

f. 癌遺残の評価 Evaluation of residual cancer

表 3.5.f.1 膵切除断端における癌浸潤 Infiltration of cancer cells at pancreatic cut end margin (PCM)

	2001	2002	2003	2004	Total	%
0. PCM 陰性 PCM negative	348	305	364	384	1401	89.1
1. PCM 陽性 PCM positive	23	15	32	26	96	6.1
9. 不明 Unknown	36	17	12	11	76	4.8
Total	407	337	408	421	1573	100.0

表 3.5.f.2 術式とPCM Procedure of pancreatectomy and PCM

	TP	PD, subtotal PD, PPPD, SSPPD	DP, subtotal DP, spleen preserving DP	DPPHR, MP, PR	Total	%
0. PCM 陰性 PCM negative	41	971	367	5	1384	89.3
1. PCM 陽性 PCM positive	0	58	35	2	95	6.1
9. 不明 Unknown	8	41	22	0	71	4.6
Total	49	1070	424	7	1550	100.0

表 3.5.f.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)

	2001	2002	2003	2004	Total	%
0. BCM 陰性 BCM negative	334	296	361	369	1360	86.5
1. BCM 陽性 BCM positive	8	2	6	3	19	1.2
9. 不明 Unknown	65	39	41	49	194	12.3
Total	407	337	408	421	1573	100.0

表 3.5.f.4 膵周囲剥離面における癌浸潤 Infiltration of cancer cells at dissected pancreatic tissue margin (DPM)

	2001	2002	2003	2004	Total	%
0. DPM 陰性 DPM negative	296	265	312	326	1199	76.2
1. DPM 陽性 DPM positive	70	46	81	82	279	17.7
9. 不明 Unknown	41	26	15	13	95	6.0
Total	407	337	408	421	1573	100.0

表 3.5.f.5 術式とDPM Procedure of pancreatectomy and DPM

	TP	PD, subtotal PD, PPPD, SSPPD	DP, subtotal DP, spleen preserving DP	DPPIR, MP, PR	Total	%
0. DPM 陰性 DPM negative	33	830	317	4	1184	76.4
1. DPM 陽性 DPM positive	11	188	74	3	276	17.8
9. 不明 Unknown	5	52	33	0	90	5.8
Total	49	1070	424	7	1550	100.0

表 3.5.f.6 合併切除臓器とDPM Combined resection of surrounding organs and DPM

	Portal venous system	% of cases with PV resection	Artery	% of cases with arterial resection	Plexus	% of cases with plexus resection
0. DPM 陰性 DPM negative	365	77.5	59	72.8	437	78.9
1. DPM 陽性 DPM positive	86	18.3	18	22.2	97	17.5
9. 不明 Unknown	20	4.2	4	4.9	20	3.6
Total	471	100.0	81	100.0	554	100.0

表 3.5.f.7 癌遺残度 Residual tumor

	2001	2002	2003	2004	Total	%
0. R0	286	254	288	301	1129	71.8
1. R1	68	54	75	87	284	18.1
2. R2	26	18	31	27	102	6.5
9. 不明 Unknown	27	11	14	6	58	3.7
Total	407	337	408	421	1573	100.0

表 3.5.f.8 術式と癌遺残度 Procedure of pancreatectomy and residual tumor

	TP	PD, subtotal PD, PPPD, SSPPD	DP, subtotal DP, spleen preserving DP	DPPHR, MP, PR	Total	%
0. R0	35	789	290	4	1118	72.1
1. R1	8	196	75	2	281	18.1
2. R2	3	55	40	1	99	6.4
9. 不明 Unknown	3	30	19	0	52	3.4
Total	49	1070	424	7	1550	100.0

表 3.5.f.9 合併切除臓器と癌遺残度 Combined resection of surrounding organs and residual tumor

	Portal venous system	% of cases with PV resection	Artery	% of cases with arterial resection	Plexus	% of cases with plexus resection
0. R0	346	73.5	56	69.1	417	75.3
1. R1	93	19.7	18	22.2	100	18.1
2. R2	18	3.8	4	4.9	22	4.0
9. 不明 Unknown	14	3.0	3	3.7	15	2.7
Total	471	100.0	81	100.0	554	100.0

g. リンパ節郭清の程度 Extent of dissection of lymph nodes
表 3.5.g.1 リンパ節郭清の程度年次推移 Trend of extent of lymph node dissection

	2001	2002	2003	2004	Total	%
0. D0	27	11	24	31	93	5.9
1. D1	114	84	80	82	360	22.9
2. D2	200	179	235	234	848	53.9
3. D3	45	50	56	65	216	13.7
9. 不明 Unknown	21	13	13	9	56	3.6
Total	407	337	408	421	1573	100.0

表 3.5.g.2 術式とリンパ節郭清の程度 Procedure of pancreatectomy and extent of lymph node dissection

	TP	PD, subtotal PD, PPPD, SSPPD	DP, subtotal DP, spleen preserving DP	DPPHR, MP, PR	Total	%
0. D0	2	36	49	4	91	5.9
1. D1	12	188	154	2	356	23.0
2. D2	21	649	169	1	840	54.2
3. D3	11	169	34	0	214	13.8
9. 不明 Unknown	3	31	22	0	56	3.6
Total	49	1070	424	7	1550	100.0

h. 合併切除臓器 Combined resection of surrounding organs

表 3.5.h.1 合併切除臓器の年次推移 (重複あり) Trend of combined resection of surrounding organs (With overlap)

	2001	2002	2003	2004	Total	%
十二指腸 Duodenum	203	196	204	227	830	52.8
胃 Stomach	128	129	154	166	577	36.7
結腸 Colon	13	13	26	24	76	4.8
肝臓 Liver	11	6	15	11	43	2.7
脾 Spleen	94	63	90	99	346	22.0
神経叢 Plexus	126	127	146	155	554	35.2
門脈 Portal venous system	106	105	124	136	471	29.9
動脈 Artery	13	19	24	26	82	5.2
Total	407	337	408	421	1573	100.0

表 3.5.h.2 術式と合併切除臓器 (重複あり) Procedure of pancreatectomy and combined resection of surrounding organs (With overlap)

	TP	PD, subtotal PD, PPPD, SSPPD	DP, subtotal DP, spleen preserving DP	DPPHR, MP, PR	Total	%
十二指腸 Duodenum	37	770	8	2	817	52.7
胃 Stomach	28	476	56	0	560	36.1
結腸 Colon	2	32	38	0	72	4.6
肝臓 Liver	0	17	18	0	35	2.3
脾 Spleen	27	14	300	0	341	22.0
神経叢 Plexus	20	418	109	0	547	35.3
門脈 Portal venous system	17	381	68	0	466	30.1
動脈 Artery	3	29	50	0	82	5.3
Total	49	1070	424	7	1550	100.0

VI. UICC 分類

a. 申告による UICC 分類 UICC TNM by declaration

表 3.6.a.1 申告による UICC T 因子の年次推移 Trend of UICC T factors declared

	2001	2002	2003	2004	Total	%
UICC T1 declared	44	39	38	44	165	6.3
UICC T2 declared	126	103	113	106	448	17.1
UICC T3 declared	260	227	307	342	1136	43.4
UICC T4 declared	162	142	274	214	792	30.3
Unknown	18	28	13	17	76	2.9
Total	610	539	745	723	2617	100.0

表 3.6.a.2 申告による UICC T 因子ごとにみた治療法 Treatment according to UICC T factors declared

	UICC T1 declared	UICC T2 declared	UICC T3 declared	UICC T4 declared	Total	%
1. 膵切除術 Pancreatectomy	147	384	851	168	1550	61.0
2. 姑息手術 Palliative operation	6	27	110	176	319	12.6
3. 単開腹 Exploratory laparotomy	1	6	31	46	84	3.3
4. 非手術 No surgical treatment	11	30	136	390	567	22.3
5. 非手術剖検 Autopsy cases	0	1	8	12	21	0.8
Total	165	448	1136	792	2541	100.0
切除率 Resectability %	89.1	85.7	74.9	21.2	61.0	

表 3.6.a.3 申告による UICC N 因子の年次推移 Trend of UICC N factors declared

	2001	2002	2003	2004	Total	%
UICC N0 declared	229	197	254	259	939	35.9
UICC N1 declared	307	263	402	373	1345	51.4
Unknown	74	79	89	91	333	12.7
Total	610	539	745	723	2617	100.0

表 3.6.a.4 申告による UICC N 因子ごとにみた治療法 Treatment according to UICC N factors declared

	UICC N0 declared	UICC N1 declared	Total	%
1. 膵切除術 Pancreatotomy	594	950	1544	67.6
2. 姑息手術 Palliative operation	37	142	179	7.8
3. 単開腹 Exploratory laparotomy	14	39	53	2.3
4. 非手術 No surgical treatment	291	199	490	21.5
5. 非手術剖検 Autopsy cases	3	15	18	0.8
Total	939	1345	2284	100.0
切除率 Resectability %	63.3	70.6	67.6	

表 3.6.a.5 申告による UICC M 因子の年次推移 Trend of UICC M factors declared

	2001	2002	2003	2004	Total	%
UICC M0 declared	372	318	396	418	1504	57.5
UICC M1 declared	225	210	346	300	1081	41.3
Unknown	13	11	3	5	32	1.2
Total	610	539	745	723	2617	100.0

表 3.6.a.6 申告による UICC M 因子ごとにみた治療法 Treatment according to UICC M factors declared

	UICC M0 declared	UICC M1 declared	Total	%
1. 膵切除術 Pancreatotomy	1223	337	1560	60.3
2. 姑息手術 Palliative operation	90	241	331	12.8
3. 単開腹 Exploratory laparotomy	18	73	91	3.5
4. 非手術 No surgical treatment	170	412	582	22.5
5. 非手術剖検 Autopsy cases	3	18	21	0.8
Total	1504	1081	2585	100.0
切除率 Resectability %	81.3	31.2	60.3	

表 3.6.a.7 申告による UICC Stage の年次推移 Trend of UICC Stage declared

	2001	2002	2003	2004	Total	%
UICC Stage Ia declared	34	26	21	17	98	3.7
UICC Stage Ib declared	46	50	39	38	173	6.6
UICC Stage IIa declared	67	49	60	91	267	10.2
UICC Stage IIb declared	142	125	167	171	605	23.1
UICC Stage III declared	77	60	97	88	322	12.3
UICC Stage IV declared	225	210	346	300	1081	41.3
Unknown	19	19	15	18	71	2.7
Total	610	539	745	723	2617	100.0

表 3.6.a.8 申告による UICC Stage ごとにみた治療法 Treatment according to UICC Stage declared

	UICC Stage Ia declared	UICC Stage Ib declared	UICC Stage IIa declared	UICC Stage IIb declared	UICC Stage III declared	UICC Stage IV declared	Total	%
1. 膵切除術 Pancreatotomy	95	167	254	589	106	337	1548	60.8
2. 姑息手術 Palliative operation	0	3	3	9	64	241	320	12.6
3. 単開腹 Exploratory laparotomy	0	0	0	2	13	73	88	3.5
4. 非手術 No surgical treatment	3	3	10	4	137	412	569	22.3
5. 非手術剖検 Autopsy cases	0	0	0	1	2	18	21	0.8
Total	98	173	267	605	322	1081	2546	100.0
切除率 Resectability %	96.9	96.5	95.1	97.4	32.9	31.2	60.8	

b. 計算によるUICC分類 UICC TNM by calculation from components

表 3.6.b.1 計算によるUICC T 因子と申告によるUICC T 因子の相関 Correlation between declaration and calculation of UICC T factors

	UICC T1 declared	UICC T2 declared	UICC T3 declared	UICC T4 declared	Unknown	Total
UICC T1 calculated	89	6	4	0	1	100
UICC T2 calculated	7	133	38	2	2	182
UICC T3 calculated	44	196	544	55	10	849
UICC T4 calculated	15	68	415	702	8	1208
Unknown	10	45	135	33	55	278
Total	165	448	1136	792	76	2617

表 3.6.b.2 計算によるUICC N 因子と申告によるUICC N 因子の相関 Correlation between declaration and calculation of UICC N factors

	UICC N0 declared	UICC N1 declared	Unknown	Total
UICC N0 calculated	876	0	19	895
UICC N1 calculated	0	1266	36	1302
Unknown	63	79	278	420
Total	939	1345	333	2617

表 3.6.b.3 計算によるUICC M 因子と申告によるUICC M 因子の相関 Correlation between declaration and calculation of UICC M factors

	UICC M0 declared	UICC M1 declared	Unknown	Total
UICC M0 calculated	1498	19	15	1532
UICC M1 calculated	0	1056	3	1059
Unknown	6	6	14	26
Total	1504	1081	32	2617

Out of 19 cases with declared UICC M1 and calculated UICC M0 cases, 8 cases underwent pancreatectomy with no evidence of distant metastasis, 6 cases underwent palliative procedures and 5 cases were treated non-surgically. Each factors consisting JPS M factors in these patients were negative or uninformative.

表 3.6.b.4 計算によるUICC Stage と申告によるUICC Stage の相関 Correlation between declaration and calculation of UICC Stage

	UICC Stage Ia declared	UICC Stage Ib declared	UICC Stage IIa declared	UICC Stage IIb declared	UICC Stage III declared	UICC Stage IV declared	Unknown	Total
UICC Stage Ia calculated	58	4	1	0	0	0	0	63
UICC Stage Ib calculated	2	61	12	0	0	0	1	76
UICC Stage IIa calculated	23	74	162	0	12	0	4	275
UICC Stage IIb calculated	0	0	0	394	18	4	5	421
UICC Stage III calculated	6	19	73	174	277	11	15	575
UICC Stage IV calculated	0	0	0	0	0	1056	3	1059
Unknown	9	15	19	37	15	10	43	148
Total	98	173	267	605	322	1081	71	2617

表 3.6.b.5 計算による UICC Stage と治療法 Treatment according to calculated UICC Stage

	UICC Stage Ia calculated	UICC Stage Ib calculated	UICC Stage IIa calculated	UICC Stage IIb calculated	UICC Stage III calculated	UICC Stage IV calculated	Total	%
1. 膵切除術 Pancreatectomy	61	75	266	417	331	329	1479	59.9
2. 姑息手術 Palliative operation	0	0	3	1	75	234	313	12.7
3. 単開腹 Exploratory laparotomy	0	0	0	1	16	73	90	3.6
4. 非手術 No surgical treatment	2	1	6	2	149	405	565	22.9
5. 非手術剖検 Autopsy cases	0	0	0	0	4	18	22	0.9
Total	63	76	275	421	575	1059	2469	
切除率 Resectability %	96.8	98.7	96.7	99.0	57.6	31.1	59.9	

c. UICC と JPS の比較

表 3.6.c.1 JPS T 因子と申告による UICC T 因子の相関 Correlation between JPS T factors and declared UICC T factors

	UICC T1 declared	UICC T2 declared	UICC T3 declared	UICC T4 declared	Unknown	Total
JPS T1	67	2	2	0	0	71
JPS T2	6	85	11	1	2	105
JPS T3	61	199	331	12	6	609
JPS T4	22	126	731	763	21	1663
Unknown	9	36	61	16	47	169
Total	165	448	1136	792	76	2617

表 3.6.c.2 JPS N 因子と申告による UICC N 因子の相関 Correlation between JPS N factors and declared UICC N factors

	UICC N0 declared	UICC N1 declared	Unknown	Total
JPS N0	876	0	19	895
JPS N1	0	448	8	456
JPS N2	0	347	7	354
JPS N3	0	471	21	492
Unknown	63	79	278	420
Total	939	1345	333	2617

表 3.6.c.3 JPS M 因子と申告による UICC M 因子の相関 Correlation between JPS M and declared UICC M factors

	UICC M0 declared	UICC M1 declared	Unknown	Total
JPS M0	1498	19	15	1532
JPS M1	0	1056	3	1059
Unknown	6	6	14	26
Total	1504	1081	32	2617

Out of 19 cases with declared UICC M1 and JPS M0 cases, 8 cases underwent pancreatotomy with no evidence of distant metastasis, 6 cases underwent palliative procedures and 5 cases were treated non-surgically. Each factors consisting JPS M factors in these patients were negative or uninformative.

表 3.6.c.4 JPS Stage と申告による UICC Stage の相関 Correlation between JPS Stage and declared UICC Stage

	UICC Stage Ia declared	UICC Stage Ib declared	UICC Stage IIa declared	UICC Stage IIb declared	UICC Stage III declared	UICC Stage IV declared	Unknown	Total
JPS Stage I	46	0	1	0	0	0	0	47
JPS Stage II	2	42	4	11	0	0	1	60
JPS Stage III	30	80	100	175	1	0	6	392
JPS Stage IVa	11	34	141	281	199	10	3	679
JPS Stage IVb	0	0	0	104	46	1058	6	1214
Unknown	9	17	21	34	76	13	55	225
Total	98	173	267	605	322	1081	71	2617

表 3.6.c.5 JPS T 因子と計算による UICC T 因子の相関 Correlation between JPS T factors and calculated UICC T factors

	UICC T1 calculated	UICC T2 calculated	UICC T3 calculated	UICC T4 calculated	Unknown	Total
JPS T1	71	0	0	0	0	71
JPS T2	0	105	0	0	0	105
JPS T3	27	76	503	0	3	609
JPS T4	0	0	342	1208	113	1663
Unknown	2	1	4	0	162	169
Total	100	182	849	1208	278	2617

表 3.6.c.6 JPS N 因子と計算による UICC N 因子の相関 Correlation between JPS N factors and calculated UICC N factors

	UICC N0 calculated	UICC N1 calculated	Unknown	Total
JPS N0	895	0	0	895
JPS N1	0	456	0	456
JPS N2	0	354	0	354
JPS N3	0	492	0	492
Unknown	0	0	420	420
Total	895	1302	420	2617

表 3.6.c.7 JPS M 因子と計算による UICC M 因子の相関 Correlation between JPS M and calculated UICC M factors

	UICC M0 calculated	UICC M1 calculated	Unknown	Total
JPS M0	1532	0	0	1532
JPS M1	0	1059	0	1059
Unknown	0	0	26	26
Total	1504	1081	32	2617

表 3.6.c.8 JPS Stage と申告による UICC Stage の相関 Correlation between JPS Stage and calculated UICC Stage

	UICC Stage Ia calculated	UICC Stage Ib calculated	UICC Stage IIa calculated	UICC Stage IIb calculated	UICC Stage III calculated	UICC Stage IV calculated	Unknown	Total
JPS Stage I	47	0	0	0	0	0	0	47
JPS Stage II	0	49	0	11	0	0	0	60
JPS Stage III	14	26	172	178	0	0	2	392
JPS Stage IVa	0	0	102	181	383	0	13	679
JPS Stage IVb	0	0	0	50	98	1059	7	1214
Unknown	2	1	1	1	94	0	126	225
Total	63	76	275	421	575	1059	148	2617

図3.6.d.1 申告によるUICC T因子ごとにみた生存率 Overall cumulative survival by declared UICC T factor

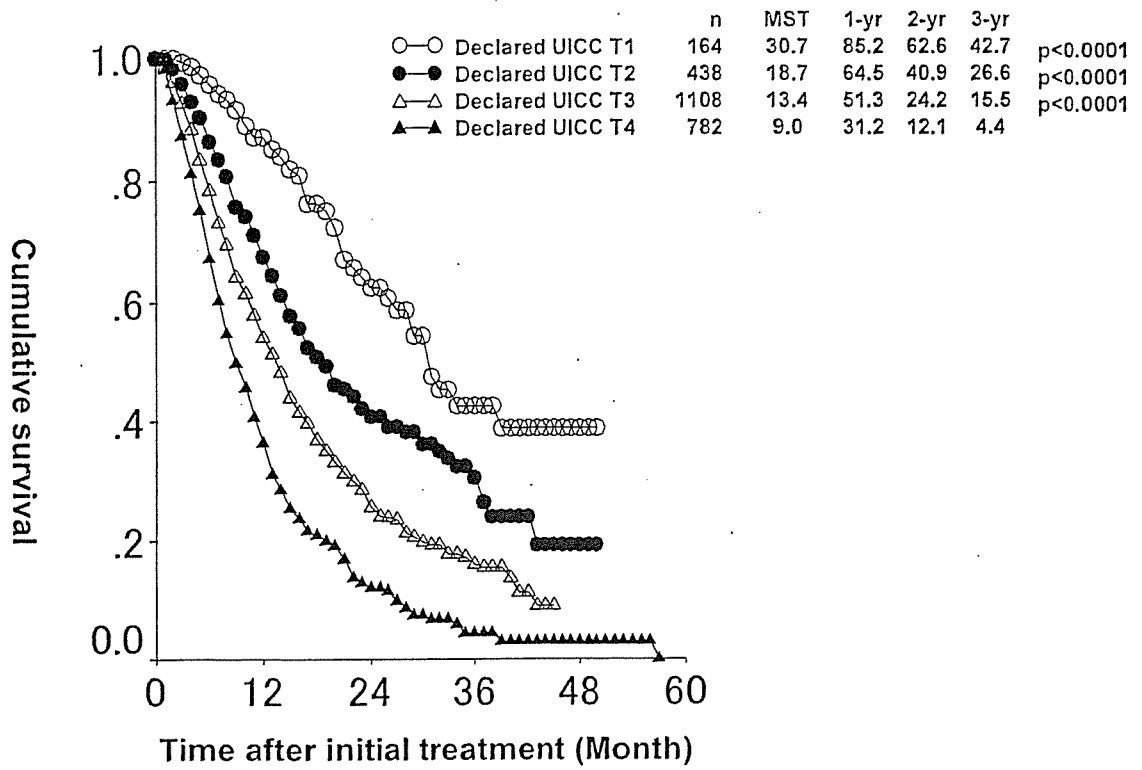


図3.6.d.2 計算によるUICC T因子ごとにみた生存率 Overall cumulative survival by calculated UICC T factor

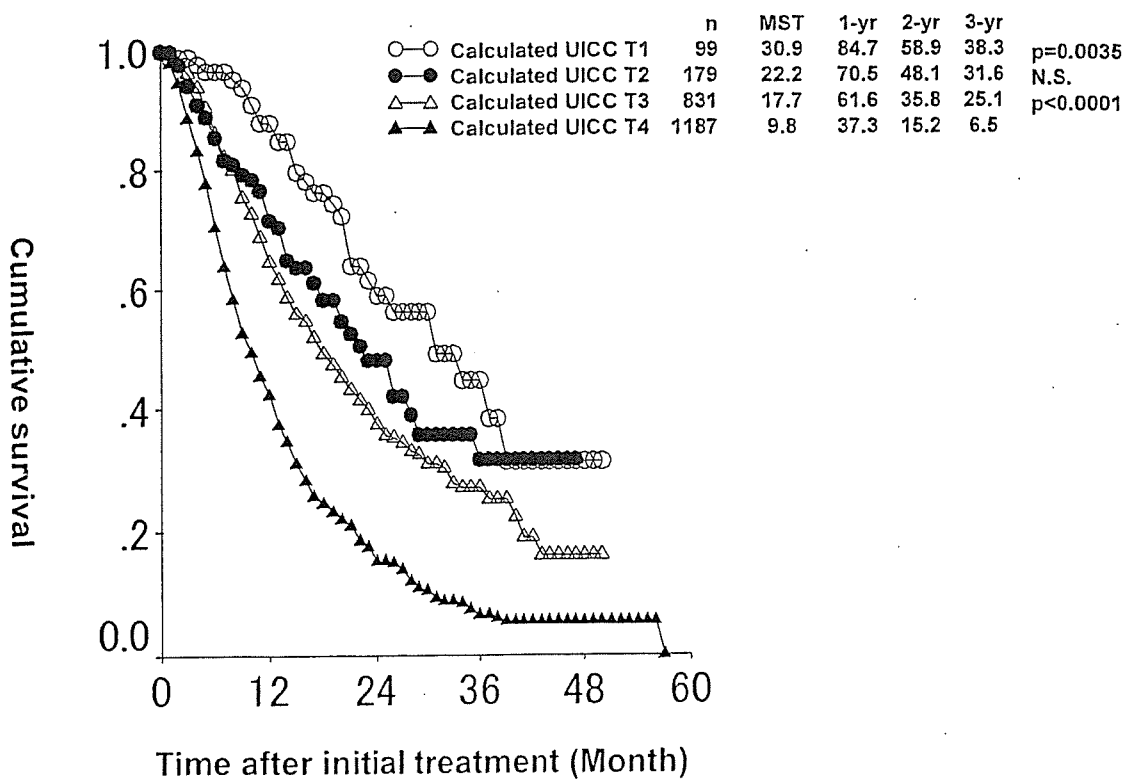


図3.6.d.3 JPS T因子ごとにみた生存率 Overall cumulative survival by JPS T factor

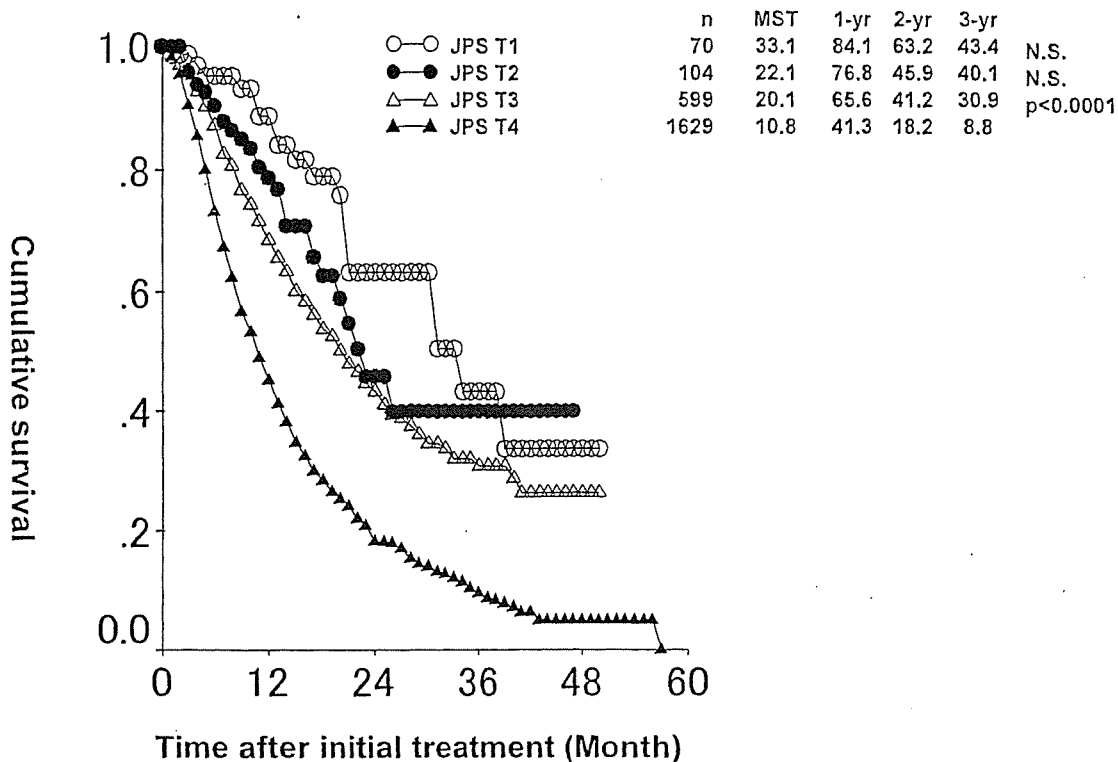


図3.6.d.4 申告によるUICC N因子ごとにみた生存率 Overall cumulative survival by declared UICC N factor

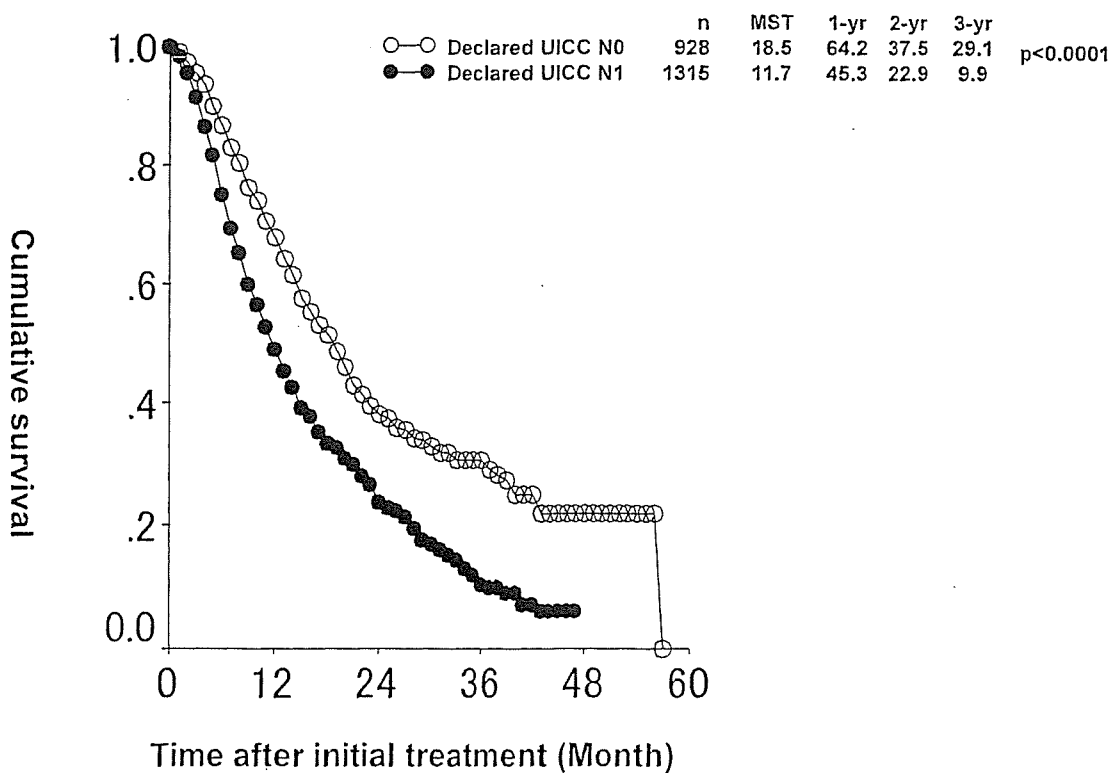


図3.6.d.5 計算によるUICC N因子ごとにみた生存率 Overall cumulative survival by calculated UICC N factor

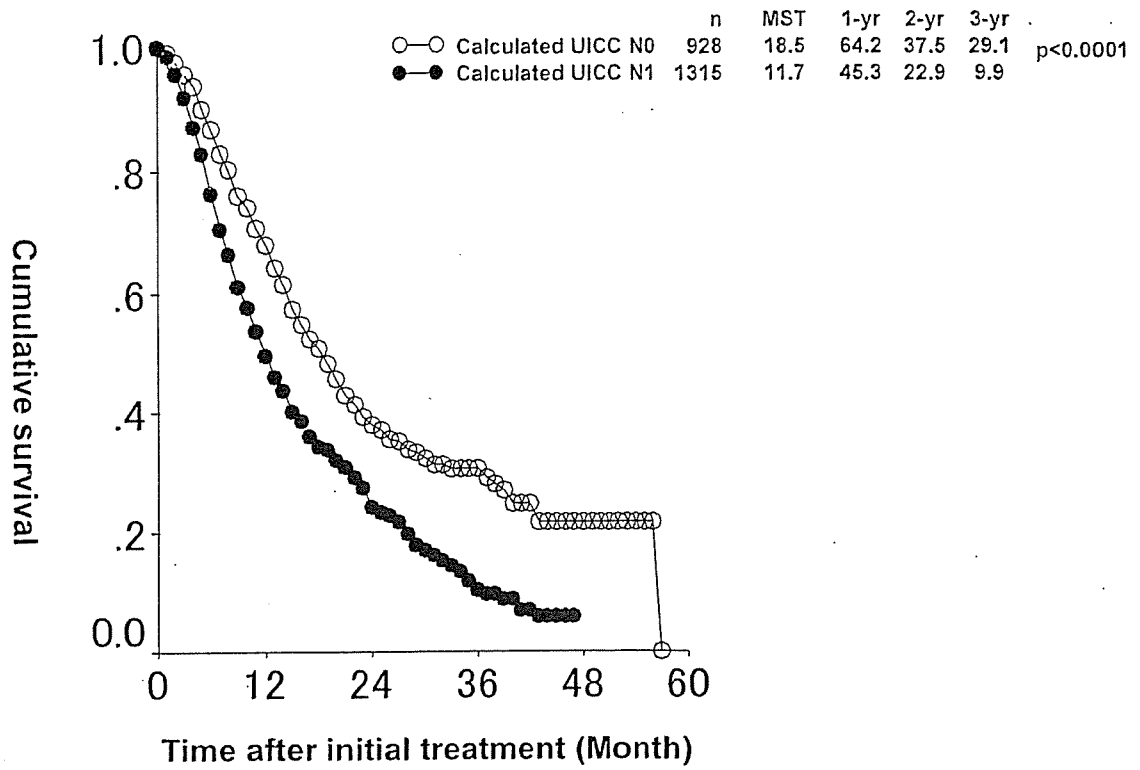


図3.6.d.6 JPS N因子ごとにみた生存率 Overall cumulative survival by JPS N factors

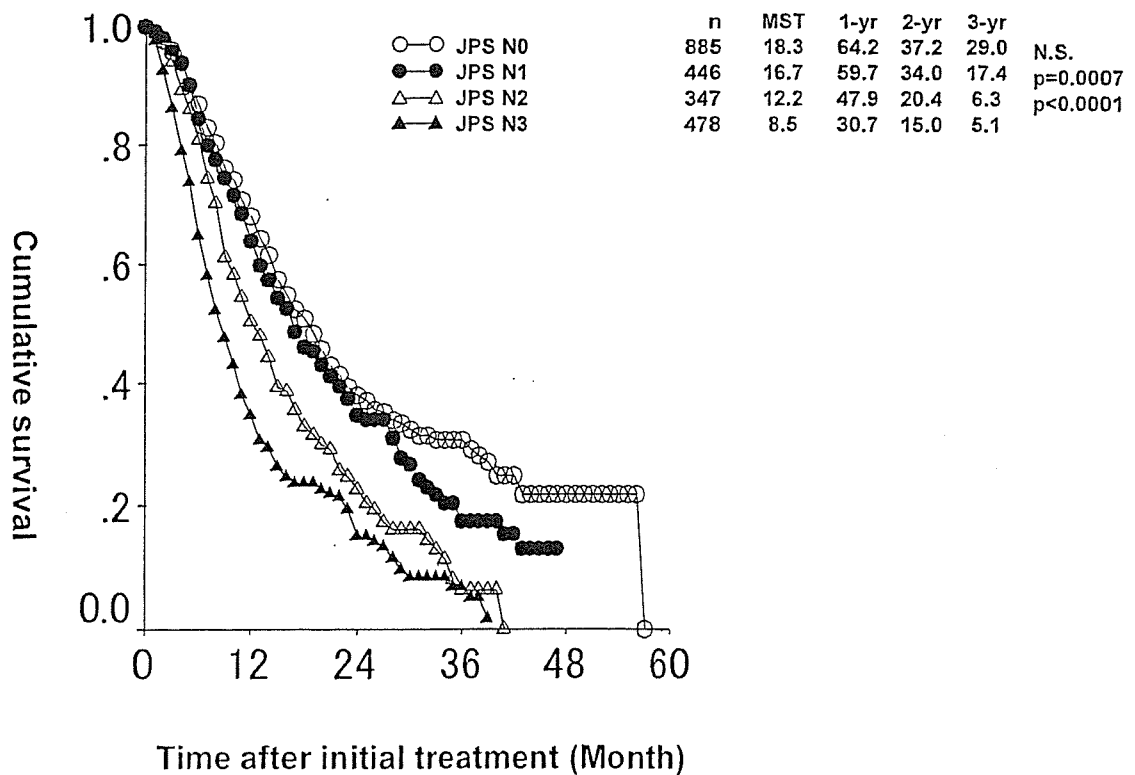


図3.6.d.7 申告によるUICC M因子ごとにみた生存率 Overall cumulative survival by declared UICC M factor

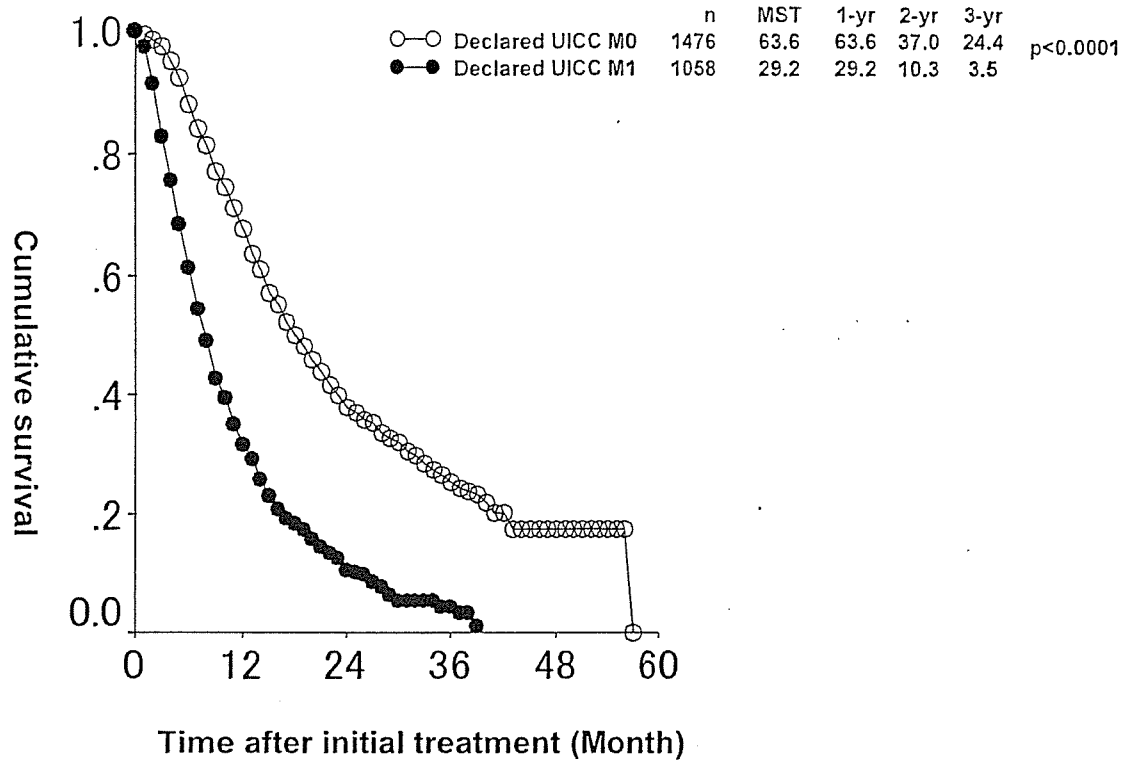


図3.6.d.8 計算によるUICC M因子(JPS M因子)ごとにみた生存率 Overall cumulative survival by calculated UICC M factor (i.e. JPS M-factor)

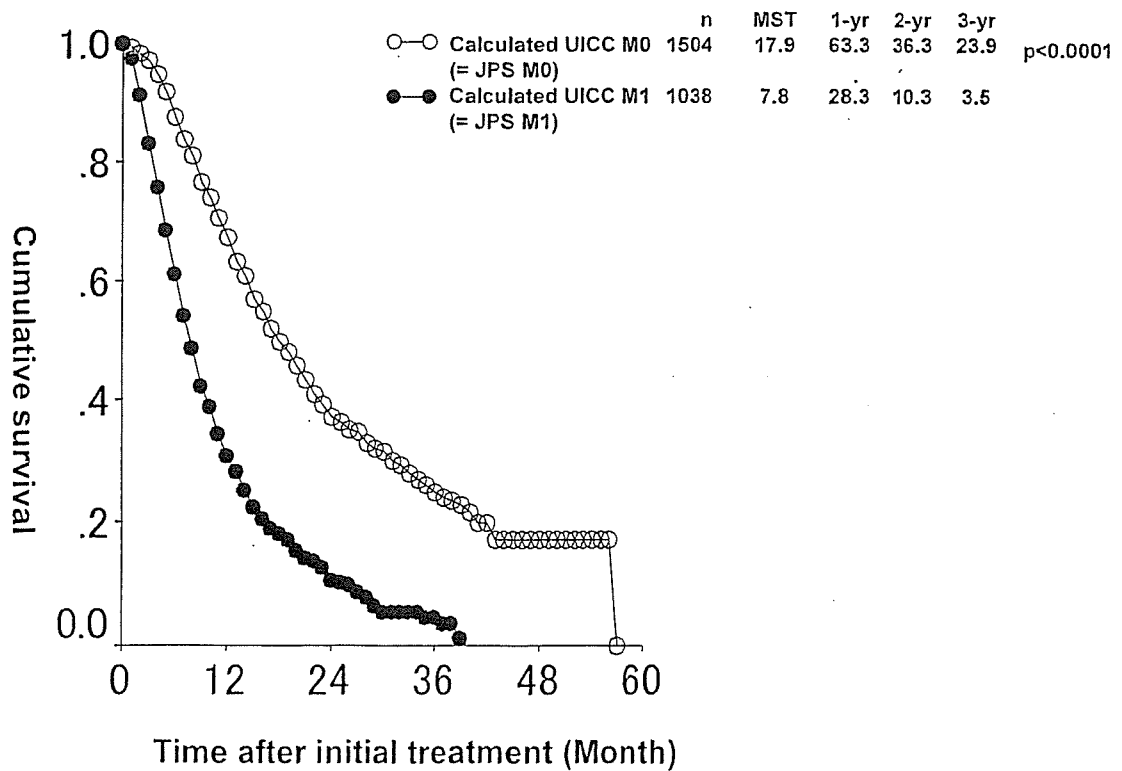


図3.6.d.9 申告されたUICC Stageごとの生存率 Overall cumulative survival by declared UICC Stage

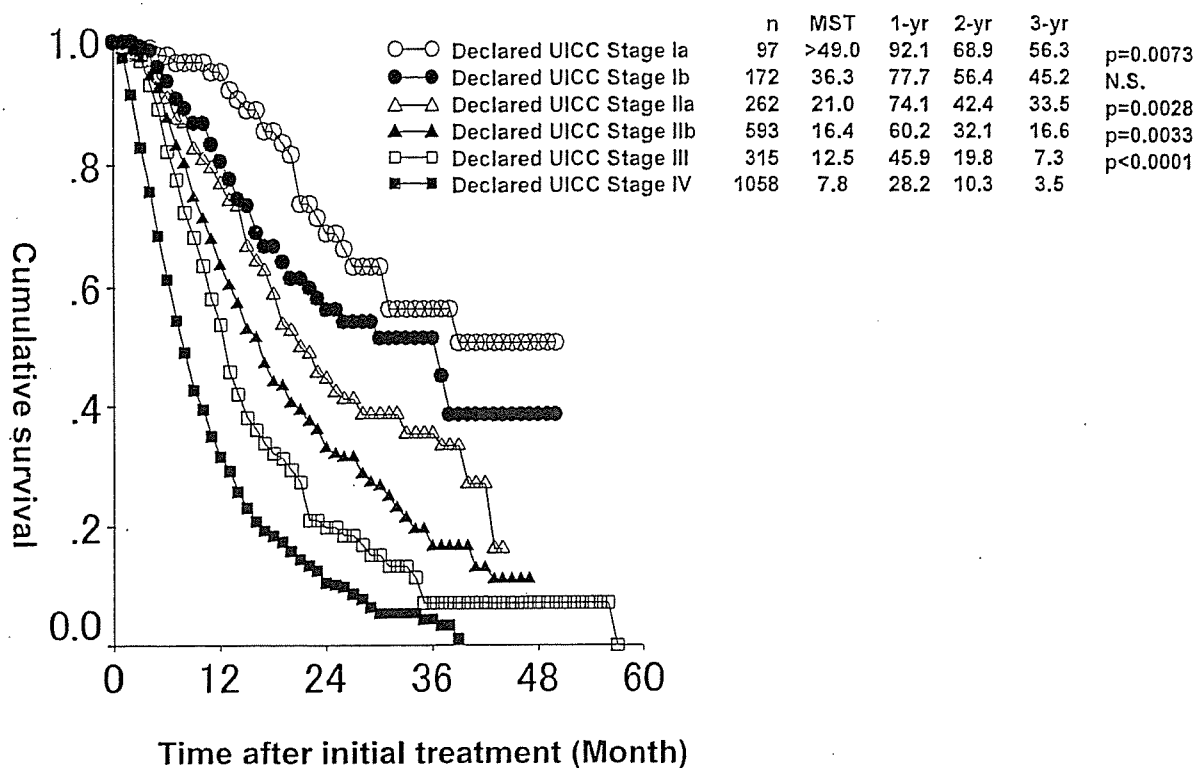


図3.6.d.10 計算されたUICC Stageごとの生存率 Overall cumulative survival by calculated UICC Stage

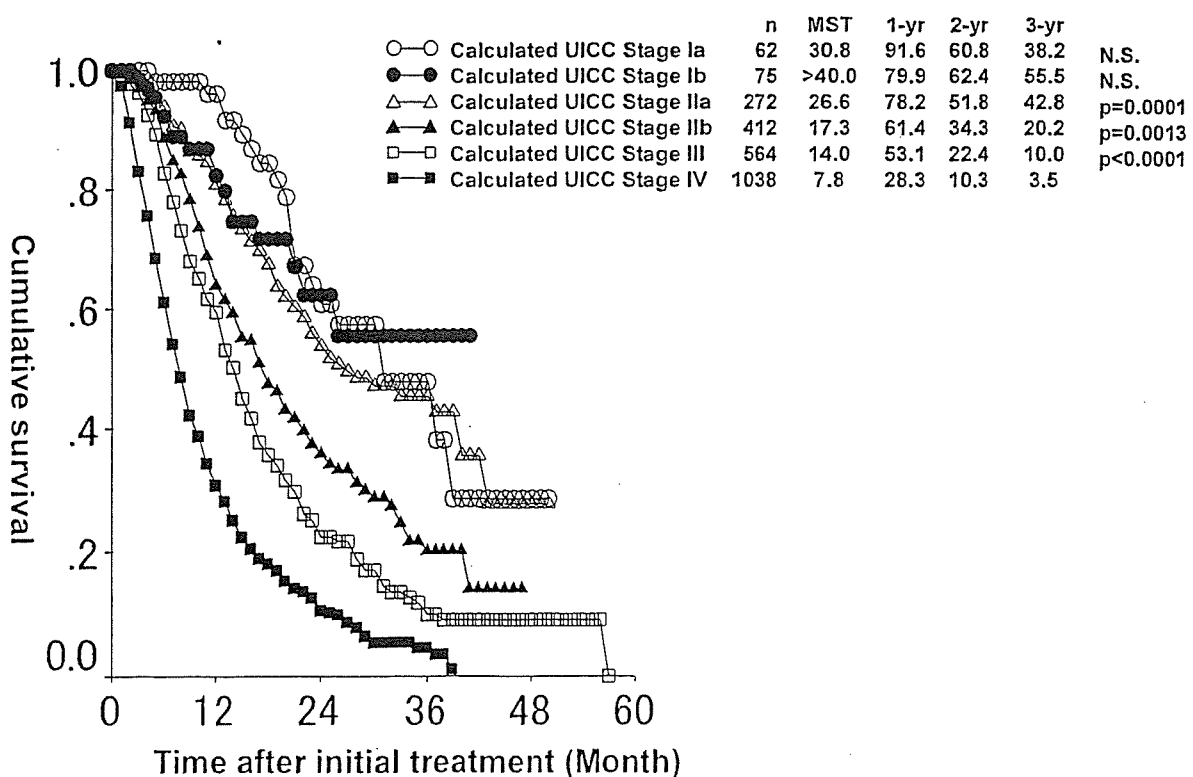
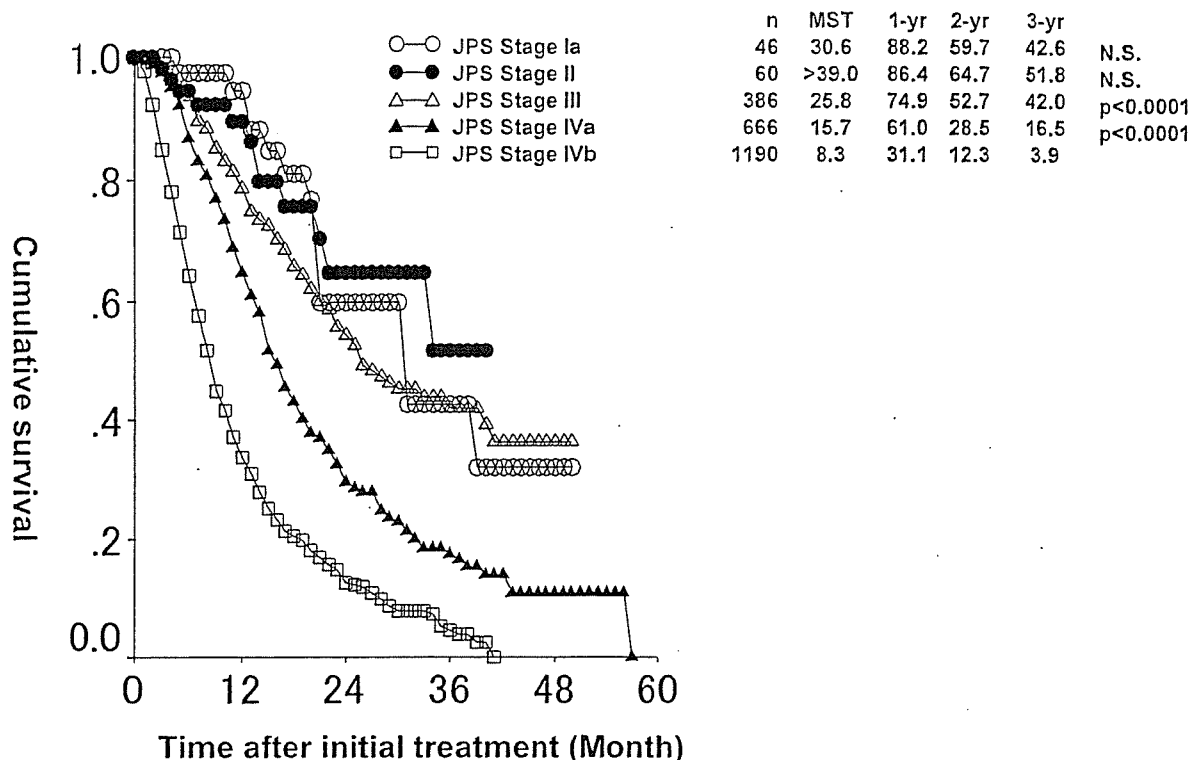


図3.6.d.11 JPS Stageごとにみた生存率 Overall cumulative survival by JPS Stage



VII. 病理学的所見 Pathological findings

a. 組織学的分類 Histological classifications

表 3.7.a.1 組織学的分類の年次推移 Yearly trend of histological subtypes

	2001	2002	2003	2004	Total	%
06. 乳頭腺癌	11	14	13	9	47	1.8
07. 管状腺癌	139	135	189	160	623	23.8
08. 高分化型管状腺癌	138	76	139	126	479	18.3
09. 中分化型管状腺癌	234	234	277	299	1044	39.9
10. 低分化型管状腺癌	66	51	85	91	293	11.2
11. 腺扁平上皮癌	6	12	12	17	47	1.8
12. 粘液癌	4	12	6	6	28	1.1
13. 退形成性膵管癌	5	0	9	7	21	0.8
16. 腺房細胞癌	3	4	14	8	29	1.1
21. 未分化癌	4	1	1	0	6	0.2
Total	610	539	745	723	2617	100.0

表 3.7.a.2 治療法別にみた組織学的分類 Histological subtypes and treatment

	膵切除術 Pancreatectomy	姑息手術 Palliative operation	単開腹 Exploratory laparotomy	非手術 No surgical treatment	非手術剖検 Autopsy cases	Total	%
06. 乳頭腺癌	37	4	0	6	0	47	1.8
07. 管状腺癌	73	150	49	341	10	623	23.8
08. 高分化型管状腺癌	397	32	11	38	1	479	18.3
09. 中分化型管状腺癌	804	92	20	122	6	1044	39.9
10. 低分化型管状腺癌	162	52	9	68	2	293	11.2
11. 腺扁平上皮癌	37	5	1	3	1	47	1.8
12. 粘液癌	21	4	1	2	0	28	1.1
13. 退形成性膵管癌	13	2	1	3	2	21	0.8
16. 腺房細胞癌	25	0	2	2	0	29	1.1
21. 未分化癌	4	0	0	2	0	6	0.2
Total	1573	341	94	587	22	2617	100.0

図3.7.a.3 組織型と生存率 Overall cumulative survival by histological subtypes

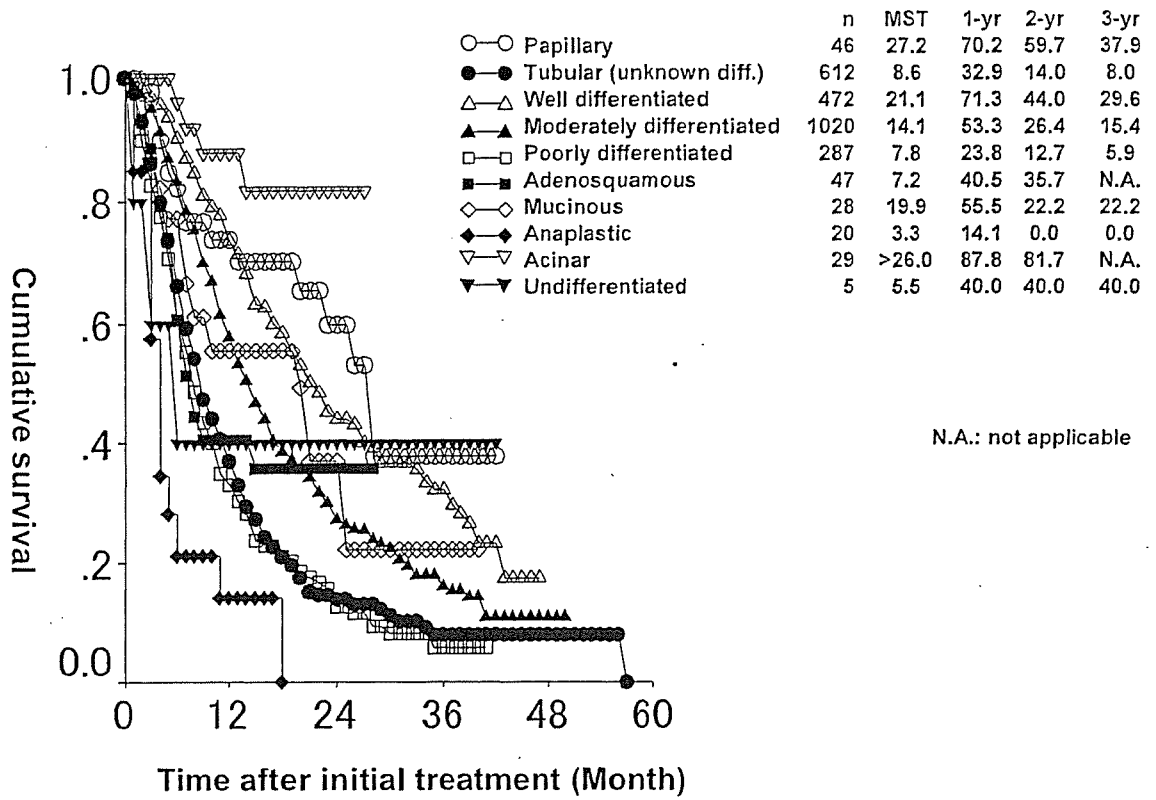


図3.7.a.4 JPS Stage I 切除例における組織型と生存率
Survival after pancreatectomy for JPS Stage I disease by histological subtypes (Cases more than 10 in four years)

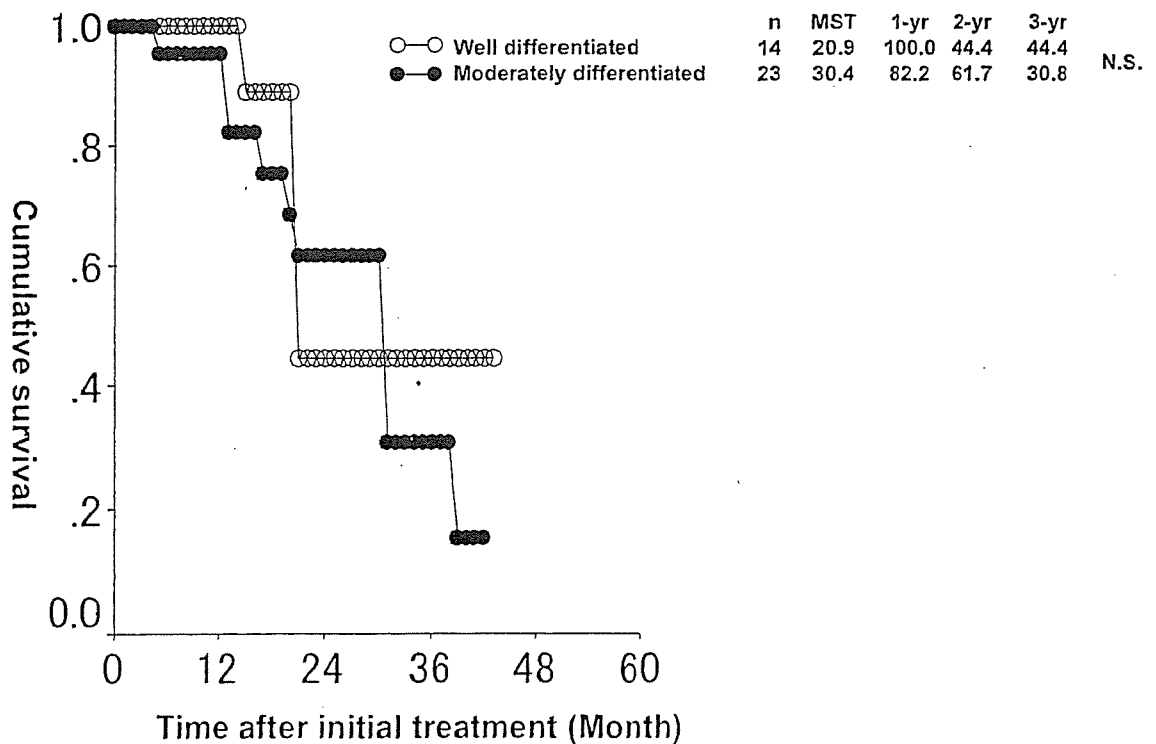


図3.7.a.5 JPS Stage II切除例における組織型と生存率

Survival after pancreatectomy for JPS Stage II disease by histological subtypes (Cases more than 10 in four years)

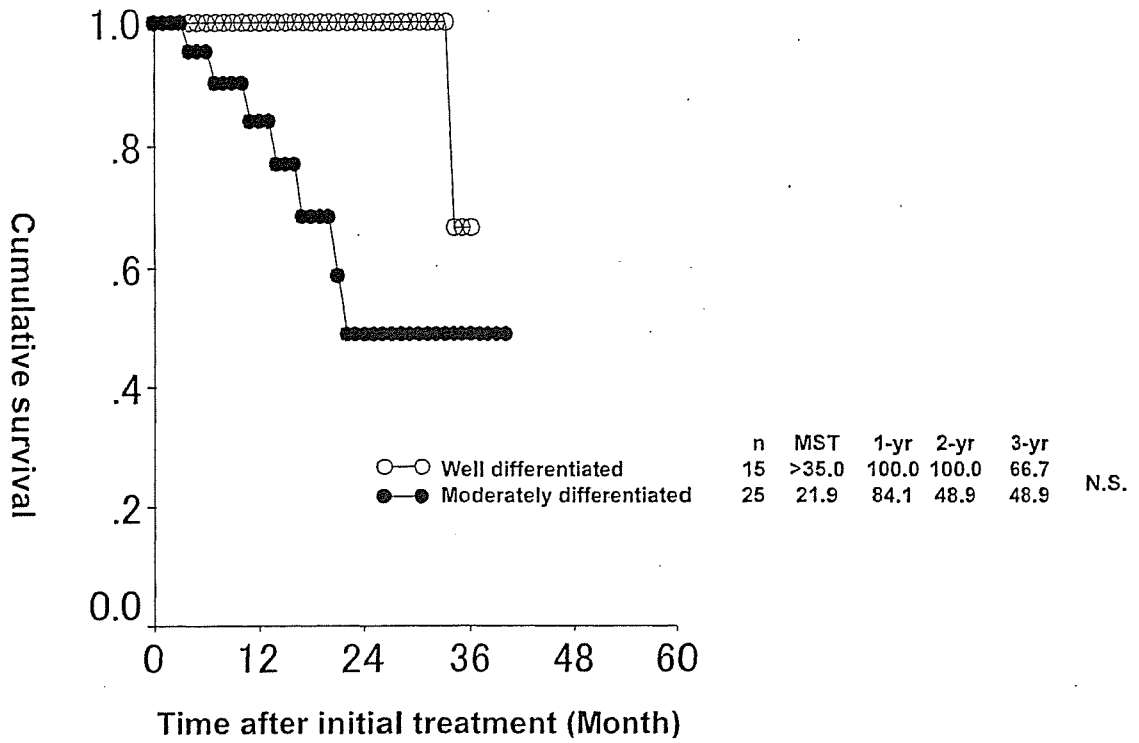


図3.7.a.6 JPS Stage III切除例における組織型と生存率

Survival after pancreatectomy for JPS Stage III disease by histological subtypes (Cases more than 10 in four years)

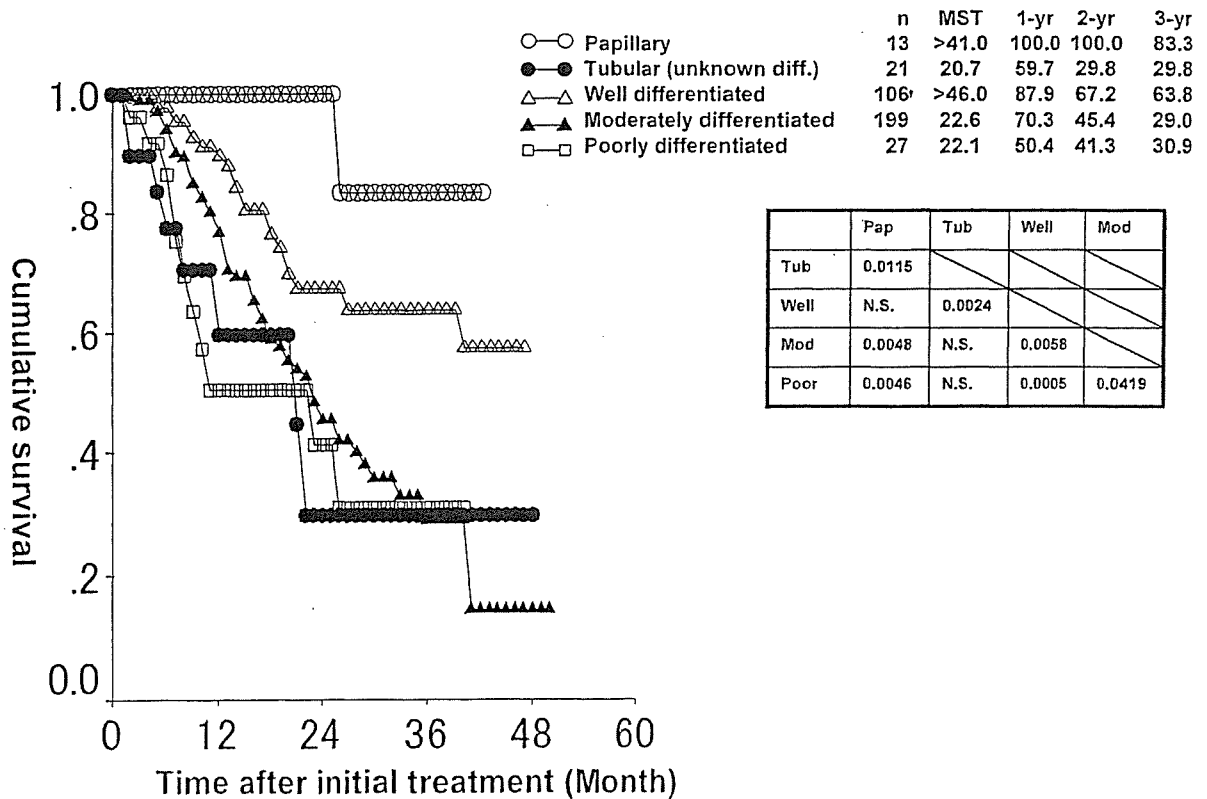


図3.7.a.7 JPS Stage IVa 切除例における組織型と生存率
Survival after pancreatectomy for JPS Stage IVa disease by histological subtypes (Cases more than 10 in four years)

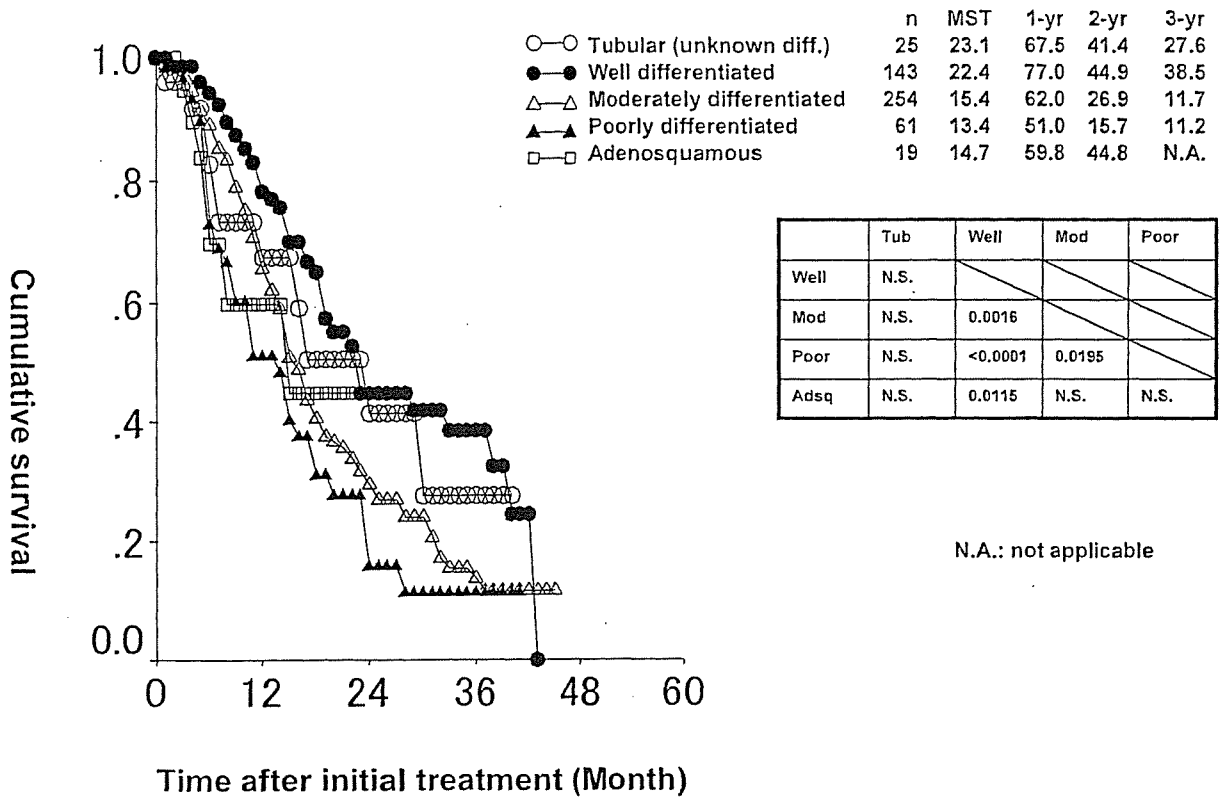
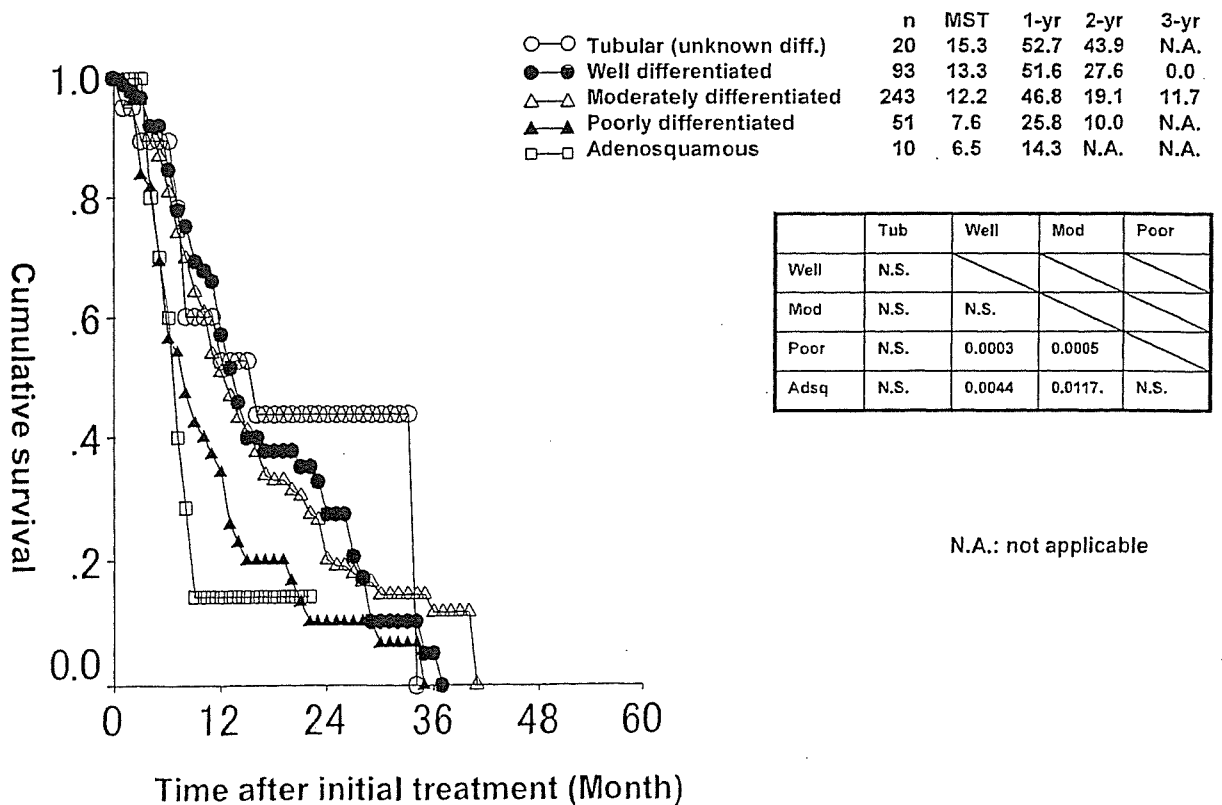


図3.7.a.8 JPS Stage IVb 切除例における組織型と生存率
Survival after pancreatectomy for JPS Stage IVb disease by histological subtypes (Cases more than 10 in four years)



b. 組織学的進展度 Histological extent
 表 3.7.b.1 癌の実質と間質量比 Cancer-stroma relationship

	2001	2002	2003	2004	Total	%
1. 髄様型 Medullary type	17	7	22	17	63	2.4
2. 中間型 Intermediate type	212	193	223	253	881	33.7
3. 硬性病 Scirrhou type	119	94	128	133	474	18.1
9. 不明 Unknown	262	245	372	320	1199	45.8
Total	610	539	745	723	2617	100.0

表 3.7.b.2 組織型と間質量比 Cancer-stroma relationship in histological subtypes

	髄様型 Medullary type	中間型 Intermediate type	硬性病 Scirrhou type	不明 Unknown	Total
06. 乳頭腺癌	5	22	3	17	47
07. 管状腺癌	2	44	17	560	623
08. 高分化型管状腺癌	13	241	101	124	479
09. 中分化型管状腺癌	20	457	264	303	1044
10. 低分化型管状腺癌	4	72	67	150	293
11. 腺扁平上皮癌	3	19	12	13	47
12. 粘液癌	3	12	3	10	28
13. 退形成性膵管癌	3	4	4	10	21
16. 腺房細胞癌	9	10	2	8	29
21. 未分化癌	1	0	1	4	6
Total	63	881	474	1199	2617
%	2.4	33.7	18.1	45.8	100.0%

表 3.7.b.3 癌の周囲組織に対する浸潤増殖様式 Growth patterns of tumors infiltrating surrounding tissue

	2001	2002	2003	2004	Total	%
1. INF α	14	5	11	18	48	1.8
2. INF β	259	211	259	252	981	37.5
3. INF γ	120	104	121	144	489	18.7
9. 不明 Unknown	217	219	354	309	1099	42.0
Total	610	539	745	723	2617	100.0

表 3.7.b.4 組織型と浸潤増殖様式 Growth patterns in histological subtypes

	INF α	INF β	INF γ	Unknown	Total
06. 乳頭腺癌	3	24	7	13	47
07. 管状腺癌	1	52	16	554	623
08. 高分化型管状腺癌	9	271	111	88	479
09. 中分化型管状腺癌	17	505	255	267	1044
10. 低分化型管状腺癌	2	80	76	135	293
11. 腺扁平上皮癌	3	20	11	13	47
12. 粘液癌	2	12	5	9	28
13. 退形成性膵管癌	0	5	7	9	21
16. 腺房細胞癌	11	10	1	7	29
21. 未分化癌	0	2	0	4	6
Total	48	981	489	1099	2617
%	1.8	37.5	18.7	42.0	100.0%

表 3.7.b.5 リンパ管侵襲 Lymphatic invasion

	2001	2002	2003	2004	Total	%
0. ly0 No lymphatic invasion	52	49	58	77	236	9.0
1. ly1 Slight lymphatic invasion	155	132	168	169	624	23.8
2. ly2 Moderate lymphatic invasion	153	117	143	144	557	21.3
3. ly3 Marked lymphatic invasion	37	27	36	29	129	4.9
9. 不明 Unknown	213	214	340	304	1071	40.9
Total	610	539	745	723	2617	100.0

表 3.7.b.6 組織型とリンパ管侵襲 Lymphatic invasion in histological subtypes

	ly 0	ly 1	ly 2	ly 3	Unknown	Total
06. 乳頭腺癌	9	23	4	0	11	47
07. 管状腺癌	7	24	31	5	556	623
08. 高分化型管状腺癌	66	175	121	34	83	479
09. 中分化型管状腺癌	98	308	317	67	254	1044
10. 低分化型管状腺癌	27	61	60	13	132	293
11. 腺扁平上皮癌	6	15	11	3	12	47
12. 粘液癌	9	7	4	1	7	28
13. 退形成性膵管癌	2	1	6	4	8	21
16. 腺房細胞癌	12	9	1	2	5	29
21. 未分化癌	0	1	2	0	3	6
Total	236	624	557	129	1071	2617
%	9.0	23.8	21.3	4.9	40.9	100.0%

表 3.7.b.7 静脈侵襲 Venous invasion

	2001	2002	2003	2004	Total	%
0. v0 No venous invasion	116	94	109	113	432	16.5
1. v1 Slight venous invasion	146	105	116	136	503	19.2
2. v2 Moderate venous invasion	107	98	131	127	463	17.7
3. v3 Marked venous invasion	30	29	51	41	151	5.8
9. 不明 Unknown	211	213	338	306	1068	40.8
Total	610	539	745	723	2617	100.0

表 3.7.b.8 組織型と静脈侵襲 Venous invasion in histological subtypes

	v 0	v 1	v 2	v 3	Unknown	Total
06. 乳頭腺癌	19	10	5	2	11	47
07. 管状腺癌	11	29	24	4	555	623
08. 高分化型管状腺癌	141	129	103	24	82	479
09. 中分化型管状腺癌	199	274	240	80	251	1044
10. 低分化型管状腺癌	33	39	62	26	133	293
11. 腺扁平上皮癌	2	9	17	7	12	47
12. 粘液癌	11	6	3	1	7	28
13. 退形成性膵管癌	0	3	6	3	9	21
16. 腺房細胞癌	16	2	2	4	5	29
21. 未分化癌	0	2	1	0	3	6
Total	432	503	463	151	1068	2617
%	16.5	19.2	17.7	5.8	40.8	100.0%

表 3.7.b.9 膵内神経浸潤 Intrapancreatic nerve invasion

	2001	2002	2003	2004	Total	%
0. ne0 No invasion of intrapancreatic nerves	57	52	56	58	223	8.5
1. ne1 Slight invasion of intrapancreatic nerves	96	84	111	120	411	15.7
2. ne2 Moderate invasion of intrapancreatic nerves	166	112	156	143	577	22.0
3. ne3 Marked invasion of intrapancreatic nerves	74	73	79	92	318	12.2
9. 不明 Unknown	217	217	343	310	1087	41.5
Total	610	539	745	723	2617	100.0

表 3.7.b.10 組織型と神経浸潤 Intrapancreatic nerve invasion in histological subtypes

	ne 0	ne 1	ne 2	ne 3	Unknown	Total
06. 乳頭腺癌	13	13	5	4	12	47
07. 管状腺癌	8	20	31	10	554	623
08. 高分化型管状腺癌	65	114	137	76	87	479
09. 中分化型管状腺癌	94	192	316	186	255	1044
10. 低分化型管状腺癌	16	46	59	33	139	293
11. 腺扁平上皮癌	4	9	16	5	13	47
12. 粘液癌	8	7	4	2	7	28
13. 退形成性膵管癌	1	3	6	2	9	21
16. 腺房細胞癌	13	6	3	0	7	29
21. 未分化癌	1	1	0	0	4	6
Total	223	411	577	318	1087	2617
%	8.5	15.7	22.0	12.2	41.5	100.0%

表 3.7.b.11 主膵管内進展 Spread within the main pancreatic duct

	2001	2002	2003	2004	Total	%
0. MPD (-) No evidence of spread	207	180	244	257	888	33.9
1. MPD (+) Spread present	173	130	127	125	555	21.2
2. MPD (b) Borderline	1	8	6	8	23	0.9
9. 不明 Unknown	229	220	368	333	1150	43.9
Total	610	539	745	723	2617	100.0

表 3.7.b.12 組織型と主膵管内進展 Spread within the main pancreatic duct in histological subtypes

	MPD (-)	MPD (+)	MPD borderline	Unknown	Total
06. 乳頭腺癌	12	24	0	11	47
07. 管状腺癌	36	28	1	558	623
08. 高分化型管状腺癌	221	146	9	103	479
09. 中分化型管状腺癌	466	272	11	295	1044
10. 低分化型管状腺癌	96	55	1	141	293
11. 腺扁平上皮癌	22	9	0	16	47
12. 粘液癌	7	10	1	10	28
13. 退形成性膵管癌	11	2	0	8	21
16. 腺房細胞癌	15	8	0	6	29
21. 未分化癌	2	1	0	3	6
Total	888	555	23	1150	2617
%	33.9	21.2	0.9	43.9	100.0%

VIII. 合併症

a. 膵頭部癌切除例の合併症

表 3.8.a.1 膵頭部癌切除例における術後合併症の年次推移 (重複あり)

Yearly trend of postoperative complications after resection of the tumor in the pancreatic head (With overlap)

	2001	2002	2003	2004	Total	%
術後早期合併症 Early abdominal complications						
消化管出血 GI bleeding	4	9	10	6	29	2.7
腹腔内出血 Intraperitoneal bleeding	7	6	4	7	24	2.3
その他の出血 Other bleeding	5	1	0	0	6	0.6
膵空腸吻合結合不全 Pancreatic anastomosis insufficiency	13	12	17	22	64	6.0
胆管空腸吻合結合不全 Biliary anastomosis insufficiency	8	8	6	8	30	2.8
胃空腸吻合結合不全 Gastric anastomosis insufficiency	3	3	3	1	10	0.9
その他の結合不全 Other anastomotic insufficiency	0	2	0	0	2	0.2
胃排出遅延 Delayed gastric emptying	4	6	40	34	84	7.9
吻合部狭窄 Anastomotic stenosis	3	0	9	9	21	2.0
急性膵炎 Acute pancreatitis	1	1	0	4	6	0.6
膵液瘻 Pancreatic fistula	17	16	22	15	70	6.6
胆汁瘻 Biliary fistula	2	4	5	5	16	1.5
腹膜炎 Peritonitis	3	4	5	4	16	1.5
術後早期全身合併症 Early systemic complications						
肝不全 Liver failure	4	5	2	3	14	1.3
腎不全 Renal failure	5	5	2	3	15	1.4
低血糖 Hypoglycemia	0	0	2	2	4	0.4
肺合併症 Pulmonary complication	14	12	6	9	41	3.8
心不全 Heart failure	3	2	1	1	7	0.7
術後晚期合併症 Late complications						
イレウス Ileus	6	9	7	4	26	2.4
糖尿病 Diabetes mellitus	24	25	22	20	91	8.5
頑固な下痢 Persistent diarrhea	21	23	26	8	78	7.3
栄養不良 Malnutrition	30	13	27	15	85	8.0
ケトアシドーシス Ketoacidosis	0	0	0	0	0	0.0
感染症 Infection	8	11	18	18	55	5.2
胆管炎 Cholangitis	12	21	17	18	68	6.4
Total	259	240	277	289	1065	100.0

表 3.8.a.2 膵頭部癌切除例における主な術式と術後早期局所合併症 (重複あり)

Postoperative complications by major procedures after resection of the tumor in the pancreatic head

(Procedures that were performed more than 10 cases in four years. With overlap between each complication)

	TP	PD	Subtotal PD	PPPD	SSPPD	Total	%
術後早期合併症 Early abdominal complications							
消化管出血 GI bleeding	0	20	0	7	1	28	2.7
腹腔内出血 Intraperitoneal bleeding	0	12	0	7	3	22	2.1
その他の出血 Other bleeding	0	4	0	1	0	5	0.5
膵空腸吻合結合不全 Pancreatic anastomosis insufficiency	0	29	0	29	5	63	6.0
胆管空腸吻合結合不全 Biliary anastomosis insufficiency	0	19	1	10	0	30	2.9
胃空腸吻合結合不全 Gastric anastomosis insufficiency	0	5	0	5	0	10	1.0
その他の結合不全 Other anastomotic insufficiency	0	1	0	0	1	2	0.2
胃排出遅延 Delayed gastric emptying	0	42	0	33	8	83	7.9
吻合部狭窄 Anastomotic stenosis	0	13	1	5	0	19	1.8
急性膵炎 Acute pancreatitis	0	4	0	1	1	6	0.6
膵液瘻 Pancreatic fistula	0	41	2	22	4	69	6.6
胆汁瘻 Biliary fistula	0	12	1	2	1	16	1.5
腹膜炎 Peritonitis	0	8	1	5	1	15	1.4
術後早期全身合併症 Early systemic complications							
肝不全 Liver failure	0	11	0	2	0	13	1.2
腎不全 Renal failure	1	9	0	5	0	15	1.4
低血糖 Hypoglycemia	0	3	0	1	0	4	0.4
肺合併症 Pulmonary complication	1	18	2	13	5	39	3.7
心不全 Heart failure	0	5	0	1	0	6	0.6
術後晚期合併症 Late complications							
イレウス Ileus	0	11	0	10	5	26	2.5
糖尿病 Diabetes mellitus	7	41	1	31	10	90	8.6
頑固な下痢 Persistent diarrhea	3	27	1	23	23	77	7.4
栄養不良 Malnutrition	2	42	1	25	13	83	7.9
ケトアシドーシス Ketoacidosis	0	0	0	0	0	0	0.0
感染症 Infection	1	31	1	12	9	54	5.2
胆管炎 Cholangitis	1	41	0	14	10	66	6.3
Total	16	535	28	346	120	1045	100.0

表 3.8.a.3 膵頭部癌切除例における合併切除臓器と術後局所早期合併症 (重複あり)
Postoperative complications by combined resection for tumor in the pancreatic head (With overlap)

	Portal vein	Artery	Plexus
術後早期合併症 Early abdominal complications			
消化管出血 GI bleeding	14	2	17
腹腔内出血 Intraperitoneal bleeding	11	2	15
その他の出血 Other bleeding	1	0	2
膵空腸吻合不全 Pancreatic anastomosis insufficiency	16	1	23
胆管空腸吻合不全 Biliary anastomosis insufficiency	12	2	12
胃空腸吻合不全 Gastric anastomosis insufficiency	4	0	3
その他の吻合不全 Other anastomotic insufficiency	1	0	1
胃排出遅延 Delayed gastric emptying	34	0	34
吻合部狭窄 Anastomotic stenosis	9	0	5
急性膵炎 Acute pancreatitis	4	0	3
膵液瘻 Pancreatic fistula	21	1	26
胆汁瘻 Biliary fistula	5	2	6
腹膜炎 Peritonitis	2	0	5
術後早期全身合併症 Early systemic complications			
肝不全 Liver failure	6	1	9
腎不全 Renal failure	5	2	8
低血糖 Hypoglycemia	1	1	2
肺合併症 Pulmonary complication	7	0	17
心不全 Heart failure	2	0	2
術後晩期合併症 Late complications			
イレウス Ileus	9	1	5
糖尿病 Diabetes mellitus	37	2	31
頑固な下痢 Persistent diarrhea	52	6	61
栄養不良 Malnutrition	40	1	43
ケトアシドーシス Ketoacidosis	0	0	0
感染症 Infection	23	3	19
胆管炎 Cholangitis	27	2	32
Total	376	27	416

表 3.8.a.4 膵頭部癌切除例におけるリンパ節郭清度と術後早期局所合併症 (重複あり)
Postoperative complications by lymph node dissection for tumor in the pancreatic head (With overlap)

	D0	D1	D2	D3	Total	%
術後早期合併症 Early abdominal complications						
消化管出血 GI bleeding	0	5	20	3	28	2.7
腹腔内出血 Intraperitoneal bleeding	1	2	15	4	22	2.1
その他の出血 Other bleeding	0	1	4	1	6	0.6
膵空腸吻合不全 Pancreatic anastomosis insufficiency	4	16	34	8	62	6.0
胆管空腸吻合不全 Biliary anastomosis insufficiency	2	7	20	0	29	2.8
胃空腸吻合不全 Gastric anastomosis insufficiency	0	5	5	0	10	1.0
その他の吻合不全 Other anastomotic insufficiency	0	1	0	1	2	0.2
胃排出遅延 Delayed gastric emptying	1	15	49	15	80	7.7
吻合部狭窄 Anastomotic stenosis	2	6	10	2	20	1.9
急性膵炎 Acute pancreatitis	1	1	2	1	5	0.5
膵液瘻 Pancreatic fistula	3	15	40	9	67	6.5
胆汁瘻 Biliary fistula	2	3	9	2	16	1.5
腹膜炎 Peritonitis	3	3	7	3	16	1.5
術後早期全身合併症 Early systemic complications						
肝不全 Liver failure	1	1	8	4	14	1.4
腎不全 Renal failure	1	4	6	3	14	1.4
低血糖 Hypoglycemia	0	0	4	0	4	0.4
肺合併症 Pulmonary complication	4	8	23	3	38	3.7
心不全 Heart failure	2	0	4	1	7	0.7
術後晩期合併症 Late complications						
イレウス Ileus	2	8	12	4	26	2.5
糖尿病 Diabetes mellitus	2	17	47	23	89	8.6
頑固な下痢 Persistent diarrhea	1	7	41	25	74	7.2
栄養不良 Malnutrition	1	14	46	19	80	7.7
ケトアシドーシス Ketoacidosis	0	0	0	0	0	0.0
感染症 Infection	3	10	32	10	55	5.3
胆管炎 Cholangitis	4	8	48	7	67	6.5
Total	35	189	643	167	1034	100.0