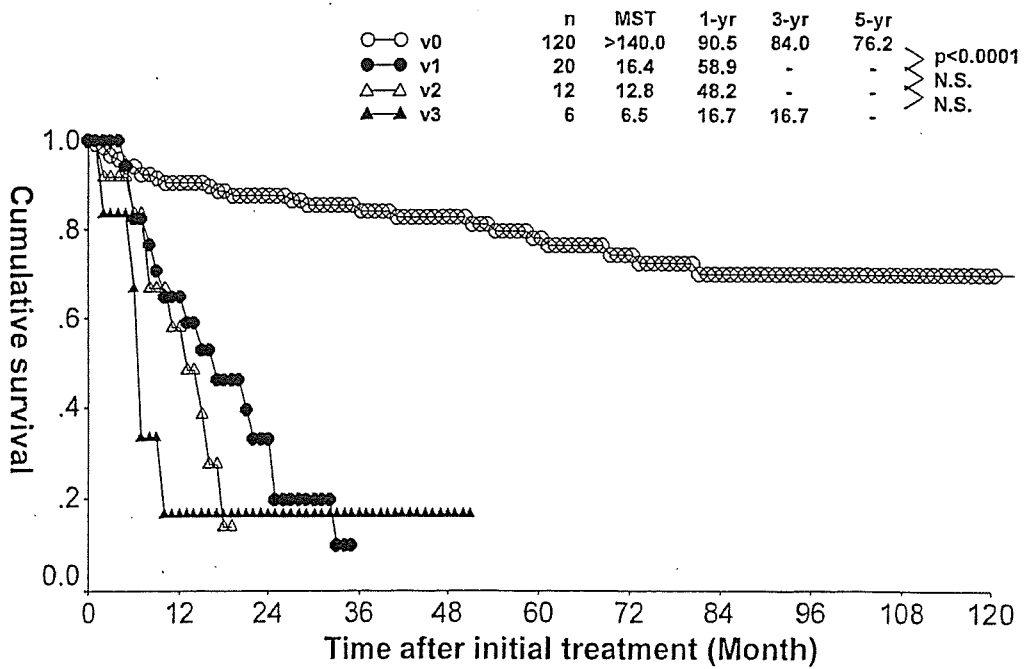


图 7.5.b.6 胰内神经浸润と粘液性囊胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to intrapancreatic nerve invasion

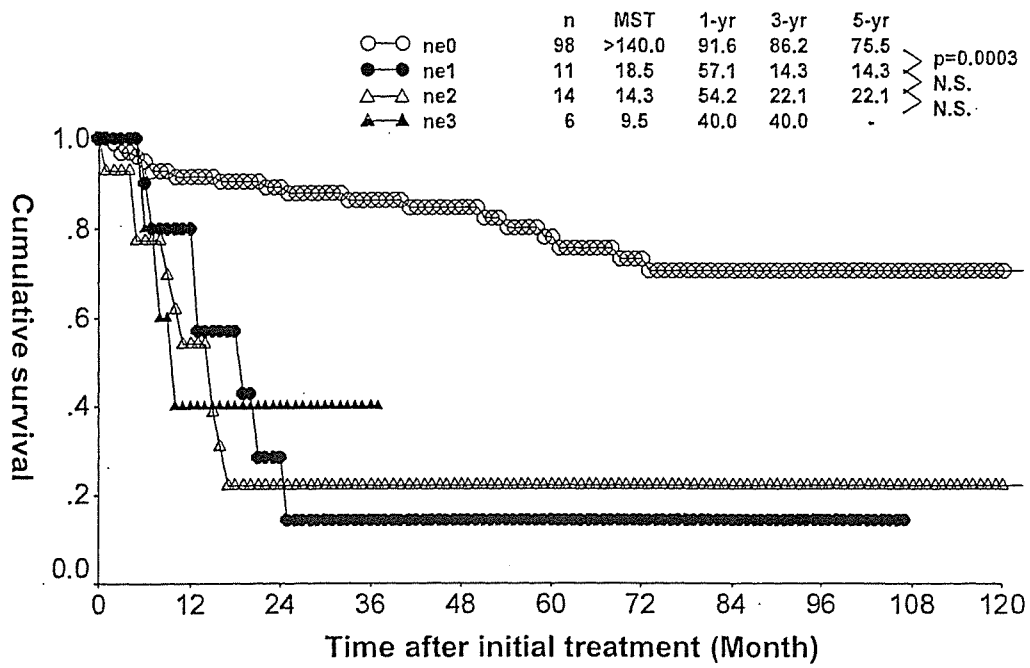
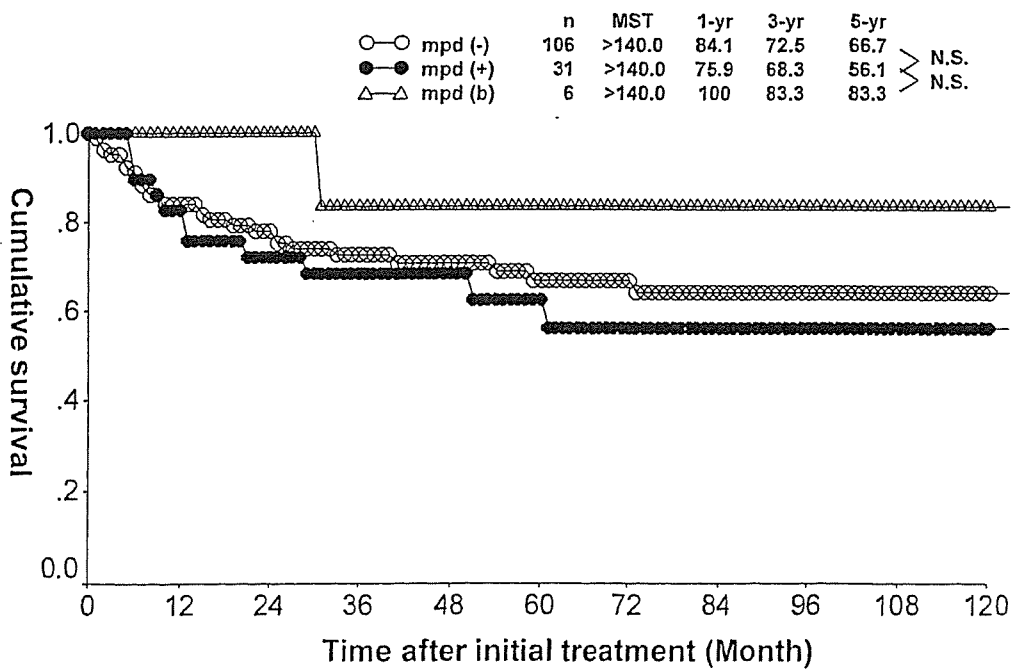


图 7.5.b.7 主胰管内進展と粘液性囊胞腫瘍術後生存率 Survival of patients with MCN after pancreatectomy according to Spread within the main pancreatic duct



VI. 合併症 Complications

a. 術後合併症 Complications after pancreatectomy

表 7.6.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	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
腹腔内出血 Intraperitoneal bleeding	0 (0.0%)	2 (4.3%)	0 (0.0%)	1 (0.8%)	0 (0.0%)	3 (1.6%)
膵空腸吻合不全 Pancreatic anastomosis insufficiency	0 (0.0%)	4 (8.7%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	5 (2.7%)
胆管空腸吻合不全 Biliary anastomosis insufficiency	0 (0.0%)	2 (4.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (1.1%)
胃空腸吻合不全 Gastric anastomosis insufficiency	0 (0.0%)	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.5%)
胃排出遅延 Delayed gastric emptying	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
吻合部狭窄 Anastomotic stenosis	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
急性膵炎 Acute pancreatitis	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (2.4%)	0 (0.0%)	3 (1.6%)
膵液瘻 Pancreatic fistula	0 (0.0%)	4 (8.7%)	1 (50.0%)	18 (14.2%)	1 (20.0%)	24 (12.7%)
胆汁瘻 Biliary fistula	0 (0.0%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (0.5%)
腹膜炎 Peritonitis	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (2.4%)	0 (0.0%)	3 (1.6%)
術後早期全身合併症 Early systemic complications						
肝不全 Liver failure	1 (11.1%)	3 (6.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (2.1%)
腎不全 Renal failure	0 (0.0%)	2 (4.3%)	0 (0.0%)	2 (1.6%)	0 (0.0%)	4 (2.1%)
低血糖 Hypoglycemia	2 (22.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (1.1%)
肺合併症 Pulmonary complication	0 (0.0%)	5 (10.9%)	0 (0.0%)	3 (2.4%)	0 (0.0%)	8 (4.2%)
心不全 Heart failure	0 (0.0%)	2 (4.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (1.1%)
術後晚期合併症 Late complications						
イレウス Ileus	0 (0.0%)	1 (2.3%)	0 (0.0%)	2 (1.6%)	0 (0.0%)	3 (1.6%)
糖尿病 Diabetes mellitus	4 (50.0%)	5 (11.6%)	0 (0.0%)	4 (3.2%)	0 (0.0%)	13 (7.1%)
頑固な下痢 Persistent diarrhea	1 (12.5%)	2 (4.5%)	0 (0.0%)	1 (0.8%)	0 (0.0%)	4 (2.2%)
栄養不良 Malnutrition	4 (44.4%)	4 (9.1%)	0 (0.0%)	2 (1.6%)	0 (0.0%)	10 (5.4%)
ケトアシドーシス Ketoacidosis	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
感染症 Infection	0 (0.0%)	3 (6.8%)	0 (0.0%)	2 (1.6%)	0 (0.0%)	5 (2.7%)
胆管炎 Cholangitis	0 (0.0%)	3 (7.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (1.6%)
Total	9	50	2	133	5	199

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8章 内分泌腫瘍 Endocrine tumors

1. 背景因子 Background of the patients with endocrine tumors

a. 症例数の推移 Trend of number of cases

表 8.1.a.1 内分泌腫瘍症例数の推移 Annual trend of cases with endocrine tumors.

Year	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
1981							7	7
1982							9	9
1983							9	9
1984							10	10
1985							14	14
1986							7	7
1987							14	14
1988							18	18
1989							14	14
1990							17	17
1991							11	11
1992							15	15
1993							20	20
1994							15	15
1995							20	20
1996							27	27
1997							24	24
1998							15	15
1999							18	18
2000							23	23
2001	12	1	3	0	0	16	3	35
2002	11	1	2	0	2	27	6	49
2003	14	1	0	1	0	28	2	46
2004	8	2	2	0	3	29	3	47
Total	45	5	7	1	5	100	321	484

2000年までの症例は内分泌細胞癌としてのみ登録され、産生ホルモンによる分類は2001年の症例からのみ登録された。
Cases before 2001 were registered only as endocrine cancers. Hormonal classification was registered after 2001 cases.

表 8.1.a.2 内分泌腫瘍年齢分布 Age distribution of cases with endocrine tumors.

Year	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
10-19	2 (4.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (2.2%)	9 (1.9%)
20-29	3 (6.7%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (4.0%)	12 (3.7%)	20 (4.1%)
30-39	2 (4.4%)	0 (0.0%)	2 (28.6%)	0 (0.0%)	2 (40.0%)	10 (10.0%)	30 (9.3%)	46 (9.5%)
40-49	7 (15.6%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	15 (15.0%)	61 (19.0%)	85 (17.6%)
50-59	5 (11.1%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	25 (25.0%)	103 (32.1%)	134 (27.7%)
60-69	15 (33.3%)	2 (40.0%)	4 (57.1%)	0 (0.0%)	1 (20.0%)	22 (22.0%)	70 (21.8%)	114 (23.6%)
70-79	7 (15.6%)	0 (0.0%)	1 (14.3%)	1 (100.0%)	1 (20.0%)	23 (23.0%)	29 (9.0%)	62 (12.8%)
80-89	3 (6.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	2 (0.6%)	6 (1.2%)
90-99	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Unknown	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (2.2%)	8 (1.7%)
Total	45 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	100 (100%)	321 (100%)	484 (100%)

b. 家族歴 Family history

表 8.1.b.1 癌の家族歴 Family history of cancer

Family history	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
0. なし No family history	29 (72.5%)	2 (50.0%)	5 (71.4%)	0 (0.0%)	3 (60.0%)	62 (70.5%)	218 (74.1%)	319 (72.7%)
1. あり(膵癌) Family history of pancreatic cancer	2 (5.0%)	1 (25.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (4.5%)	7 (2.4%)	14 (3.2%)
2. あり(膵癌以外) Family history of other cancer	9 (22.5%)	1 (25.0%)	2 (28.6%)	1 (100%)	1 (20.0%)	21 (23.9%)	66 (22.4%)	101 (23.0%)
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%)	1 (20.0%)	1 (1.1%)	3 (1.0%)	5 (1.1%)
Total	40 (100%)	4 (100%)	7 (100%)	1 (100%)	5 (100%)	88 (100%)	294 (100%)	439 (100%)

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

Pancreatic cancer in the kindred	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
0. なし No member	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
1. 家族内に1人 One family member with pancreatic cancer	2 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (66.7%)	0 (0.0%)	4 (66.7%)
2. 家族内に2人 Two family member with pancreatic cancer	0 (0.0%)	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (33.3%)	0 (0.0%)	2 (33.3%)
3. 家族内に3人以上 More than three	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total	2 (100%)	1 (100%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (100%)	0 (0.0%)	6 (100%)

家族内膵癌は2001年からの登録項目 Pancreatic cancer in the kindred was registered after 2001 cases.

c. 既往歴 Past history

表 8.1.c.1 重複癌 Past history of cancer in the other organ

Past history of cancer in the other organ	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
0. なし No past history of other cancer	42 (95.5%)	5 (100%)	5 (71.4%)	1 (100%)	3 (60.0%)	87 (87.9%)	283 (92.8%)	426 (91.4%)
1. あり(同時性) Synchronous multiple cancer	2 (4.5%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	2 (40.0%)	7 (7.1%)	10 (3.3%)	22 (4.7%)
2. あり(異時性) Metachronous multiple cancer	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	5 (5.1%)	12 (3.9%)	18 (3.9%)
Total	44 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	99 (100%)	305 (100%)	466 (100%)

表 8.1.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	2/462	0.4%
2. 急性膵炎 Acute pancreatitis	16/462	3.5%
3. 慢性膵炎 Chronic pancreatitis	7/463	1.5%
4. 膵嚢胞(非腫瘍性) Pancreatic cyst, non-neoplastic	2/462	0.4%
5. 膵嚢胞(腫瘍性) Pancreatic cyst, neoplastic	3/459	0.7%
6. 糖尿病 Diabetes Mellitus	60/462	13.0%
7. 胆石症 Biliary stone	24/462	5.2%
8. 慢性下痢 Chronic diarrhea	7/460	1.5%
9. 慢性アルコール中毒 Chronic alcoholism	2/459	0.4%
10. 消化性潰瘍 Peptic ulcer	42/462	9.1%

d. 喫煙と飲酒 Smoking and drinking

表 8.1.d.1 喫煙習慣 Smoking habit

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
0. 喫煙せず No smoking	17 (89.5%)	3 (100%)	0 (0.0%)	3 (100%)	36 (76.6%)	4 (80.0%)	63 (79.7%)	17 (89.5%)
1. 20年前から禁煙 Abstain from smoking for more than 20 years.	1 (5.3%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	1 (2.1%)	0 (0.0%)	3 (3.8%)	1 (5.3%)
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%)	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%)	1 (2.1%)	0 (0.0%)	1 (1.3%)	0 (0.0%)
4. 最近禁煙 Abstain from smoking recently	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (4.3%)	0 (0.0%)	2 (2.5%)	0 (0.0%)
5. 1日20本以内 Less than 20 cigarettes/day	1 (5.3%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	3 (6.4%)	1 (20.0%)	6 (7.6%)	1 (5.3%)
6. 1日20本以上 More than 20 cigarettes/day	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (8.5%)	0 (0.0%)	4 (5.1%)	0 (0.0%)
Total	19 (100%)	3 (100%)	2 (100%)	3 (100%)	47 (100%)	5 (100%)	79 (100%)	19 (100%)

表 8.1.d.2 飲酒習慣 Drinking frequency

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
0. 飲酒せず No drinking	15 (78.9%)	2 (66.7%)	0 (0.0%)	2 (66.7%)	25 (56.8%)	4 (80.0%)	48 (63.2%)	15 (78.9%)
1. 数か月に1回程度の飲酒 Once in several months	1 (5.3%)	1 (33.3%)	1 (50.0%)	0 (0.0%)	3 (6.8%)	0 (0.0%)	6 (7.9%)	1 (5.3%)
2. 数週間に1回程度の飲酒 Once in several weeks	1 (5.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (9.1%)	0 (0.0%)	5 (6.6%)	1 (5.3%)
3. 数日に1回 Once in few days	1 (5.3%)	0 (0.0%)	0 (0.0%)	1 (33.3%)	4 (9.1%)	0 (0.0%)	6 (7.9%)	1 (5.3%)
4. 毎日 Everyday	1 (5.3%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	8 (18.2%)	1 (20.0%)	11 (14.5%)	1 (5.3%)
Total	19 (100%)	3 (100%)	2 (100%)	3 (100%)	47 (100%)	5 (100%)	79 (100%)	19 (100%)

II. 診断 Diagnosis
a. 主訴 Chief complaint

表 8.2.a.1 訪医理由 Reason to visit clinic

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
1. 健康診断 Health check	2 (4.4%)	0 (0.0%)	3 (42.9%)	0 (0.0%)	0 (0.0%)	25 (25.0%)	51 (15.9%)	81 (16.7%)
2. 症状あり With symptom	37 (82.2%)	3 (60.0%)	3 (42.9%)	1 (100%)	2 (40.0%)	42 (42.0%)	195 (60.7%)	283 (58.5%)
3. 糖尿病の増悪 Deterioration of diabetes mellitus	3 (6.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (5.0%)	22 (6.9%)	30 (6.2%)
4. 集団検診後の精検 Mass screening	2 (4.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (6.0%)	34 (10.6%)	42 (8.7%)
5. その他 Other	1 (2.2%)	2 (40.0%)	1 (14.3%)	0 (0.0%)	3 (60.0%)	19 (19.0%)	4 (1.2%)	30 (6.2%)
9. 不明 Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (3.0%)	15 (4.7%)	18 (3.7%)
Total	45 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	100 (100%)	321 (100%)	484 (100%)

表 8.2.a.2 初発症状 Initial symptoms

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
00. なし No symptom	4 (8.9%)	2 (40.0%)	4 (57.1%)	0 (0.0%)	2 (40.0%)	50 (50.0%)	75 (23.4%)	137 (28.3%)
01. 腹痛 Abdominal pain	0 (0.0%)	1 (20.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	23 (23.0%)	91 (28.3%)	116 (24.0%)
02. 体重減少 Body weight loss	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	6 (1.9%)	9 (1.9%)
03. 嘔吐 Vomiting	0 (0.0%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	4 (1.2%)	7 (1.4%)
04. 食思不振 Appetite loss	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	8 (2.5%)	9 (1.9%)
05. 黄疸 Jaundice	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100%)	1 (20.0%)	3 (3.0%)	17 (5.3%)	22 (4.5%)
06. 全身倦怠 General fatigue	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (3.0%)	6 (1.9%)	10 (2.1%)
07. 腫瘍 Abdominal tumor	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	14 (4.4%)	15 (3.1%)
08. 腰背部痛 Back pain	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	7 (7.0%)	19 (5.9%)	27 (5.6%)
09. 糖尿病の増悪 Deterioration of diabetes mellitus	3 (6.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (4.0%)	54 (16.8%)	61 (12.6%)
10. その他 Other	36 (80.0%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	2 (40.0%)	2 (2.0%)	2 (0.6%)	43 (8.9%)
99. 不明 Unknown	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	25 (7.8%)	28 (5.8%)
Total	45 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	100 (100%)	321 (100%)	484 (100%)

b. 画像診断 Imaging diagnosis

表 8.2.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.

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
01. 臨床所見 Clinical signs	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	12 (3.7%)	13 (2.7%)
02. 消化管造影 Barium meal	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	9 (2.8%)	9 (1.9%)
03. DIC	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
04. ERCP	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.0%)	7 (2.2%)	8 (1.7%)
05. Angiography	3 (6.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (2.2%)	10 (2.1%)
06. CT	28 (62.2%)	3 (60.0%)	2 (28.6%)	0 (0.0%)	3 (60.0%)	46 (46.0%)	91 (28.3%)	173 (35.7%)
07. US	5 (11.1%)	1 (20.0%)	5 (71.4%)	0 (0.0%)	1 (20.0%)	32 (32.0%)	158 (49.2%)	202 (41.7%)
08. PTCD	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (1.6%)	5 (1.0%)
09. MRI	3 (6.7%)	1 (20.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	0 (0.0%)	6 (1.2%)
10. 内視鏡 Endoscopic findings	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.0%)	3 (0.9%)	5 (1.0%)
11. 腹腔鏡 Laparoscopic findings	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
12. 臓器シンチ Scintigraphy	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	1 (0.2%)
13. SPIO-MRI	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	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%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
15. EUS	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.2%)
16. IDUS	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	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%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
18. その他 Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	2 (2.0%)	14 (4.4%)	17 (3.5%)
99. 不明 Unknown	4 (8.9%)	0 (0.0%)	0 (0.0%)	1 (100%)	0 (0.0%)	15 (15.0%)	14 (4.4%)	34 (7.0%)
Total	45 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	100 (100%)	321 (100%)	484 (100%)

c. 生化学検査 Biochemical examination

表 8.2.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	77/465	16.6%
リパーゼ Serum lipase	36/183	19.7%
エラスターゼ I Serum elastase I	29/126	23.0%
Total	484	100%

表8.2.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	3/13	23.1%
PFD Pancreatic functional diagnosis test	26/69	37.7%
Total	484	100%

d. 腫瘍マーカー Tumor markers

表 8.2.d.1 腫瘍マーカーの異常値頻度 Frequency of abnormal values in tumor markers

	Insulinoma	Gastrinoma	Glucagonoma	Somatostatinoma	MEN-1	Non-functioning tumor	Other & Unspecified	Total
CA19-9	1/30 (3.3%)	1/4 (25.0%)	1/7 (14.3%)	1/1 (100%)	0/2 (0.0%)	18/97 (18.6%)	25/114 (21.9%)	47/255 (18.4%)
CEA	4/30 (13.3%)	0/5 (0.0%)	1/6 (16.7%)	0/1 (0.0%)	0/2 (0.0%)	9/95 (9.5%)	40/235 (17.0%)	54/374 (14.4%)
DUPAN2	0/9 (0.0%)	0/1 (0.0%)	1/3 (33.3%)	1/1 (100%)	0/2 (0.0%)	1/37 (2.7%)	1/7 (14.3%)	4/60 (6.7%)
SPAN1	0/9 (0.0%)	0/1 (0.0%)	0/3 (0.0%)	1/1 (100%)	0/0 (0.0%)	2/18 (11.1%)	1/5 (20.0%)	4/37 (10.8%)
Total	45 (100%)	5 (100%)	7 (100%)	1 (100%)	5 (100%)	100 (100%)	321 (100%)	484 (100%)

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

図8.2.d.2 CA19-9と内分泌腫瘍組織型分類の相関 Correlation of CA19-9 and histological classification of endocrine tumors

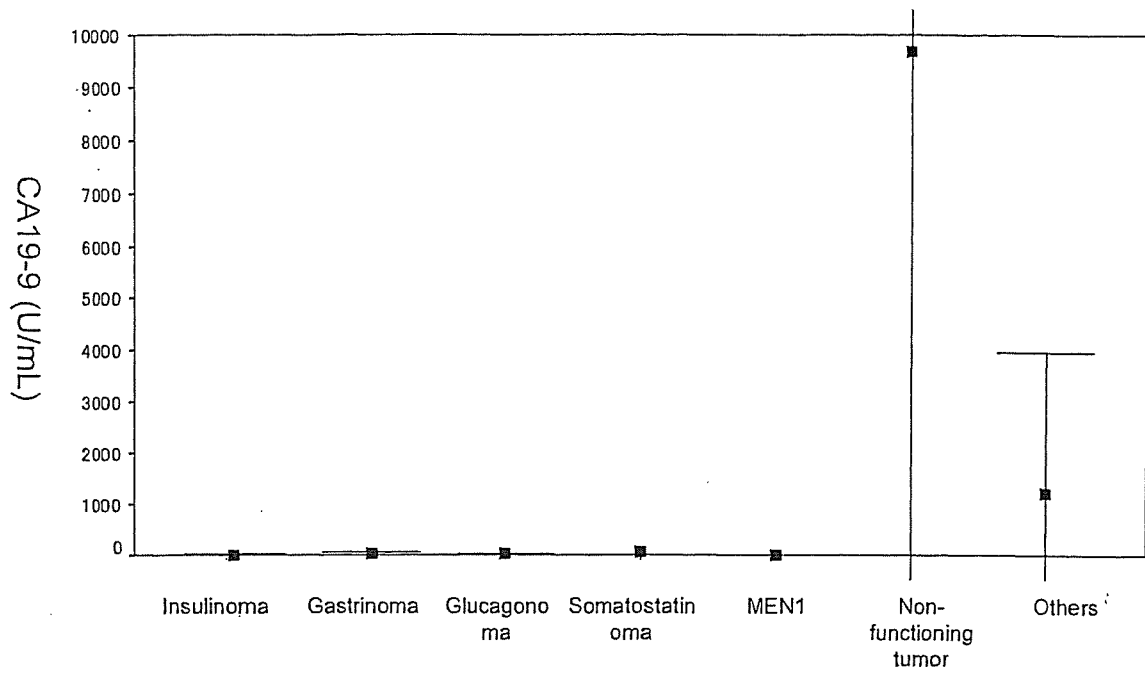


図8.2.d.3 CEAと内分泌腫瘍組織型分類の相関 Correlation of CEA and histological classification of endocrine tumors

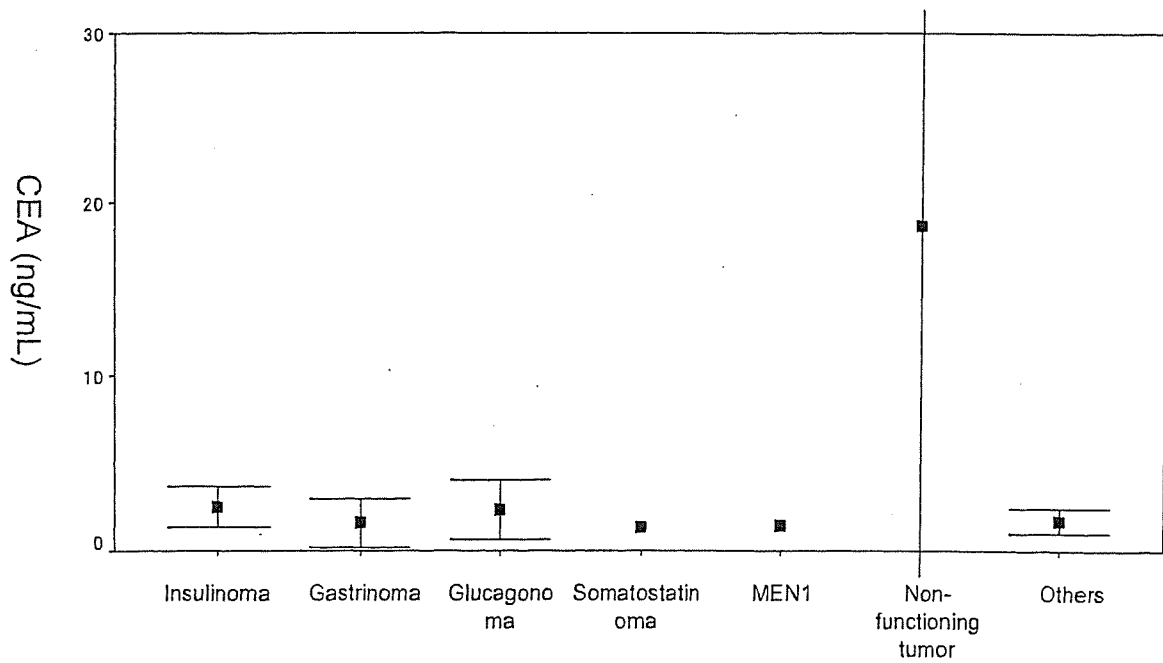


図8.2.d.4 DUPAN2と内分泌腫瘍組織型分類の相関 Correlation of DUPAN2 and histological classification of endocrine tumors

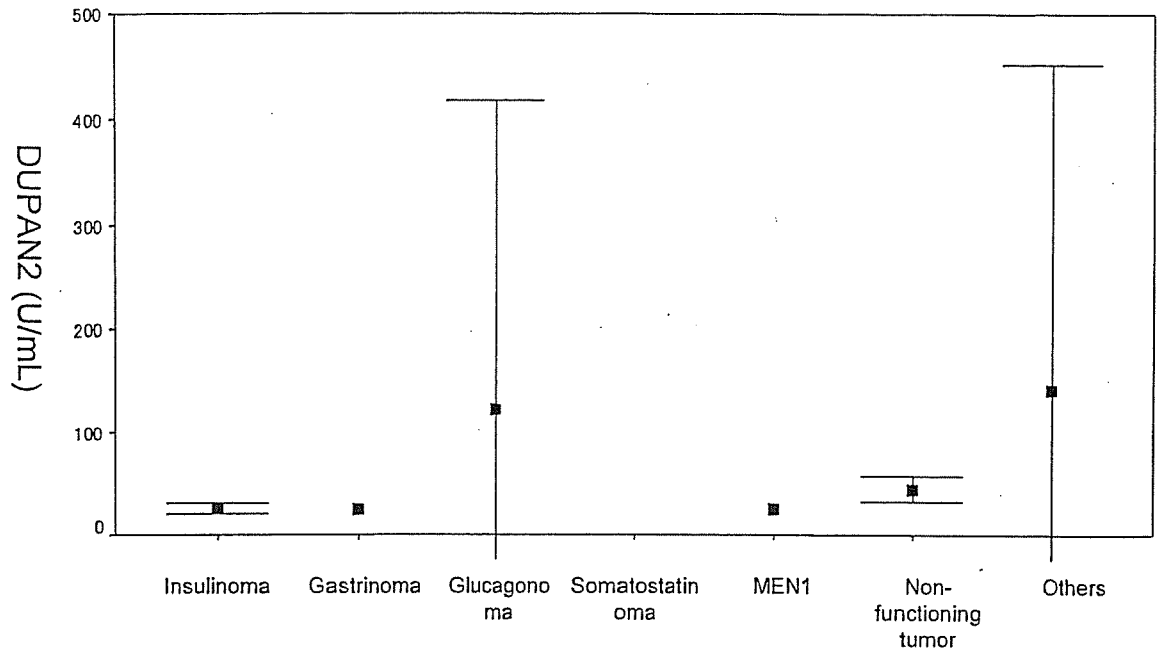


図8.2.d.5 SPAN1と内分泌腫瘍組織型分類の相関 Correlation of SPAN1 and histological classification of endocrine tumors

