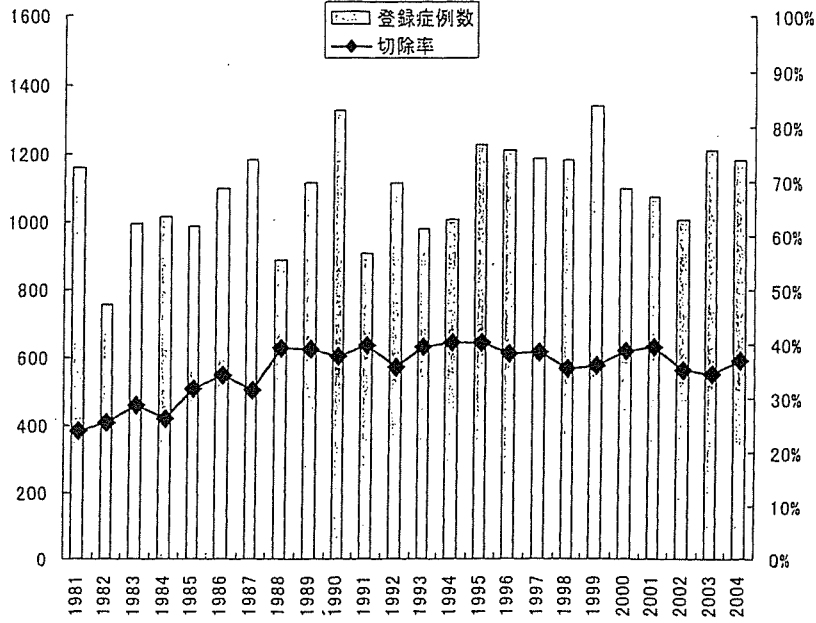


図2.1.c 通常型膵癌と組織型不明例における切除率の年次推移

Trend of resectability of total cases of histologically confirmed and unconfirmed invasive pancreatic cancer.



第2章 切除率・生存率の推移 Trend of treatment modality and survival

1. 切除率の年次推移 Trend of treatment modality

a. 通常型膵癌と組織型不明症例をあわせた症例に対する切除率(表2.1.a)

Trend of resectability of total cases of histologically confirmed and unconfirmed invasive pancreatic cancer

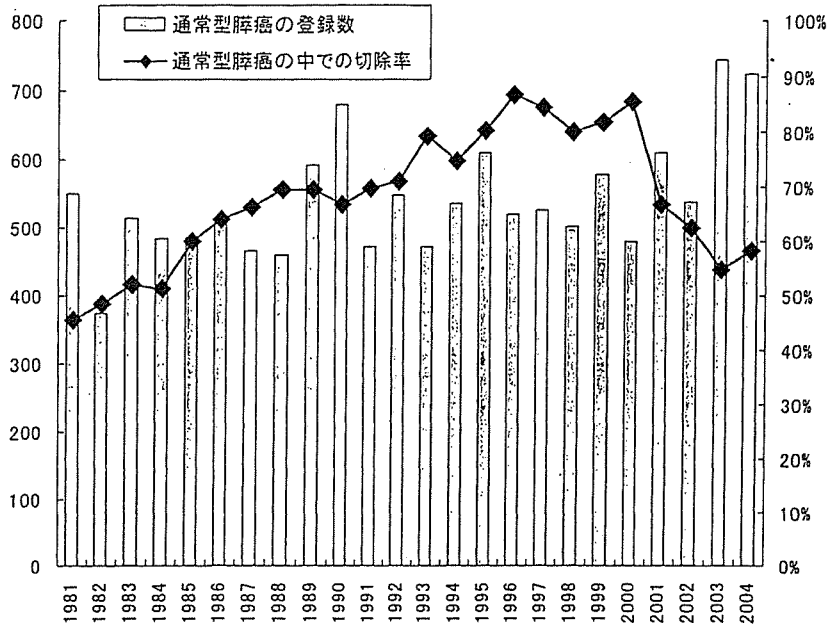
Year	Pancreatectomy	Palliative surgery	Exploratory laparotomy	Non-surgical	Autopsy	Total
1981	278 (23.9%)	532	101	198	52	1161
1982	193 (25.5%)	325	49	157	34	758
1983	288 (28.5%)	417	58	225	10	998
1984	267 (26.3%)	399	79	249	21	1015
1985	314 (31.8%)	350	50	240	33	987
1986	376 (34.2%)	439	49	210	25	1099
1987	374 (31.5%)	424	69	296	23	1186
1988	348 (39.1%)	257	78	189	17	889
1989	436 (39.1%)	359	70	228	23	1116
1990	501 (37.7%)	418	90	282	37	1328
1991	360 (39.7%)	262	70	197	18	907
1992	400 (35.9%)	282	89	318	26	1115
1993	388 (39.5%)	294	66	223	11	982
1994	405 (40.1%)	295	48	242	19	1009
1995	495 (40.4%)	314	73	319	27	1229
1996	463 (38.2%)	330	58	338	22	1211
1997	459 (38.6%)	300	58	349	24	1190
1998	422 (35.6%)	266	46	417	34	1185
1999	484 (36.1%)	264	59	500	35	1342
2000	427 (38.7%)	213	44	397	21	1102
2001	436 (39.6%)	196	40	402	13	1077
2002	356 (35.3%)	163	55	427	8	1009
2003	419 (34.6%)	169	45	571	7	1211
2004	438 (37.0%)	170	46	525	6	1185
Total	9318 (35.4%)	7438	1490	7499	546	26291

b. 通常型膵癌と組織型不明(良悪性)症例をあわせた場合の切除率(表2.1.b)

Year	Pancreatectomy	Palliative surgery	Exploratory laparotomy	Non-surgical	Autopsy	Total
2001	419 (43.7%)	166	37	323	13	958
2002	351 (40.0%)	143	45	331	8	878
2003	413 (37.6%)	154	41	482	7	1097
2004	431 (40.2%)	156	44	436	6	1073
Total	1614 (40.3%)	619	167	1572	34	4006

2001-2004年の登録データには採選度の記載があること、ならびに、組織学的な確定診断なしに経過観察されているような悪性疾患などを除外するために、合計症例数が少なくなり、切除率は(ア)の表よりも高くなる。

図2.1.e 通常型膵癌が組織学的に確定診断された症例における切除率の年次推移
Trend of resectability of histologically confirmed invasive pancreatic cancer.



d. 通常型膵癌の切除率推移 (表 2.1.d)

Year	Pancrectectomy	Palliative surgery	Exploratory laparotomy	Non-surgical	Autopsy	Total
1981	251 (45.6%)	194	45	31	30	551
1982	182 (48.5%)	124	22	23	24	375
1983	268 (52.0%)	175	26	42	4	515
1984	248 (51.1%)	143	29	46	19	485
1985	292 (60.1%)	109	23	39	23	486
1986	329 (64.0%)	123	18	26	18	514
1987	309 (66.2%)	108	26	13	11	467
1988	320 (69.5%)	87	27	16	10	460
1989	412 (69.5%)	122	25	18	16	593
1990	454 (66.7%)	147	35	24	21	681
1991	330 (69.8%)	85	30	15	13	473
1992	389 (71.0%)	76	39	27	17	548
1993	375 (79.3%)	60	18	14	6	473
1994	402 (71.9%)	90	16	18	11	537
1995	490 (80.2%)	73	26	12	10	611
1996	452 (86.8%)	36	17	8	8	521
1997	445 (84.4%)	53	18	3	8	527
1998	402 (79.5%)	62	12	10	17	503
1999	473 (81.6%)	57	16	15	17	578
2000	411 (85.4%)	43	10	11	6	481
2001	407 (66.7%)	85	15	93	10	610
2002	337 (62.5%)	78	27	94	3	539
2003	408 (54.8%)	86	28	217	6	745
2004	422 (58.3%)	92	24	183	3	724
Total	8808 (100.0%)	2308	572	998	311	12997

2001年以降は登録がコンピューター入力になったこと、組織学的な要件が明確化されたことなどにより、組織学的に不明な症例が減少している。それに加えて、画像診断の進歩、針生検・内視鏡的生検などの組織学的確定診断方法の進歩により非切除の割合が増している。その結果、通常型膵癌と組織学的に診断された症例のなかでの切除率は2001年以降の症例で急激に減少している(図2.1.e)。

図2.2.a.1 通常型・組織型不明の浸潤癌全症例の生存率推移(全Stage及びStage不明例を含む)
Trend of overall cumulative survival of the patients with histologically confirmed and unconfirmed invasive pancreatic cancer including indefinite JPS Stage.

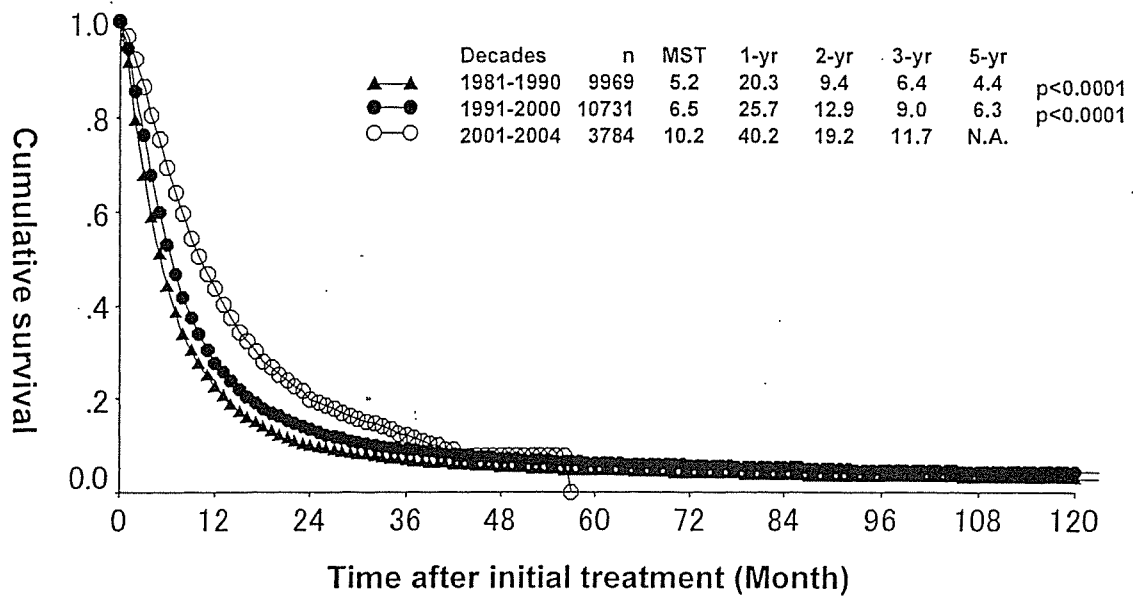


図2.2.a.2 通常型・組織型不明の浸潤癌全症例のStage内訳
Trend of JPS Stage distribution of histologically confirmed and unconfirmed invasive pancreatic cancer.

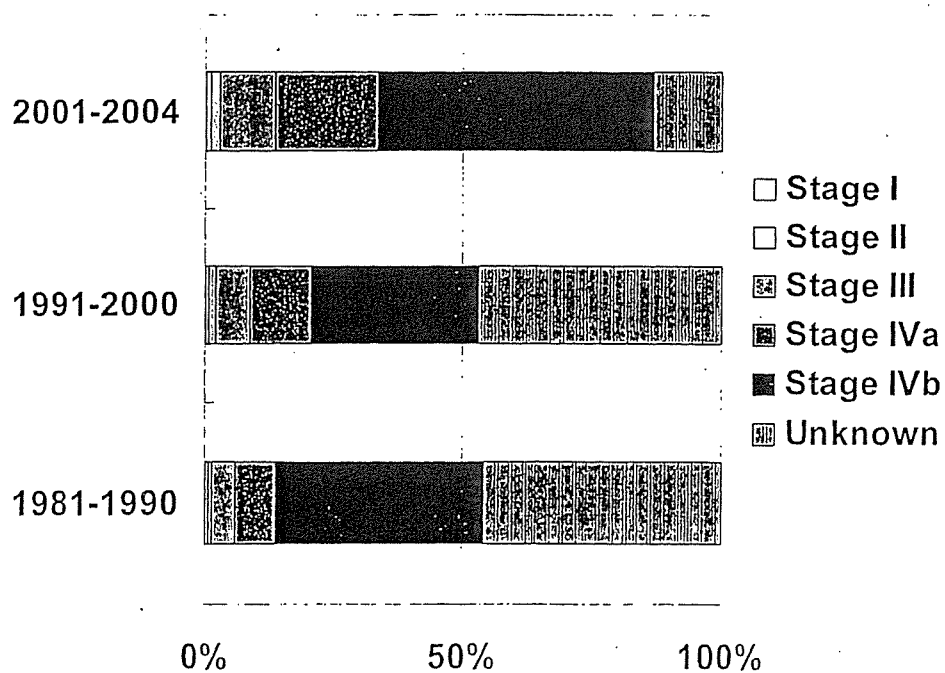


図2.2.b.1 通常型・組織型不明の浸潤癌全症例の生存率推移 (Stage不明例を除く)

Trend of overall cumulative survival of the patients with histologically confirmed and unconfirmed invasive pancreatic cancer with definite JPS Stage.

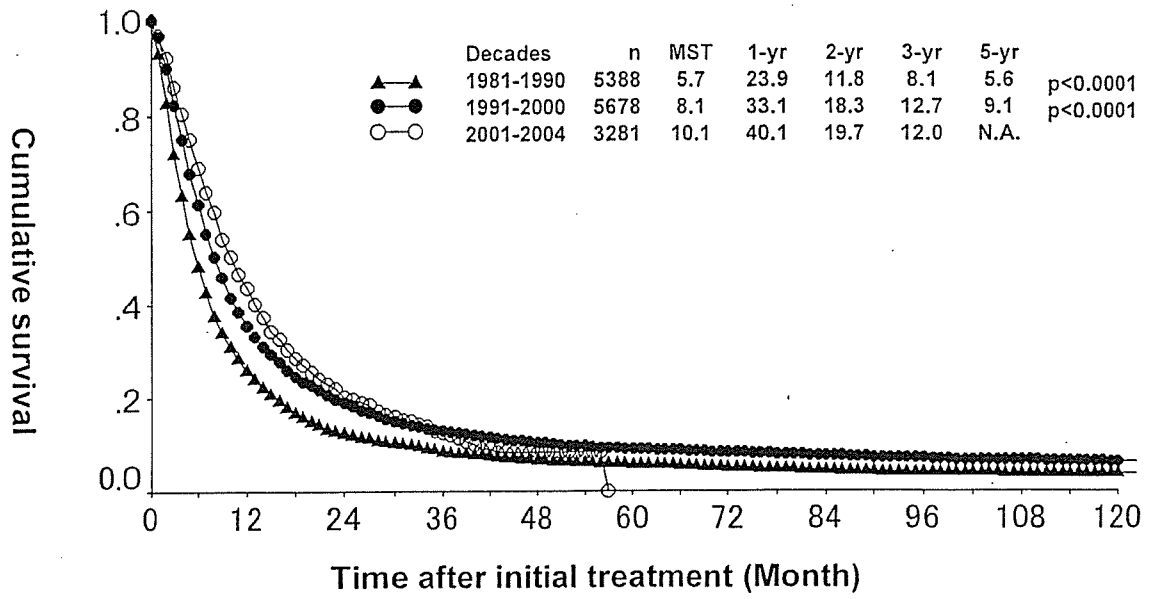


図2.2.b.2 通常型・組織型不明の浸潤癌全症例のStage内訳 (Stage不明例を除く)

Trend of JPS Stage distribution of histologically confirmed and unconfirmed invasive pancreatic cancer.

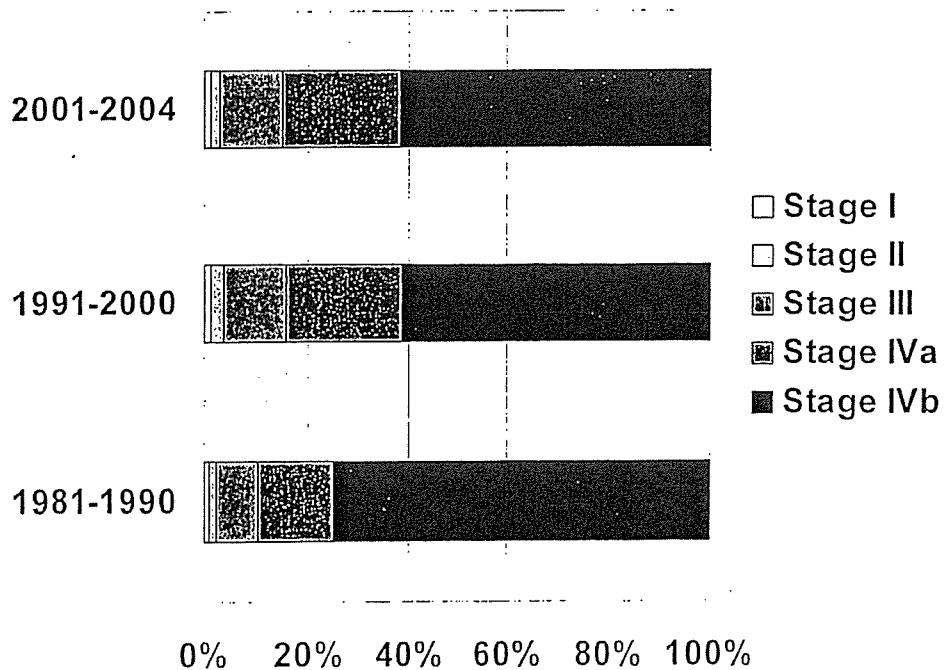


図2.2.c.1 通常型膵癌 全症例の生存率推移 (全Stage、非切除例を含む)
Trend of overall survival of the patients with histologically confirmed invasive pancreatic cancer.

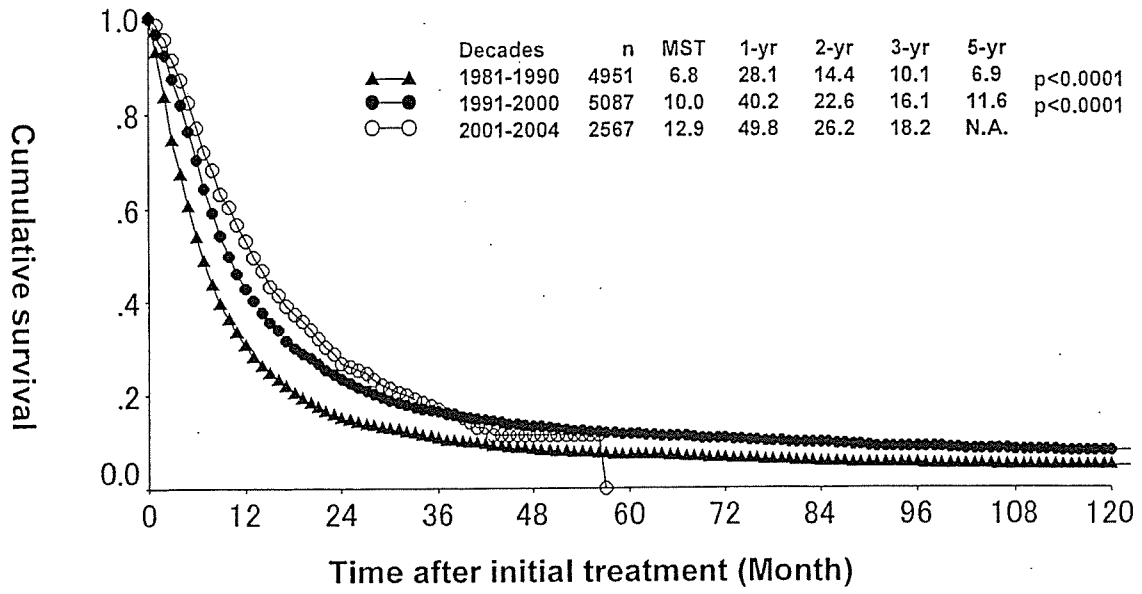


図2.2.c.2 通常型膵癌のStage内訳
Trend of JPS Stage distribution of histologically confirmed invasive pancreatic cancer.

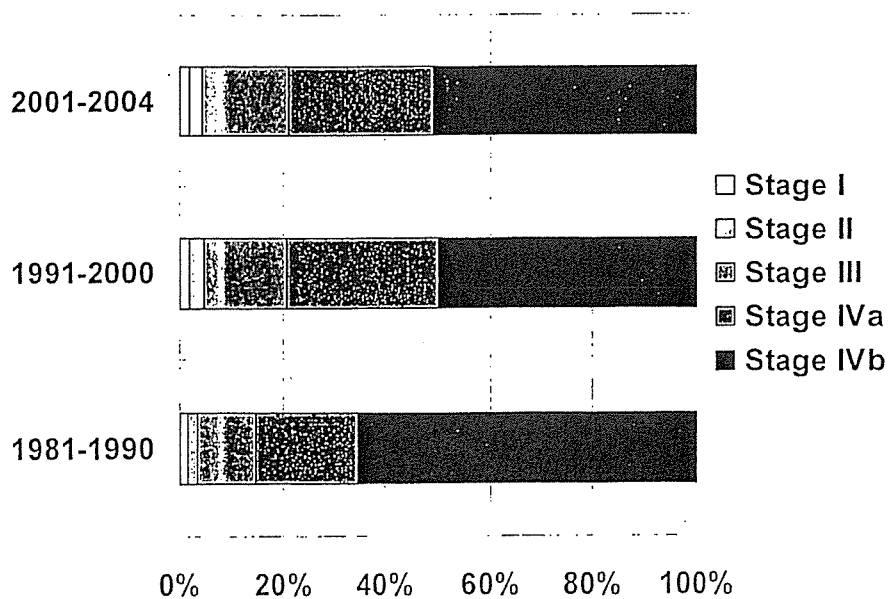


図2.2.d.1 通常型膵癌 切除症例の生存率推移 (全Stage)

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of all JPS Stage.

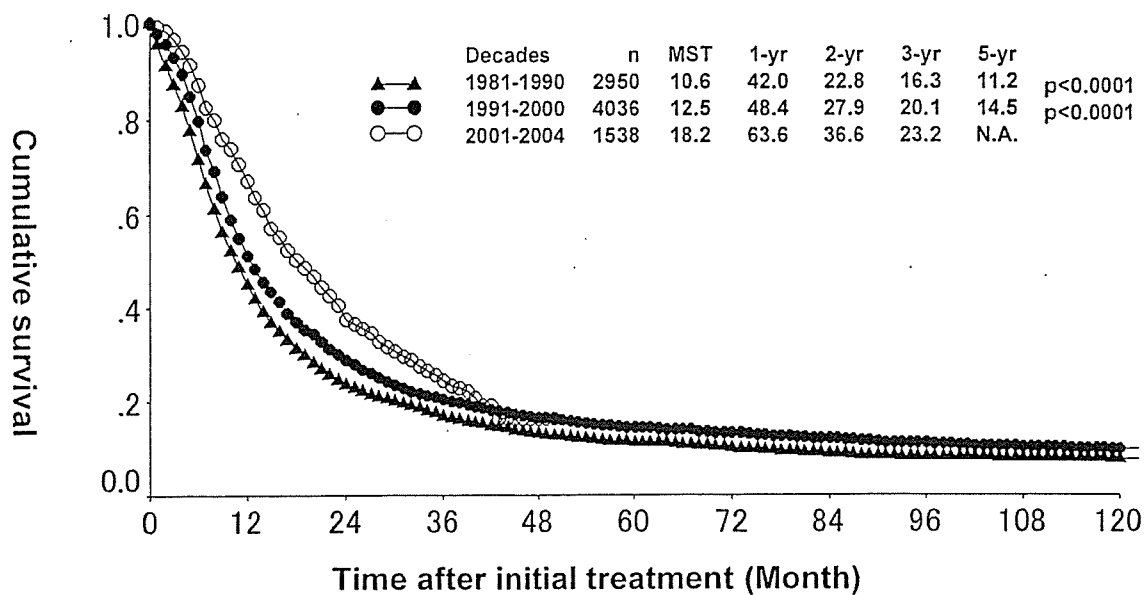


図2.2.d.2 通常型膵癌 Stage I 切除症例の生存率推移

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of JPS Stage I.

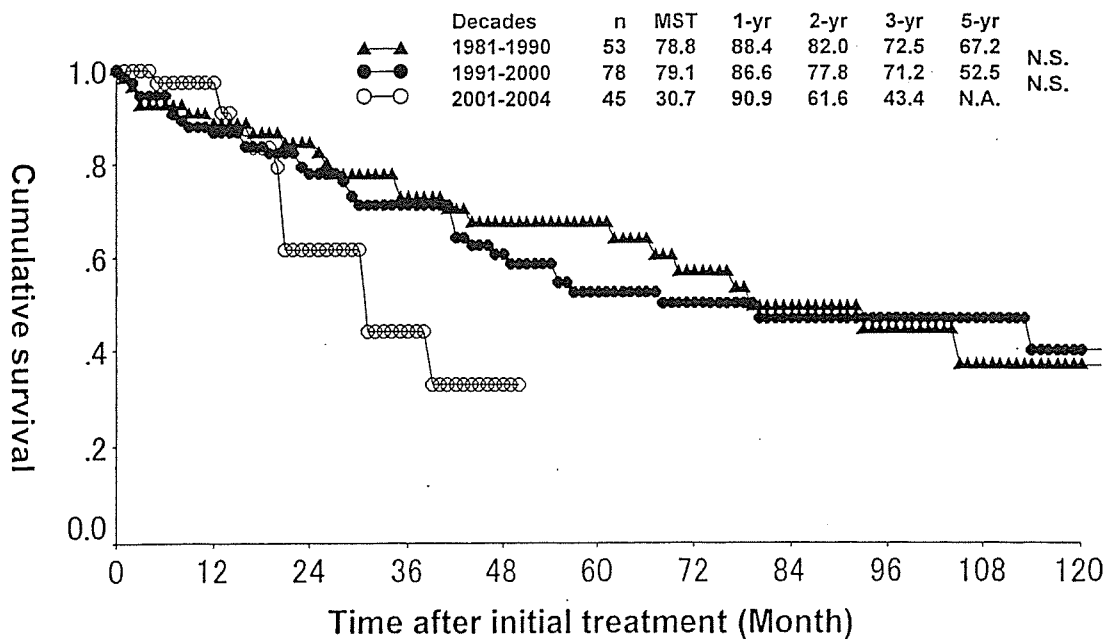


図 2.2.d.3 通常型膵癌 Stage II 切除症例の生存率推移

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of JPS Stage II.

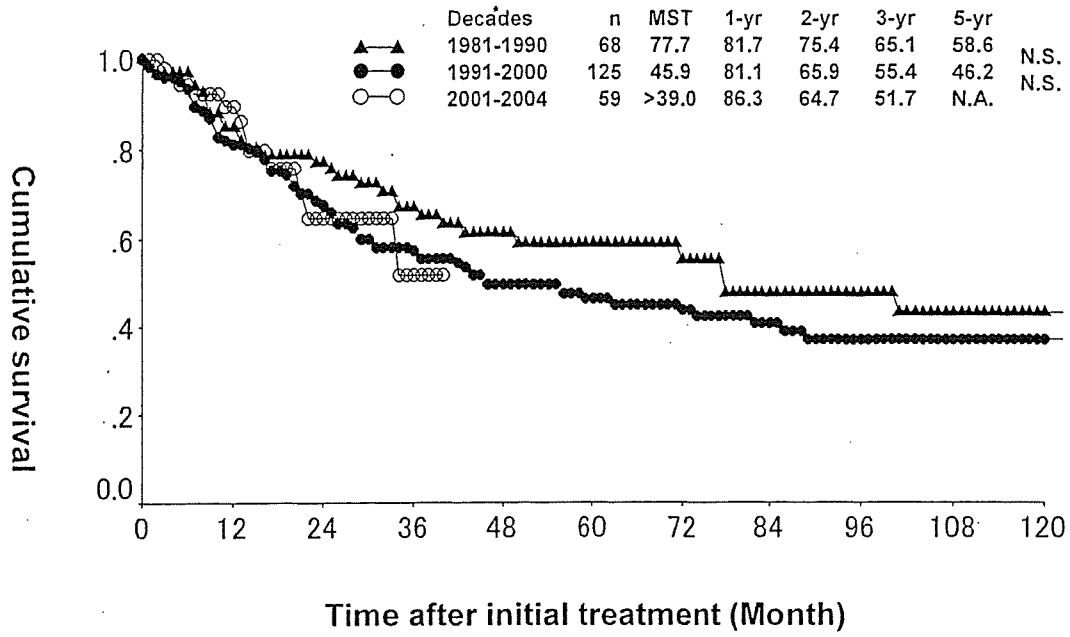


図2.2.d.4 通常型膵癌 Stage III 切除症例の生存率推移

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of JPS Stage III.

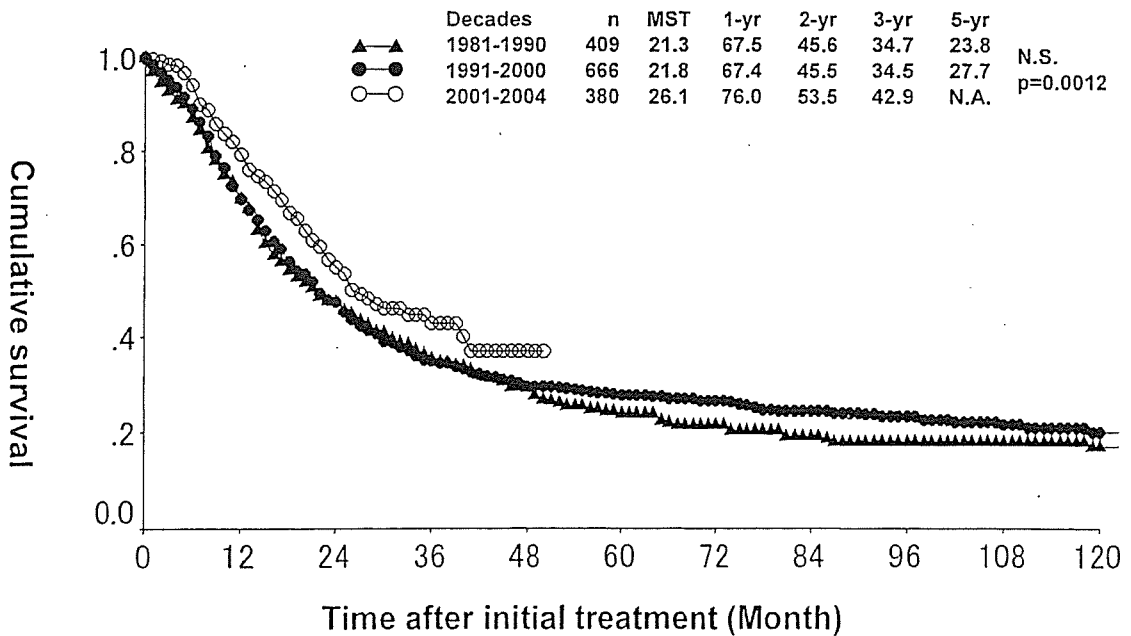


図2.2.d.5 通常型膵癌 Stage IVa 切除症例の生存率推移

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of JPS Stage IVa.

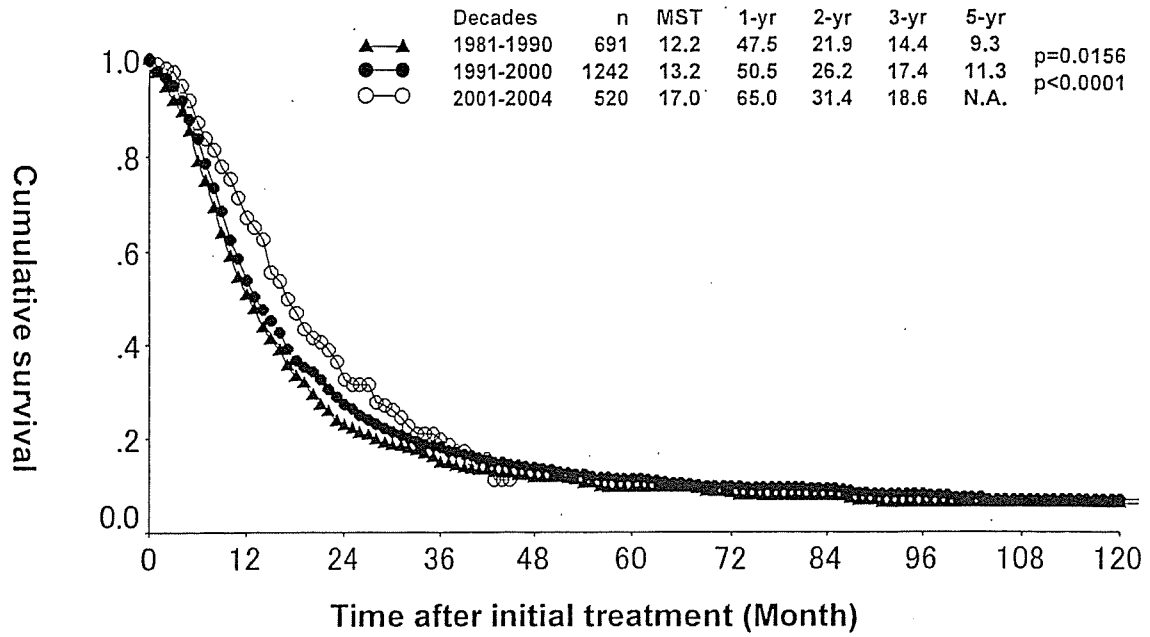


図2.2.d.6 通常型膵癌 Stage IVb 切除症例の生存率推移

Trend of survival of the patients after pancreatectomy for histologically confirmed invasive pancreatic cancer of JPS Stage IVb.

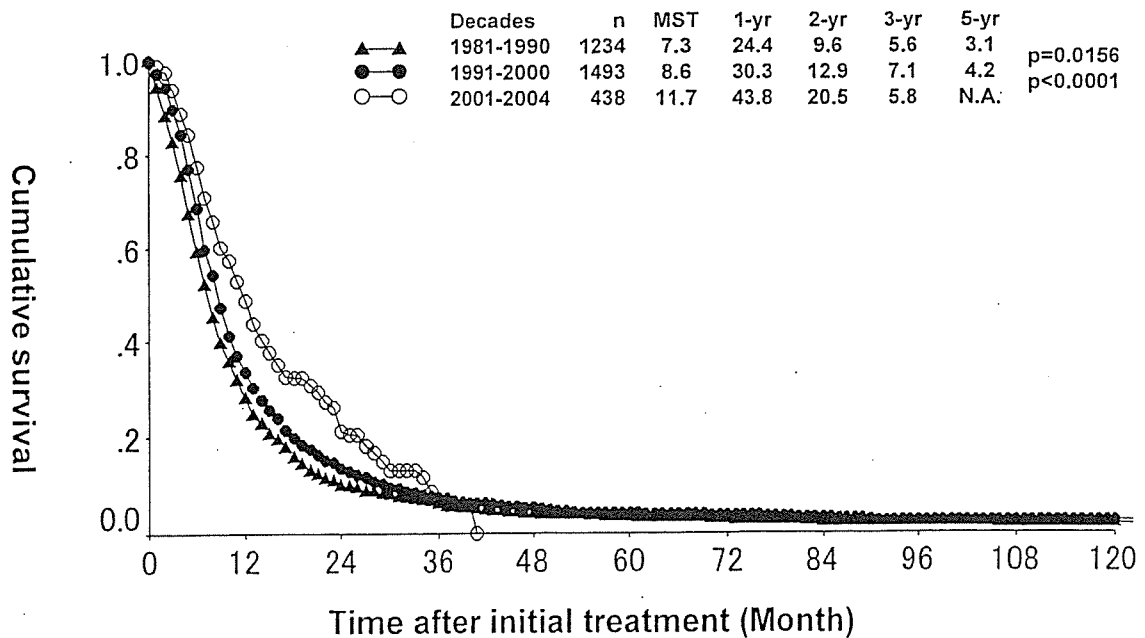


図2.2.e.1 通常型膵癌 Stage IVa, IVb 非切除症例の生存率推移

Trend of survival of the patients with histologically confirmed unresectable invasive pancreatic cancer of JPS Stage IVa, IVb and unknown Stage.

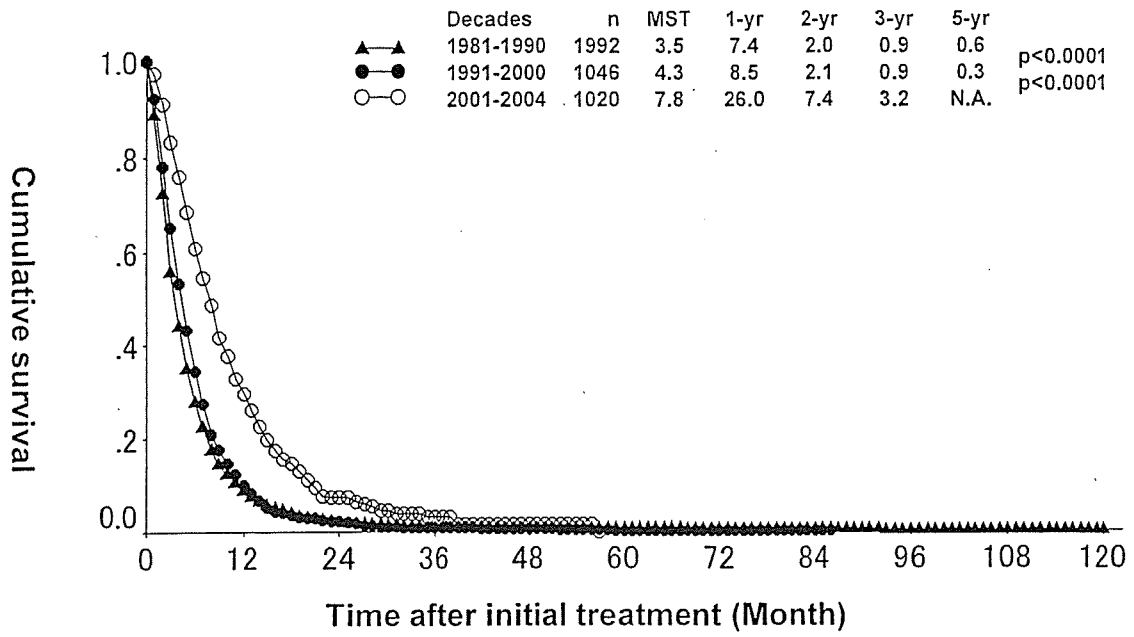


図2.2.e.2 通常型膵癌非切除例のStage内訳

Trend of JPS Stage distribution of histologically confirmed unresectable invasive pancreatic cancer.

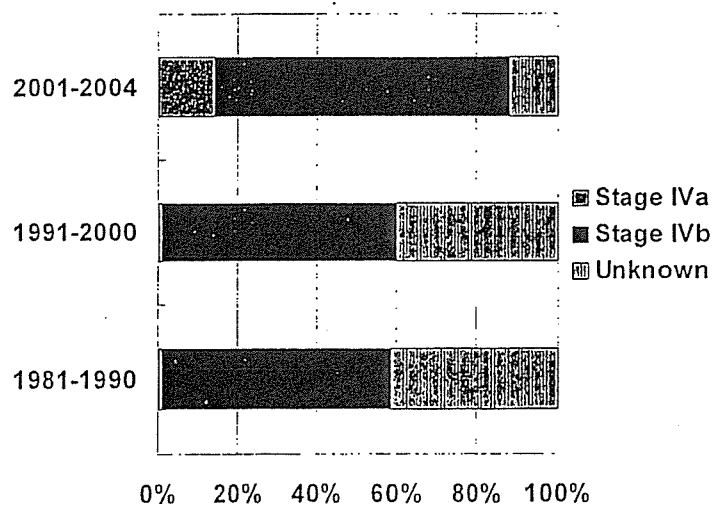


図2.2.f.1 組織型不明の浸潤癌 非切除症例の生存率推移

Trend of survival of the patients with histologically unconfirmed unresectable invasive pancreatic cancer

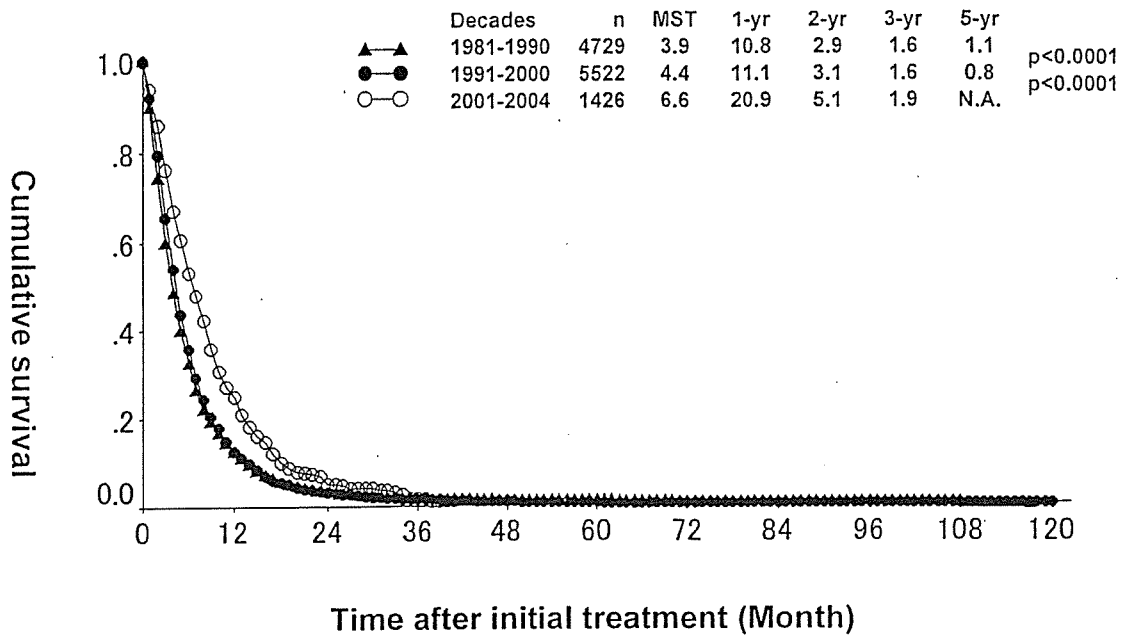
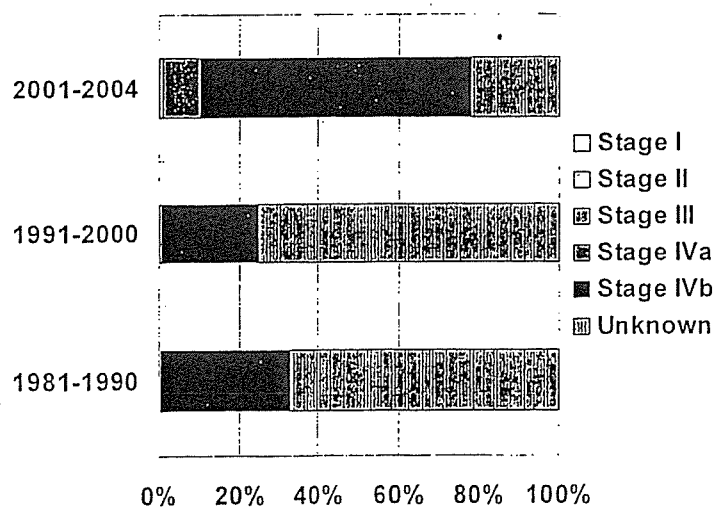


図2.2.f.2 組織型不明の浸潤癌 非切除例のStage内訳

Trend of JPS Stage distribution of histologically unconfirmed unresectable invasive pancreatic cancer.



第3章 2001年から2004年度 通常型膵癌の年次報告 Yearly report of histologically confirmed invasive pancreatic cancer from 2001 through 2004

1. 背景因子 Background of the patients with invasive pancreatic cancer

a. 年齢と性別 Age and sex

表 3.1.a.1 通常型膵癌の年齢・性別 Age and sex distribution of histologically confirmed invasive pancreatic cancer

Age	2001		2002		2003		2004		Total			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	%
10-19	0	0	0	0	1	0	0	0	1	0	1	0.0
20-29	1	0	0	0	0	0	1	0	2	0	2	0.1
30-39	4	1	4	3	1	1	8	3	17	8	25	1.0
40-49	20	7	19	13	35	14	22	7	96	41	137	5.2
50-59	87	40	62	54	114	72	105	53	368	219	587	22.4
60-69	125	86	125	71	172	84	176	96	598	337	935	35.8
70-79	116	93	90	75	127	91	113	105	446	364	810	30.9
80-89	4	9	9	9	12	20	14	13	39	51	90	3.4
90-99	0	1	1	1	0	0	2	0	3	2	5	0.2
Unknown	13	3	1	2	0	1	5	0	19	6	25	1.0
Total	370	240	311	228	462	283	446	277	1589	1028	2617	100.0%

男性の平均年齢: 63.9歳、女性の平均年齢:65.9歳 (p<0.0001, t-test)

表 3.1.a.2 通常型膵癌の組織型と年齢・性別 Major histological subtypes of invasive carcinoma and age/sex distribution. (通常型膵癌のうち症例数の比較的多い組織型に限定)

Age	乳頭腺癌 Papillary		管状腺癌 Ductal without description of differentiation		高分化型管状腺癌 Well differentiated		中分化型管状腺癌 Moderately differentiated	
	Male	Female	Male	Female	Male	Female	Male	Female
10-19	0	0	0	0	0	0	0	0
20-29	0	0	2	0	0	0	0	0
30-39	0	0	3	2	2	3	5	2
40-49	1	0	25	12	15	8	33	16
50-59	3	6	107	47	39	47	155	79
60-69	15	6	139	82	90	69	251	128
70-79	10	8	103	62	86	90	184	159
80-89	0	2	9	15	12	14	13	15
90-99	0	0	1	2	1	0	0	0
Unknown	0	0	11	5	2	0	5	1
Total	29	22	400	227	247	231	646	400

Age	低分化型管状腺癌 Poorly differentiated		腺扁平上皮癌 Adenosquamous		腺房細胞癌 Acinar	
	Male	Female	Male	Female	Male	Female
10-19	1	0	0	0	0	0
20-29	0	0	0	0	0	0
30-39	5	0	0	0	2	0
40-49	17	3	1	0	2	1
50-59	49	30	6	3	4	3
60-69	66	36	13	5	11	2
70-79	48	29	9	7	3	1
80-89	4	3	0	2	0	0
90-99	0	0	1	0	0	0
Unknown	2	0	0	0	0	0
Total	192	101	30	17	22	7

b. 職業 Occupation

表3.1.b.1 全登録例の職業 Working or Non-working of the patients with histologically confirmed invasive pancreatic cancer

	人数 Cases	%
0. なし Non-working	1263	48.3
1. あり Working	1116	42.6
9. 不明 Unknown	238	9.1
Total	2617	100.0

表3.1.b.2 全登録例の職業 Life time occupation of the all registered patients from 2001 to 2004

	人数 Cases	%
01. 家事 House keeping	243	9.3
02. 農業 Agriculture	46	1.8
03. 建築 Construction	45	1.7
04. 漁業 Fisherman	5	0.2
05. 林業 Forestry	1	0.0
06. 教育研究 Education and research	32	1.2
07. 食品 Food processing	27	1.0
08. 自衛隊 Army	2	0.1
09. 警察消防 Police and fire station	3	0.1
10. 社員 Office worker	22	0.8
10. 公務員 Government employee	50	1.9
11. 鉱山 Mining	2	0.1
12. 工業 Manufacturing industry	41	1.6
13. 商業 Marchandize	70	2.7
14. 法務 Judicial	5	0.2
15. 販売 Sales	35	1.4
16. 医療 Medical	31	1.2
17. 運転手 Driving	11	0.4
18. 交通 Traffic	12	0.5
19. 芸術芸能 Art	9	0.3
20. その他 Other	129	4.8
99. 不明 Unknown	1795	68.6
Total	2617	100.0

c. 人種 Ethnic

表 3.1.c.1 通常型膵癌の人種分布 Ethnic distribution of registered invasive pancreatic cancer.

	人数 Cases	%
1. アジア Asian	2614	99.9
9. 不明 Unknown	3	0.1
Total	2617	100.0

d. 家族歴 Family history

表 3.1.d.1 癌の家族歴 Family history of cancer

	人数 Cases	%
0. なし No family history	1532	58.6
1. あり(膵癌) Family history of pancreatic cancer	89	3.4
2. あり(膵癌以外) Family history of other cancer	651	24.9
3. あり(膵癌を含む癌の家族歴) Family history of cancer including pancreatic cancer	28	1.1
9. 不明 Unknown	317	12.1
Total	2617	100.0

表 3.1.d.2 家族内膵癌 Pancreatic cancer in the kindred

	人数 Cases	%
0. なし No member	995	38.0
1. 家族内に1人 One family member with pancreatic cancer	57	2.2
2. 家族内に2人 Two family member with pancreatic cancer	7	0.3
3. 家族内に3人以上 More than three family member with pancreatic cancer	0	0.0
9. 不明 Unknown	1558	59.5
Total	2617	100.0

e. 既往歴 Past history

表 3.1.e.1 重複癌 Past history of cancer in the other organ

	人数 Cases	%
0. なし No past history of other cancer	2204	84.2
1. あり(同時性) Synchronous multiple cancer	88	3.4
2. あり(異時性) Metachronous multiple cancer	229	8.7
9. 不明 Unknown	96	3.7
Total	2617	100.0

表 3.1.e.2 膵癌と関係ありそうな既往歴 Past history which seems to be related to pancreatic cancer

	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	12 / 2580	0.5
2. 急性膵炎 Acute pancreatitis	66 / 2579	2.6
3. 慢性膵炎 Chronic pancreatitis	66 / 2579	2.6
4. 膵嚢胞(非腫瘍性) Pancreatic cyst, non-neoplastic	17 / 2578	0.7
5. 膵嚢胞(腫瘍性) Pancreatic cyst, neoplastic	19 / 2576	0.8
6. 糖尿病 Diabetes Mellitus	677 / 2575	25.9
7. 胆石症 Biliary stone	151 / 2563	5.9
8. 慢性下痢 Chronic diarrhea	8 / 2562	0.3
9. 慢性アルコール中毒 Chronic alcoholism	22 / 2559	0.9
10. 消化性潰瘍 Peptic ulcer	167 / 2565	6.5

f. 喫煙 Smoking

表 3.1.f.1 喫煙習慣 Smoking habit

	人数 Cases	%
0. 喫煙せず No smoking	656	25.1
1. 20年前から禁煙 Abstain from smoking for more than 20 years.	31	1.2
2. 10年前から禁煙 Abstain from smoking for 10 years.	31	1.2
3. 5年前から禁煙 Abstain from smoking for 5 years	16	0.6
4. 最近禁煙 Abstain from smoking recently	45	1.7
5. 1日20本以内 Less than 20 cigarettes/day	129	4.9
6. 1日20本以上 More than 20 cigarettes/day	182	7.0
9. 不明 Unknown	1527	58.3
Total	2617	100.0

図3.1.f.2 喫煙年数の度数分布図 Distribution of smoking years

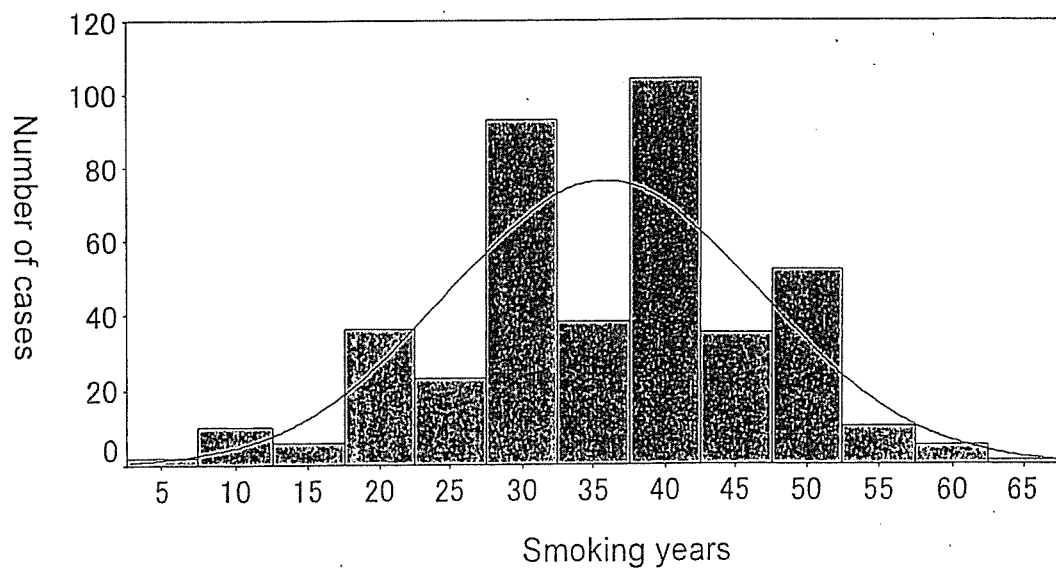


図3.1.f.3 喫煙指数の度数分布図 Distribution of smoking index

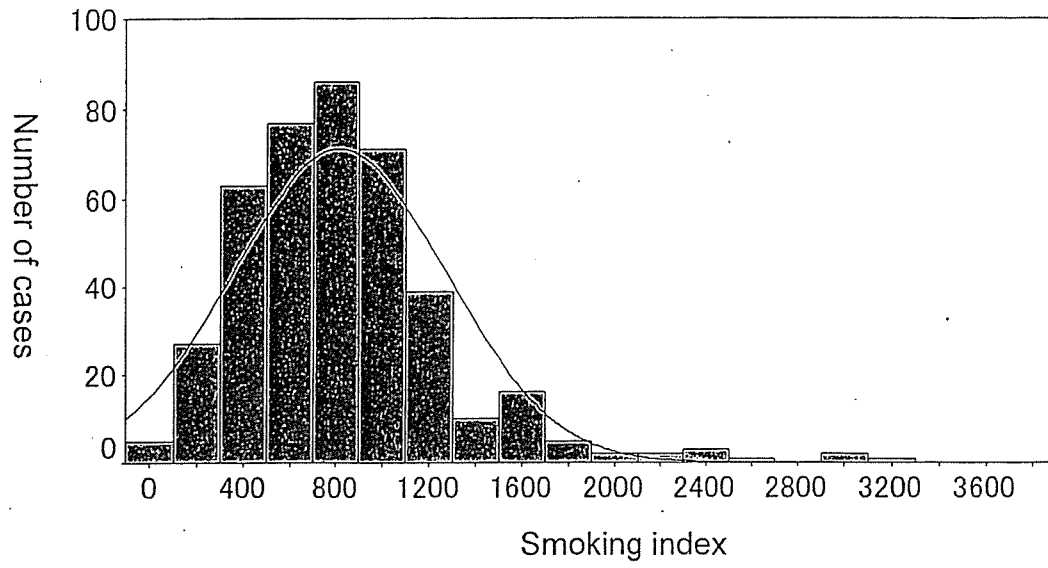
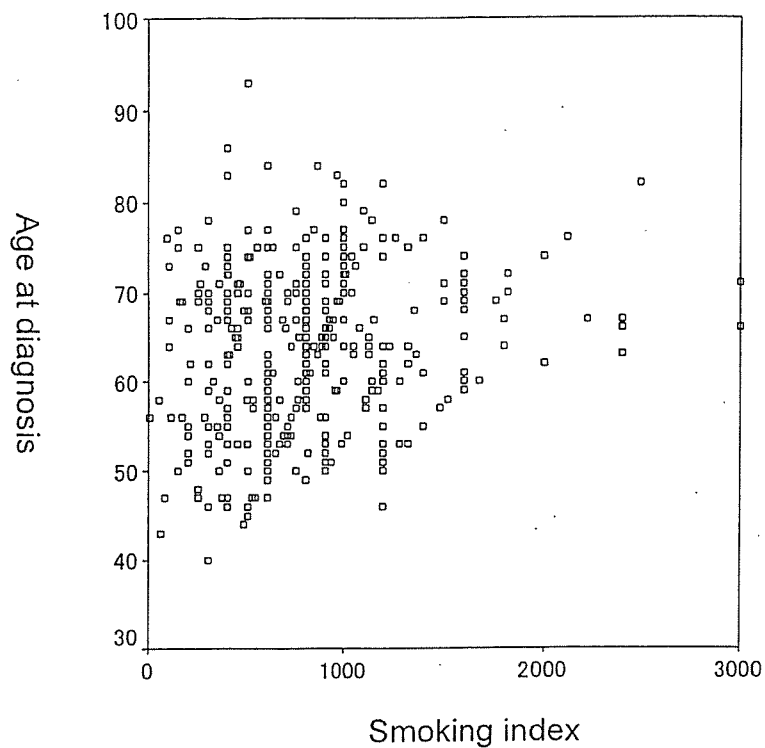


表 3.1.f.4 喫煙習慣別にみた平均年齢の有意差比較試験 Comparison of mean age by smoking habit (t-test)

	喫煙せず No smoking N=656 平均年齢 Mean age : 65.9 歳	5年以上前に禁煙 Abstain from smoking for more than 5 years N=79 平均年齢 Mean age : 66.5 歳	最近禁煙または喫煙中 Abstain from smoking recently or currently smoking N=354 平均年齢 Mean age : 62.3 歳
喫煙せず No smoking N=656 平均年齢 Mean age : 65.9 歳			
5年以上前に禁煙 Abstain from smoking for more than 5 years N=79 平均年齢 Mean age : 66.5 歳	N.S.		
最近禁煙または喫煙中 Abstain from smoking recently or currently smoking N=354 平均年齢 Mean age : 62.3 歳	P<0.0001	P<0.0001	

図3.1.f.5 喫煙指数と年齢の散布図 Scatter gram of smoking index and age at diagnosis of pancreatic cancer



g. 飲酒 Drinking

表 3.1.g.1 飲酒習慣 Drinking frequency

	人数 Cases	%
0. 飲酒せず No drinking	591	22.6
1. 数か月に1回程度の飲酒 Once in several months	30	1.1
2. 数週間に1回程度の飲酒 Once in several weeks	41	1.6
3. 数日に1回 Once in few days	112	4.3
4. 毎日 Everyday	278	10.6
9. 不明 Unknown	1565	59.8
Total	2617	100.0

図3.1.g.2 飲酒年数の度数分布図 Distribution of drinking years

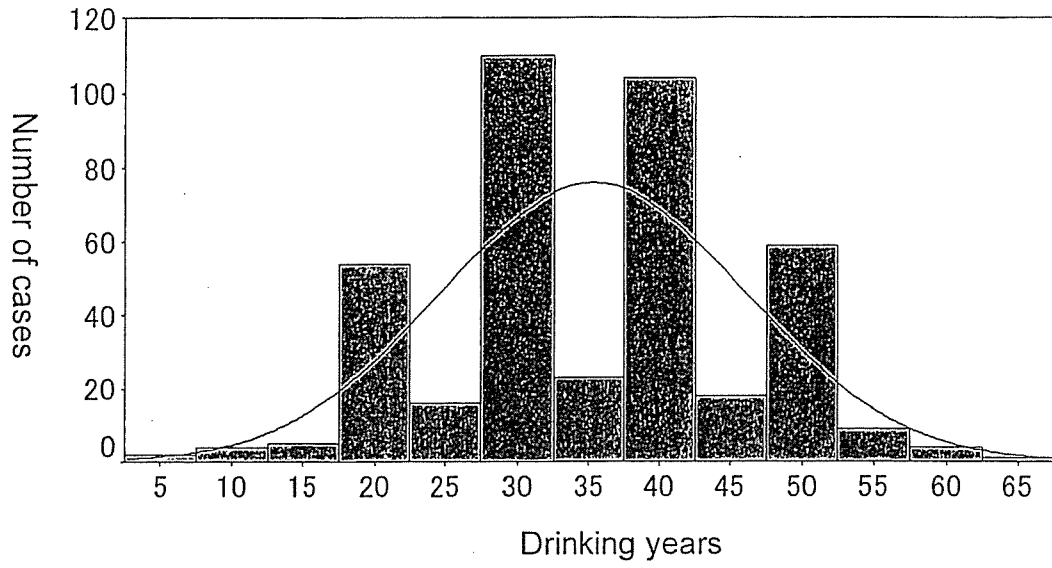


図3.1.g.3 飲酒指数の度数分布図 Distribution of drinking index

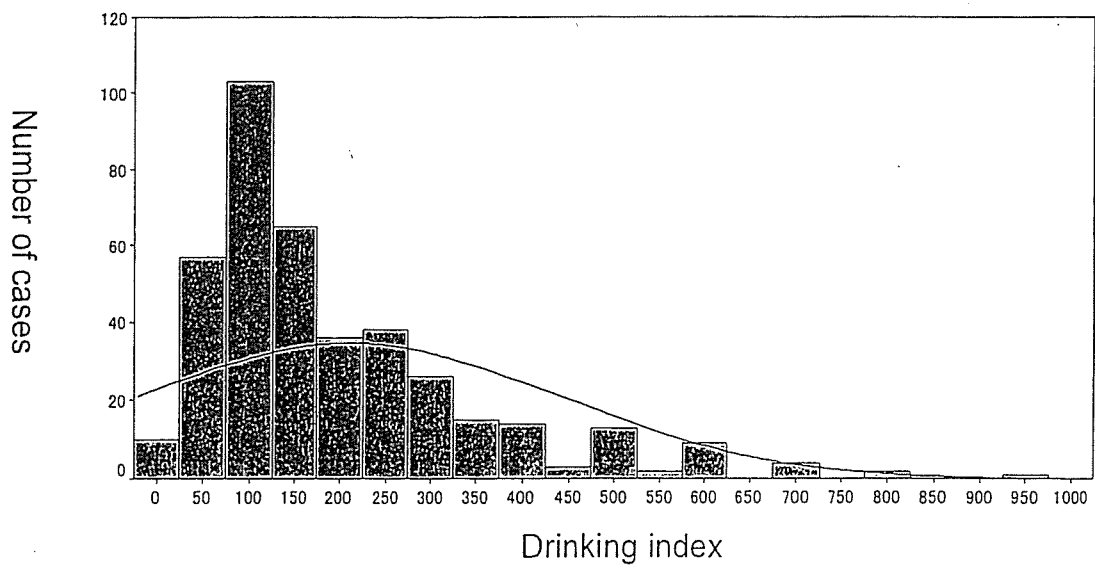
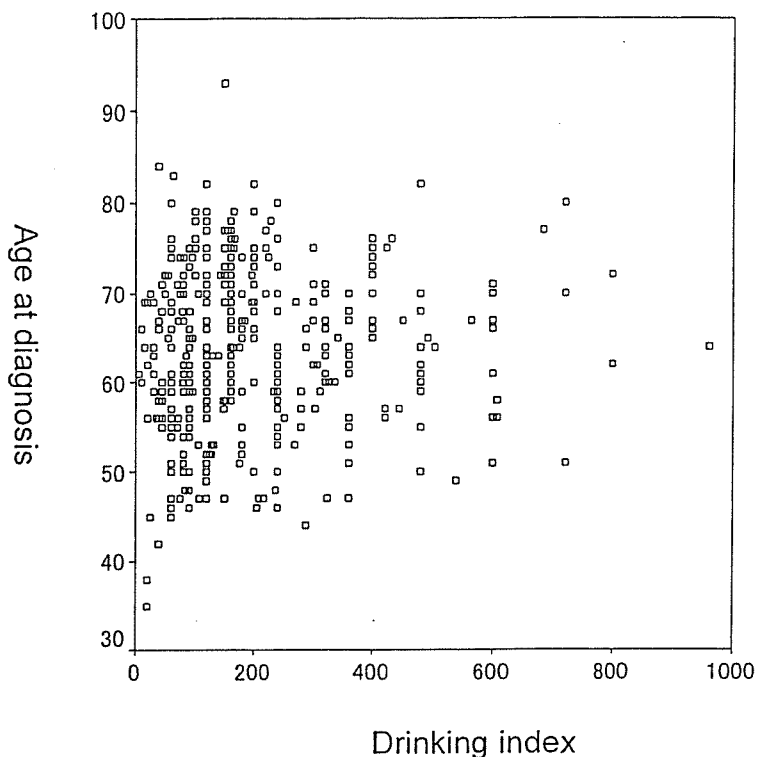


図3.1.g.4 飲酒指数と年齢の散布図 Scatter gram of drinking index and age at diagnosis



II. 診断 Diagnosis
a. 主訴 Chief complaint

表 3.2.a.1 訪医理由 Reason to visit clinic

	人数 Cases	%
1. 健康診断 Health check	207	7.9
2. 症状あり With symptom	1950	74.5
3. 糖尿病の増悪 Deterioration of diabetes mellitus	142	5.4
4. 集団検診後の精検 Mass screening	64	2.4
5. その他 Other	219	8.4
9. 不明 Unknown	35	1.3
Total	2617	100.0

表 3.2.a.2 初発症状 Initial symptoms

	人数 Cases	%
00. なし No symptom	403	15.4
01. 腹痛 Abdominal pain	828	31.6
02. 体重減少 Body weight loss	122	4.7
03. 嘔吐 Vomiting	49	1.9
04. 食思不振 Appetite loss	115	4.4
05. 黄疸 Jaundice	496	18.9
06. 全身倦怠 General fatigue	83	3.2
07. 腫瘍 Abdominal tumor	10	0.4
08. 腰背部痛 Back pain	224	8.6
09. 糖尿病の増悪 Deterioration of diabetes mellitus	118	4.5
10. その他 Other	121	4.6
99. 不明 Unknown	48	1.8
Total	2617	100.0

b. 画像診断 Imaging diagnosis

表 3.2.b.1 用いられた診断法 (重複あり) Methods of diagnosis utilized (With overlap)

	人数 Cases	%
01. 臨床所見 Clinical signs	845	32.3
02. 消化管造影 Barium meal	193	7.4
03. DIC	2	0.1
04. ERCP	895	34.2
05. Angiography	684	26.1
06. CT	2063	78.8
07. US	1701	65.0
08. PTCD	208	7.9
09. MRI	828	31.6
10. 内視鏡 Endoscopic findings	551	21.0
11. 腹腔鏡 Laparoscopic findings	8	0.3
12. 臓シンチ Scintigraphy	3	0.1
13. SPIO-MRI	37	1.4
14. CTAP	237	9.1
15. EUS	363	13.9
16. IDUS	61	2.4
17. PET	74	2.8
18. その他 Other	36	1.4
99. 不明 Unknown	60	2.3
Total	2617	100.0

表 3.2.b.2 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.

	人数 Cases	%
01. 臨床所見 Clinical signs	14	.5
02. 消化管造影 Barium meal	4	.2
03. DIC	0	0
04. ERCP	61	2.3
05. Angiography	2	.1
06. CT	1365	52.1
07. US	622	23.8
08. PTCD	22	.8
09. MRI	23	.9
10. 内視鏡 Endoscopic findings	27	1.0
11. 腹腔鏡 Laparoscopic findings	0	0
12. 臓シンチ Scintigraphy	0	0
13. SPIO-MRI	0	0
14. CTAP	0	0
15. EUS	8	.3
16. IDUS	4	.2
17. PET	0	0
18. その他 Other	15	.6
99. 不明 Unknown	450	17.2
Total	2617	100.0

表 3.2.b.3 転移の検出に最も重要であった画像診断 Most important diagnostic method for detection of metastasis.

	人数 Cases	%
01. 臨床所見 Clinical signs	13	.5
02. 消化管造影 Barium meal	0	0
03. DIC	0	0
04. ERCP	1	.0
05. Angiography	1	.0
06. CT	625	23.9
07. US	38	1.5
08. PCTD	0	0
09. MRI	8	.3
10. 内視鏡 Endoscopic findings	2	.1
11. 腹腔鏡 Laparoscopic findings	0	0
12. 臓シンチ Scintigraphy	0	0
13. SPIO-MRI	4	.2
14. CTAP	26	1.0
15. EUS	1	.0
16. IDUS	0	0
17. PET	3	.1
18. その他 Other	14	.5
99. 不明 Unknown	1881	71.9
Total	2617	100.0

c. 生化学検査 Biochemical examination

表 3.2.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	608 / 2420	25.2
リパーゼ Serum lipase	285 / 811	35.1
エラスターゼ I Serum elastase I	486 / 1447	47.4
Total	2618	100.0

表3.2.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	4 / 24	16.7
PFD Pancreatic functional diagnosis test	191 / 383	49.9
OGTT Oral glucose tolerance test	438 / 642	68.3
IRI Serum immunoreactive insulin	137 / 333	41.1
Total	2618	100.0