

e. 飲酒 drinking  
 表 6.1.e.1 飲酒習慣 Drinking frequency

|                                       | 人数 Cases | %     |
|---------------------------------------|----------|-------|
| 0. 飲酒せず No drinking                   | 108      | 58.7  |
| 1. 数か月に1回程度の飲酒 Once in several months | 5        | 2.7   |
| 2. 数週間に1回程度の飲酒 Once in several weeks  | 8        | 4.3   |
| 3. 数日に1回 Once in few days             | 20       | 10.9  |
| 4. 毎日 Everyday                        | 43       | 23.4  |
| Total                                 | 184      | 100.0 |

図 6.1.e.2 飲酒年数の度数分布図 Distribution of drinking years

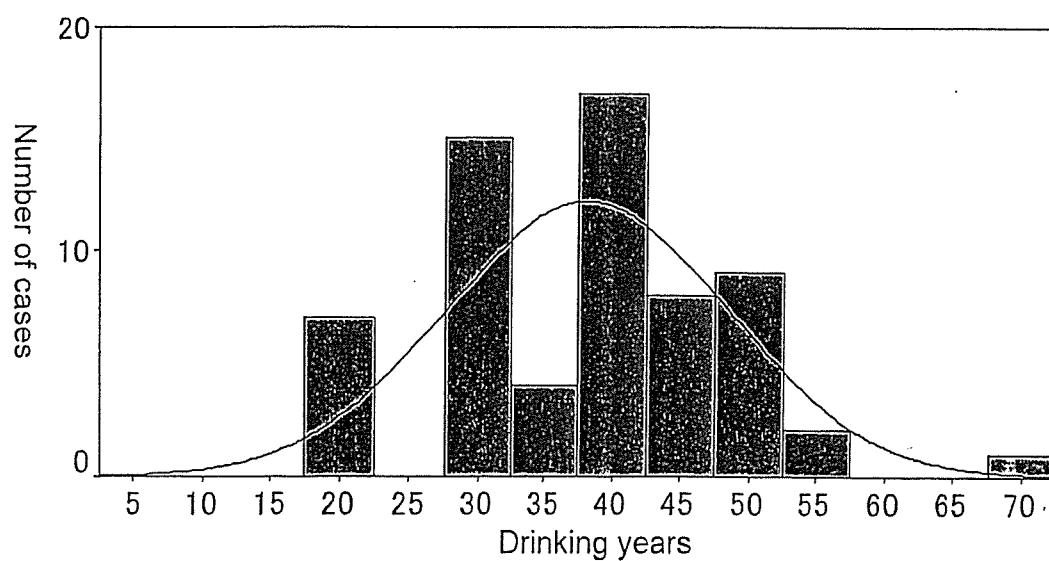


図 6.1.e.3 飲酒指数の度数分布図 Distribution of drinking index (= alcohol units x frequency level (0 to 4 as in the Table 6.1.e.1 x drinking years)

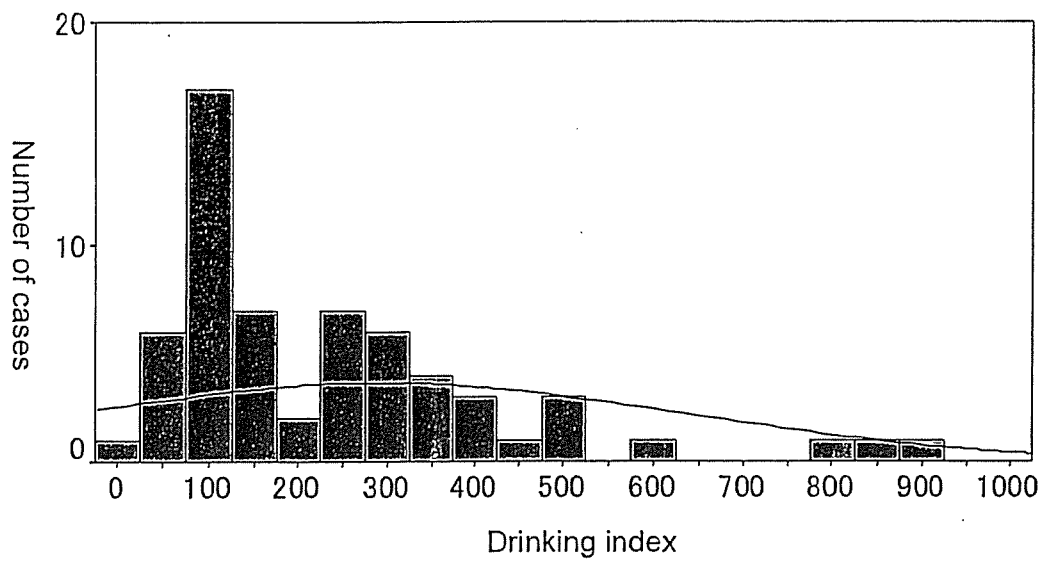
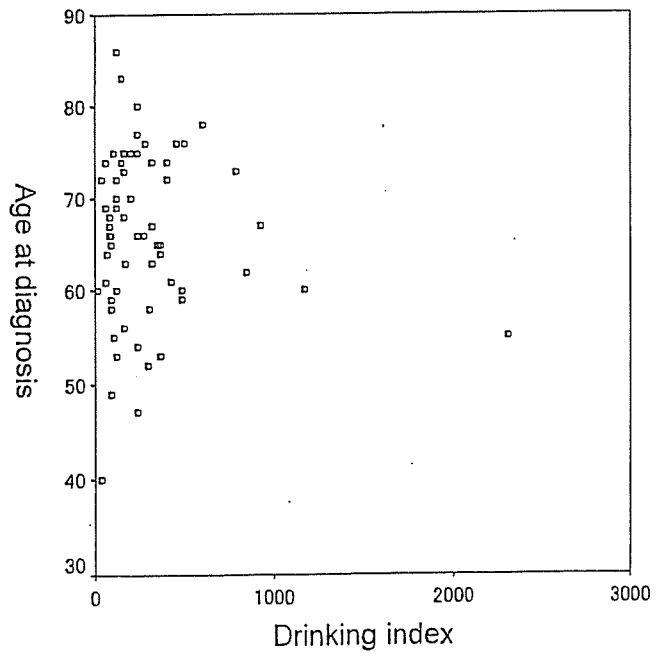


図 6.1.e.4 飲酒指数と年齢の散布図 Scatter gram of drinking index and age at diagnosis



ii. 診断 Diagnosis

a. 主訴 Chief complaint

表 6.2.a.1 訪医理由 Reason to visit clinic

|  | 人数 Cases | %     |
|--|----------|-------|
| 1. 健康診断 Health check                         | 122      | 15.9  |
| 2. 症状あり With symptom                         | 390      | 50.8  |
| 3. 糖尿病の増悪 Deterioration of diabetes mellitus | 44       | 5.7   |
| 4. 集団検診後の精検 Mass screening                   | 81       | 10.5  |
| 5. その他 Other                                 | 108      | 14.1  |
| 9. 不明 Unknown                                | 23       | 3.0   |
| Total  | 768      | 100.0 |

表 6.2.a.2 初発症状 Initial symptoms

|   | 人数 Cases | %     |
|---|----------|-------|
| 00. なし No symptom                             | 283      | 36.8  |
| 01. 腹痛 Abdominal pain                         | 207      | 27.0  |
| 02. 体重減少 Body weight loss                     | 28       | 3.6   |
| 03. 嘔吐 Vomiting                               | 8        | 1.0   |
| 04. 食思不振 Appetite loss                        | 26       | 3.4   |
| 05. 黄疸 Jaundice                               | 49       | 6.4   |
| 06. 全身倦怠 General fatigue                      | 26       | 3.4   |
| 07. 腫瘍 Abdominal tumor                        | 8        | 1.0   |
| 08. 腰背部痛 Back pain                            | 38       | 4.9   |
| 09. 糖尿病の増悪 Deterioration of diabetes mellitus | 48       | 6.3   |
| 10. その他 Other                                 | 31       | 4.0   |
| 99. 不明 Unknown                                | 16       | 2.1   |
| Total   | 768      | 100.0 |

b. 画像診断 Imaging diagnosis

表 6.2.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.

|                               | 人数 Cases | %     |
|-------------------------------|----------|-------|
| 01. 臨床所見 Clinical signs       | 4        | 0.5   |
| 02. 消化管造影 Barium meal         | 4        | 0.5   |
| 03. DIC                       | 0        | 0.0   |
| 04. ERCP                      | 56       | 7.3   |
| 05. Angiography               | 2        | 0.3   |
| 06. CT                        | 304      | 39.6  |
| 07. US                        | 277      | 36.1  |
| 08. PTCD                      | 2        | 0.3   |
| 09. MRI                       | 11       | 1.4   |
| 10. 内視鏡 Endoscopic findings   | 3        | 0.4   |
| 11. 腹腔鏡 Laparoscopic findings | 0        | 0.0   |
| 12. 瘳シンチ Scintigraphy         | 4        | 0.5   |
| 13. SPIO-MRI                  | 0        | 0.0   |
| 14. CTAP                      | 0        | 0.0   |
| 15. EUS                       | 2        | 0.3   |
| 16. IDUS                      | 1        | 0.1   |
| 17. PET                       | 0        | 0.0   |
| 18. その他 Other                 | 7        | 0.9   |
| 99. 不明 Unknown                | 91       | 11.8  |
| Total                         | 768      | 100.0 |

c. 生化学検査 Biochemical examination

表 6.2.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<br>Cases with abnormal values/ Informative cases | 有効回答数に対する%<br>% of informative cases |
|---------------------------|---|--------------------------------------|
| アミラーゼ Serum amylase       | 195 / 741   | 26.3                                 |
| リパーゼ Serum lipase         | 94 / 303  | 31.0                                 |
| エラスターゼ I Serum elastase I | 88 / 264  | 33.3                                 |
| Total                     | 768   | 100.0                                |

表6.2.c.2 膵機能試験 Pancreatic function

|  | 異常値を有した症例数/有効回答数<br>Cases with abnormal values/ Informative cases | 有効回答数に対する%<br>% of informative cases |
|--|---|--------------------------------------|
| PS テスト Pancreatic secretin test          | 10 / 20   | 50.0                                 |
| PFD Pancreatic functional diagnosis test | 69 / 140  | 49.3                                 |
| Total                                    | 768   | 100.0                                |

d. 腫瘍マーカー Tumor markers

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

表 6.2.d.1 腫瘍マーカーの異常値頻度 Frequency of abnormal values in tumor markers

|        | 異常値を有した症例数/有効回答数<br>Cases with abnormal values/ Informative cases | 有効回答数に対する%<br>% of informative cases |
|--------|---|--------------------------------------|
| CA19-9 | 225 / 655   | 34.4                                 |
| CEA    | 135 / 658   | 20.5                                 |
| DUPAN2 | 40 / 220  | 18.2                                 |
| SPAN1  | 52 / 150  | 34.7                                 |
| Total  | 768   | 100.0                                |

図 6.2.d.2 CEA と CA19-9 との相関 Correlation of CEA with CA19-9

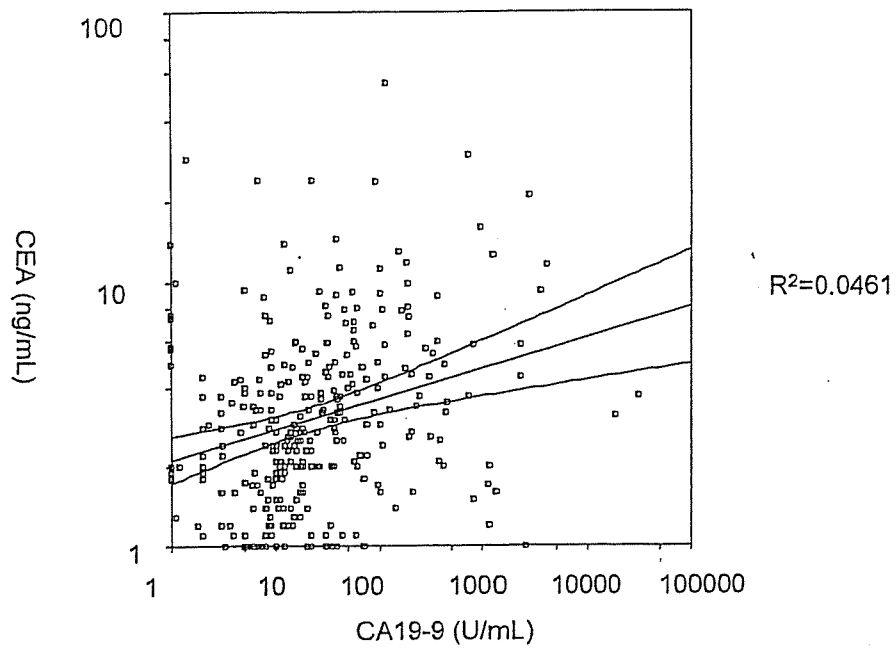


図 6.2.d.3 DUPAN2 と CA19-9 との相関 Correlation of DUPAN2 with CA19-9

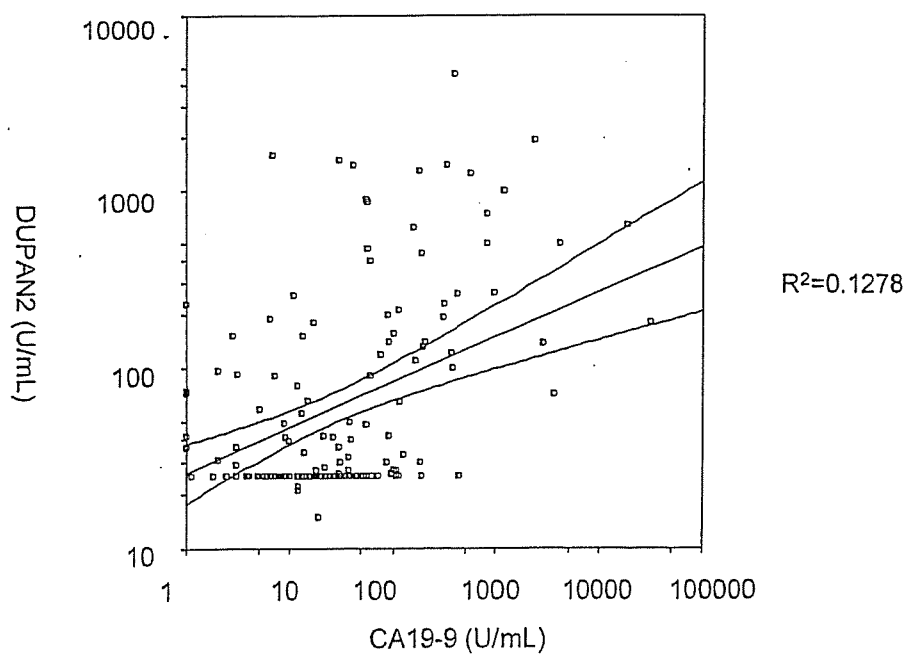


図 6.2.d.4 SPAN1 と CA19-9 との相関 Correlation of SPAN1 with CA19-9

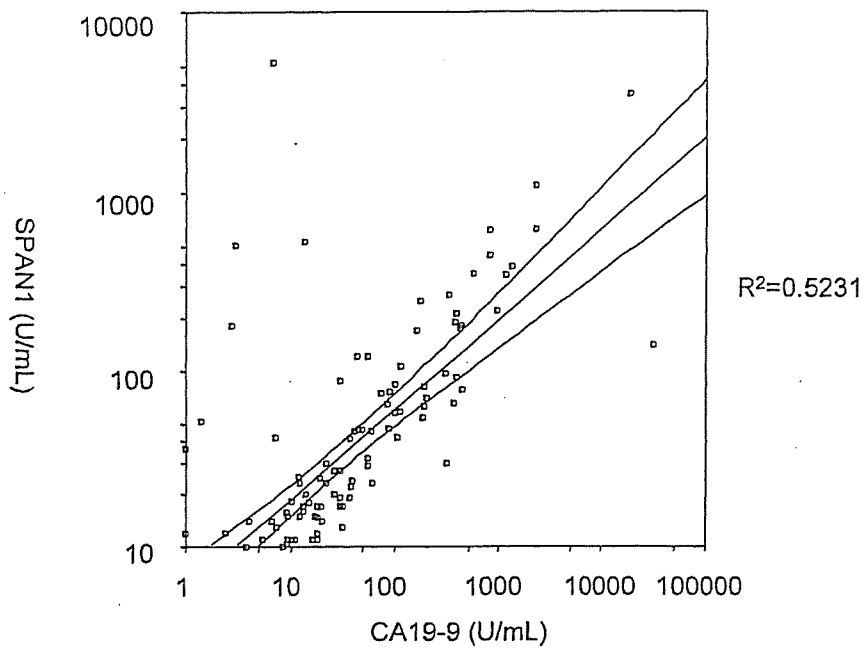


図 6.2.d.5 CA19-9 と膵管内腫瘍組織型分類の相関 Correlation of CA19-9 and histological classification of intraductal tumors

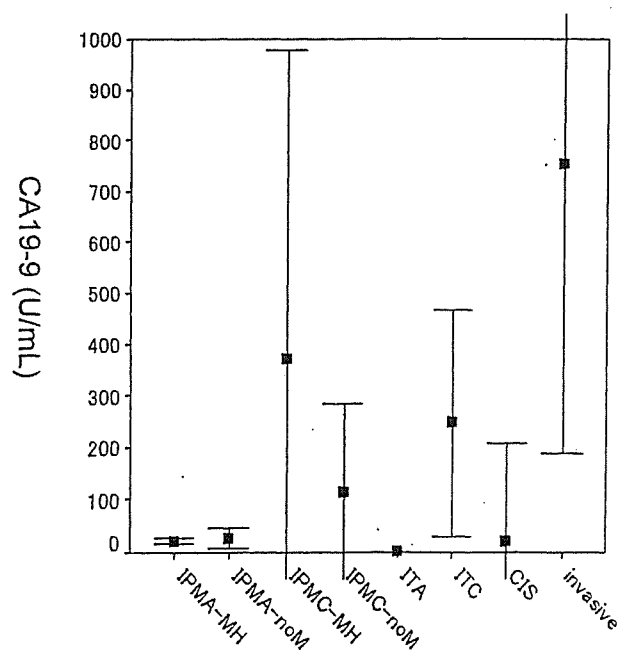


図 6.2.d.6 CEA と膵管内腫瘍組織型分類の相関 Correlation of CEA and histological classification of intraductal tumors

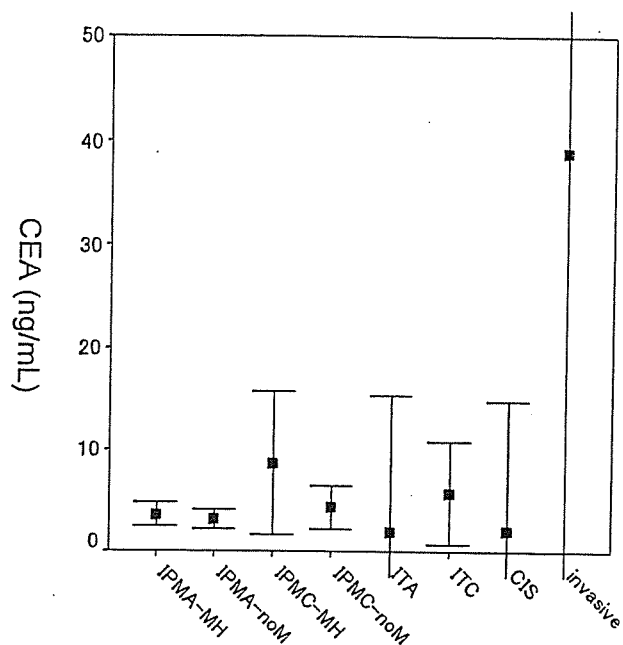


図 6.2.d.7 DUPAN2 と膵管内腫瘍組織型分類の相関 Correlation of DUPAN2 and histological classification of intraductal tumors

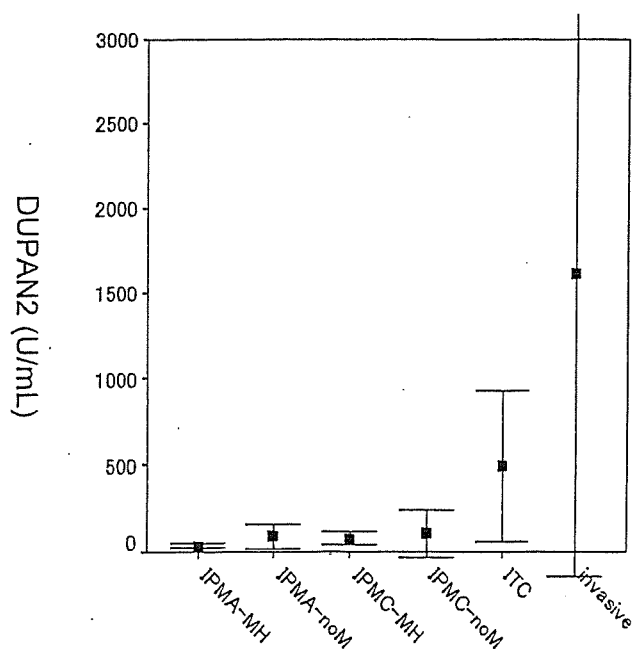
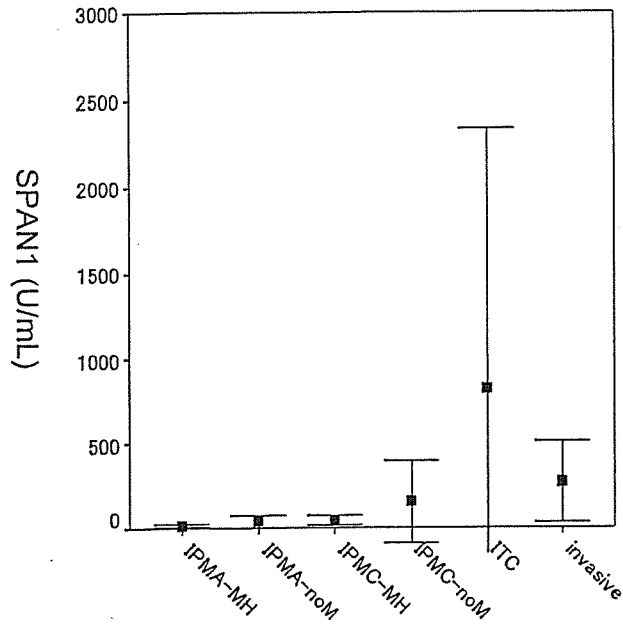


図 6.2.d.8 SPAN1 と膵管内腫瘍組織型分類の相関 Correlation of SPAN1 and histological classification of intraductal tumors



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

- 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

表 6.3.a.1 病巣の数 Number of the primary tumor

|                        | IPMA-MH      | IPMA-noM    | IPMC-MH      | IPMC-noM    | ITA        | ITC         | AH-CIS      | INV-IT       | Total        |
|------------------------|--------------|-------------|--------------|-------------|------------|-------------|-------------|--------------|--------------|
| 1. 単発 Single lesion    | 104 (88.9%)  | 43 (82.7%)  | 312 (93.4%)  | 31 (96.9%)  | 7 (100.0%) | 15 (93.8%)  | 12 (92.3%)  | 144 (97.3%)  | 668 (92.9%)  |
| 2. 多発 Multiple lesions | 13 (11.1%)   | 9 (17.3%)   | 22 (6.6%)    | 1 (3.1%)    | 0 (0.0%)   | 1 (6.3%)    | 1 (7.7%)    | 4 (2.7%)     | 51 (7.1%)    |
| Total                  | 117 (100.0%) | 52 (100.0%) | 334 (100.0%) | 32 (100.0%) | 7 (100.0%) | 16 (100.0%) | 13 (100.0%) | 148 (100.0%) | 719 (100.0%) |

表 6.3.a.2 腫瘍の占拠部位 Locus of the main tumor

|                     | IPMA-MH      | IPMA-noM    | IPMC-MH      | IPMC-noM    | ITA         | ITC         | AH-CIS      | INV-IT       | Total        |
|---------------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|--------------|
| 膵頭部 Pancreatic head | 78 (62.4%)   | 35 (63.6%)  | 214 (61.0%)  | 21 (61.8%)  | 5 (50.0%)   | 9 (52.9%)   | 12 (63.2%)  | 92 (60.5%)   | 466 (61.1%)  |
| 膵体尾部 Body and tail  | 34 (27.2%)   | 15 (27.3%)  | 81 (23.1%)   | 9 (26.5%)   | 3 (30.0%)   | 6 (35.3%)   | 6 (31.6%)   | 32 (21.1%)   | 186 (24.4%)  |
| 2 区域以上 Two areas    | 12 (9.6%)    | 4 (7.3%)    | 44 (12.5%)   | 1 (2.9%)    | 2 (20.0%)   | 0 (0.0%)    | 1 (5.3%)    | 17 (11.2%)   | 81 (10.6%)   |
| 膵全体 Whole pancreas  | 1 (0.8%)     | 1 (1.8%)    | 12 (3.4%)    | 3 (8.8%)    | 0 (0.0%)    | 2 (11.8%)   | 0 (0.0%)    | 11 (7.2%)    | 30 (3.9%)    |
| Total               | 125 (100.0%) | 55 (100.0%) | 351 (100.0%) | 34 (100.0%) | 10 (100.0%) | 17 (100.0%) | 19 (100.0%) | 152 (100.0%) | 763 (100.0%) |



b. 局所進展度 Local 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

表 6.3.b.1 深達度 Depth of infiltration

|                                | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA      | ITC       | AH-CIS    | INV-IT      | Total       |
|--------------------------------|------------|------------|-------------|------------|----------|-----------|-----------|-------------|-------------|
| 1. 上皮内 In situ carcinoma       | 71 (89.9%) | 28 (87.5%) | 143 (55.9%) | 16 (47.1%) | 6 (100%) | 7 (41.2%) | 19 (100%) | 1 (0.6%)    | 291 (48.7%) |
| 2. 微小浸潤あり Microscopic invasion | 6 (7.6%)   | 1 (3.1%)   | 91 (35.5%)  | 12 (35.3%) | 0 (0.0%) | 3 (17.6%) | 0 (0.0%)  | 5 (3.2%)    | 118 (19.8%) |
| 3. 浸潤癌 Invasive cancer         | 2 (2.5%)   | 3 (9.4%)   | 22 (8.6%)   | 6 (17.6%)  | 0 (0.0%) | 7 (41.2%) | 0 (0.0%)  | 148 (96.1%) | 188 (31.5%) |
| Total                          | 79 (100%)  | 32 (100%)  | 256 (100%)  | 34 (100%)  | 6 (100%) | 17 (100%) | 19 (100%) | 154 (100%)  | 597 (100%)  |

表 6.3.b.2 腫瘍の大きさ Size of the primary tumor

|                      | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS    | INV-IT     | Total       |
|----------------------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|-------------|
| 1. TS1 ( <= 2.0 cm)  | 46 (45.1%) | 20 (43.5%) | 110 (34.2%) | 8 (25.0%)  | 3 (37.5%) | 5 (31.3%) | 8 (72.7%) | 22 (16.1%) | 222 (32.9%) |
| 2. TS2 (2.1- 4.0 cm) | 38 (37.3%) | 21 (45.7%) | 123 (38.2%) | 12 (37.5%) | 5 (62.5%) | 7 (43.8%) | 2 (18.2%) | 49 (35.8%) | 257 (38.1%) |
| 3. TS3 (4.1- 6.0 cm) | 12 (11.8%) | 5 (10.9%)  | 55 (17.1%)  | 10 (31.3%) | 0 (0.0%)  | 2 (12.5%) | 1 (9.1%)  | 35 (25.5%) | 120 (17.8%) |
| 4. TS4 ( > 6.0 cm)   | 6 (5.9%)   | 0 (0.0%)   | 34 (10.6%)  | 2 (6.3%)   | 0 (0.0%)  | 2 (12.5%) | 0 (0.0%)  | 31 (22.6%) | 75 (11.1%)  |
| Total                | 102 (100%) | 46 (100%)  | 322 (100%)  | 32 (100%)  | 8 (100%)  | 16 (100%) | 11 (100%) | 137 (100%) | 674 (100%)  |

表 6.3.b.3 嚢胞の大きさ Size of the cystic lesion

| Cyst size   | IPMA-MH    | IPMA-noM   | IPMC-MH    | IPMC-noM  | ITA       | ITC       | AH-CIS   | INV-IT    | Total      |
|-------------|------------|------------|------------|-----------|-----------|-----------|----------|-----------|------------|
| 0.1- 1.0 cm | 13 (13.5%) | 6 (13.0%)  | 6 (6.0%)   | 6 (25.0%) | 2 (25.0%) | 0 (0.0%)  | 0 (0.0%) | 2 (8.0%)  | 35 (11.5%) |
| 1.1- 2.0 cm | 33 (34.4%) | 15 (32.6%) | 25 (25.0%) | 3 (12.5%) | 1 (12.5%) | 0 (0.0%)  | 2 (100%) | 5 (20.0%) | 84 (27.5%) |
| 2.1- 3.0 cm | 22 (22.9%) | 15 (32.6%) | 19 (19.0%) | 9 (37.5%) | 3 (37.5%) | 1 (25.0%) | 0 (0.0%) | 7 (28.0%) | 76 (24.9%) |
| 3.1- 4.0 cm | 12 (12.5%) | 6 (13.0%)  | 21 (21.0%) | 2 (8.3%)  | 0 (0.0%)  | 1 (25.0%) | 0 (0.0%) | 3 (12.0%) | 45 (14.8%) |
| 4.1- 5.0 cm | 8 (8.3%)   | 4 (8.7%)   | 10 (10.0%) | 1 (4.2%)  | 0 (0.0%)  | 2 (50.0%) | 0 (0.0%) | 3 (12.0%) | 28 (9.2%)  |
| 5.1- 6.0 cm | 3 (3.1%)   | 0 (0.0%)   | 9 (9.0%)   | 2 (8.3%)  | 2 (25.0%) | 0 (0.0%)  | 0 (0.0%) | 2 (8.0%)  | 18 (5.9%)  |
| > 6.0 cm    | 5 (5.2%)   | 0 (0.0%)   | 10 (10.0%) | 1 (4.2%)  | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%) | 3 (12.0%) | 19 (6.2%)  |
| Total       | 96 (100%)  | 46 (100%)  | 100 (100%) | 24 (100%) | 8 (100%)  | 4 (100%)  | 2 (100%) | 25 (100%) | 305 (100%) |

図 6.3.b.4 嚢胞の大きさ分布 Distribution of size of the cystic lesion

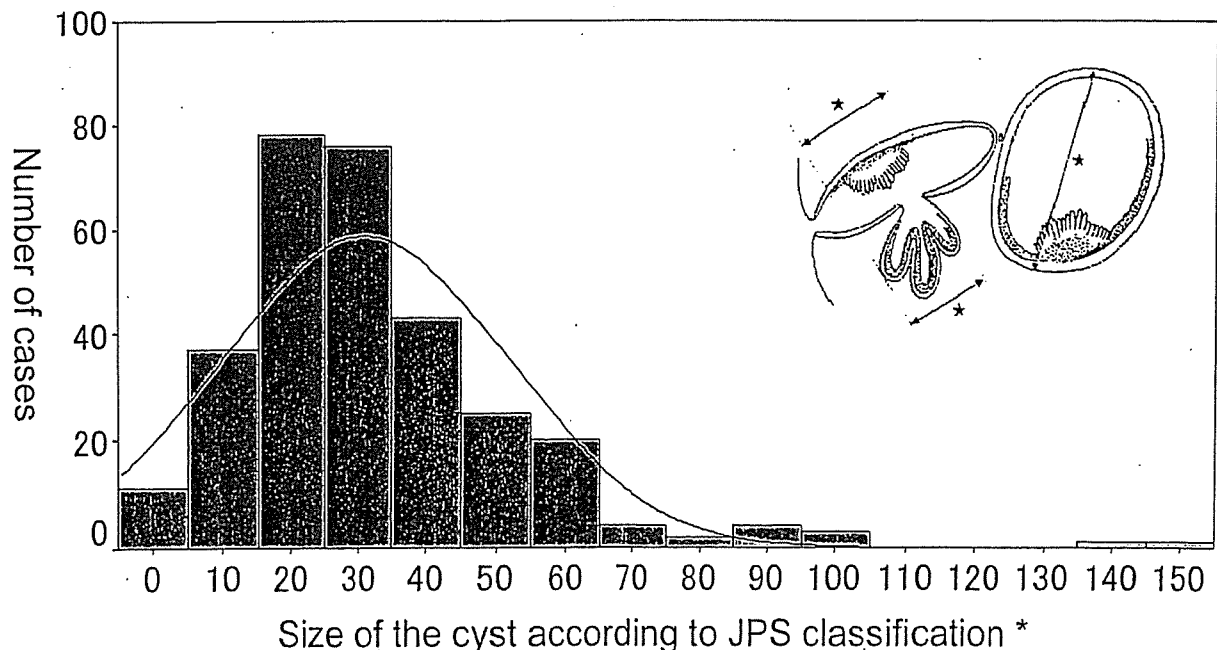


表 6.3.b.5 腫瘍の肉眼的形態 Macroscopic appearance of the primary tumor

|                      | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS     | INV-IT     | Total       |
|----------------------|------------|------------|-------------|------------|-----------|-----------|------------|------------|-------------|
| 1. 潜在型 Masked        | 3 (2.7%)   | 1 (1.9%)   | 16 (4.8%)   | 2 (6.3%)   | 0 (0.0%)  | 1 (6.7%)  | 10 (58.8%) | 2 (1.4%)   | 35 (4.9%)   |
| 2. 結節型 Nodular       | 1 (0.9%)   | 2 (3.8%)   | 36 (10.8%)  | 4 (12.5%)  | 0 (0.0%)  | 5 (33.3%) | 2 (11.8%)  | 24 (16.8%) | 74 (10.4%)  |
| 3. 浸潤型 Invasive      | 0 (0.0%)   | 0 (0.0%)   | 10 (3.0%)   | 2 (6.3%)   | 0 (0.0%)  | 1 (6.7%)  | 1 (5.9%)   | 33 (23.1%) | 47 (6.6%)   |
| 4. 嚢胞型 Cystic        | 78 (70.3%) | 41 (78.8%) | 116 (34.7%) | 14 (43.8%) | 9 (90.0%) | 4 (26.7%) | 2 (11.8%)  | 35 (24.5%) | 299 (41.9%) |
| 5. 尿管拡張型 Ductectatic | 26 (23.4%) | 8 (15.4%)  | 140 (41.9%) | 10 (31.3%) | 1 (10.0%) | 4 (26.7%) | 2 (11.8%)  | 32 (22.4%) | 223 (31.2%) |
| 6. 混合型 Mixed         | 3 (2.7%)   | 0 (0.0%)   | 16 (4.8%)   | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)   | 17 (11.9%) | 36 (5.0%)   |
| 7. 分類不能 Unclassified | 0 (0.0%)   | 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                | 111 (100%) | 52 (100%)  | 33 (100%)   | 32 (100%)  | 10 (100%) | 15 (100%) | 17 (100%)  | 143 (100%) | 714 (100%)  |

表 6.3.b.6 膵内胆管浸潤 Bile duct infiltration

|                           | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|---------------------------|------------|------------|-------------|------------|-----------|------------|-----------|------------|-------------|
| 0. CH(-) Without invasion | 117 (100%) | 51 (98.1%) | 317 (92.4%) | 31 (91.2%) | 10 (100%) | 12 (70.6%) | 19 (100%) | 90 (61.2%) | 647 (87.6%) |
| 1. CH(+) With invasion    | 0 (0.0%)   | 1 (1.9%)   | 26 (7.6%)   | 3 (8.8%)   | 0 (0.0%)  | 5 (29.4%)  | 0 (0.0%)  | 57 (38.8%) | 92 (12.4%)  |
| Total                     | 117 (100%) | 52 (100%)  | 343 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 147 (100%) | 739 (100%)  |

表 6.3.b.7 十二指腸浸潤 Duodenal infiltration

|                           | IPMA-MH    | IPMA-noM  | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|---------------------------|------------|-----------|-------------|------------|-----------|------------|-----------|------------|-------------|
| 0. DU(-) Without invasion | 118 (100%) | 52 (100%) | 323 (93.6%) | 33 (97.1%) | 10 (100%) | 16 (94.1%) | 19 (100%) | 97 (66.4%) | 668 (90.1%) |
| 1. DU(+) With invasion    | 0 (0.0%)   | 0 (0.0%)  | 22 (6.4%)   | 1 (2.9%)   | 0 (0.0%)  | 1 (5.9%)   | 0 (0.0%)  | 49 (33.6%) | 73 (9.9%)   |
| Total                     | 118 (100%) | 52 (100%) | 345 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 146 (100%) | 741 (100%)  |

表 6.3.b.8 膵前面被膜浸潤 Serosal infiltration

|                          | IPMA-MH     | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|--------------------------|-------------|------------|-------------|------------|-----------|------------|-----------|------------|-------------|
| 0. S(-) Without invasion | 117 (99.2%) | 51 (98.1%) | 326 (94.5%) | 31 (93.9%) | 9 (90.0%) | 16 (94.1%) | 19 (100%) | 96 (65.3%) | 665 (89.7%) |
| 1. S(+) With invasion    | 1 (0.8%)    | 1 (1.9%)   | 19 (5.5%)   | 2 (6.1%)   | 1 (10.0%) | 1 (5.9%)   | 0 (0.0%)  | 51 (34.7%) | 76 (10.3%)  |
| Total                    | 118 (100%)  | 52 (100%)  | 345 (100%)  | 33 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 147 (100%) | 741 (100%)  |

表 6.3.b.9 膵後方組織浸潤 Retroperitoneal infiltration

|                           | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|---------------------------|------------|------------|-------------|------------|-----------|------------|-----------|------------|-------------|
| 0. RP(-) Without invasion | 118 (100%) | 51 (98.1%) | 332 (96.2%) | 32 (94.1%) | 10 (100%) | 14 (82.4%) | 19 (100%) | 90 (60.8%) | 666 (89.6%) |
| 1. RP(+) With invasion    | 0 (0.0%)   | 1 (1.9%)   | 13 (3.8%)   | 2 (5.9%)   | 0 (0.0%)  | 3 (17.6%)  | 0 (0.0%)  | 58 (39.2%) | 77 (10.4%)  |
| Total                     | 118 (100%) | 52 (100%)  | 345 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 148 (100%) | 743 (100%)  |

表 6.3.b.10 門脈系静脈浸潤 Portal venous system infiltration

|                           | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|---------------------------|------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| 0. PV(-) Without invasion | 118 (100%) | 51 (98.1%) | 332 (95.7%) | 30 (88.2%) | 10 (100%) | 13 (76.5%) | 19 (100%) | 109 (73.2%) | 682 (91.4%) |
| 1. PV(+) With invasion    | 0 (0.0%)   | 1 (1.9%)   | 15 (4.3%)   | 4 (11.8%)  | 0 (0.0%)  | 4 (23.5%)  | 0 (0.0%)  | 40 (26.8%)  | 64 (8.6%)   |
| Total                     | 118 (100%) | 52 (100%)  | 347 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 149 (100%)  | 746 (100%)  |

表 6.3.b.11 動脈浸潤 Arterial infiltration

|                          | IPMA-MH     | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|--------------------------|-------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| 0. A(-) Without invasion | 117 (99.2%) | 51 (98.1%) | 340 (98.6%) | 31 (91.2%) | 10 (100%) | 16 (94.1%) | 19 (100%) | 128 (86.5%) | 712 (95.8%) |
| 1. A(+) With invasion    | 1 (0.8%)    | 1 (1.9%)   | 5 (1.4%)    | 3 (8.8%)   | 0 (0.0%)  | 1 (5.9%)   | 0 (0.0%)  | 20 (13.5%)  | 31 (4.2%)   |
| Total                    | 118 (100%)  | 52 (100%)  | 345 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 148 (100%)  | 743 (100%)  |

表 6.3.b.12 神経叢浸潤 Plexus infiltration

|                           | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|---------------------------|------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| 0. PL(-) Without invasion | 118 (100%) | 51 (98.1%) | 333 (97.7%) | 31 (93.9%) | 10 (100%) | 13 (76.5%) | 19 (100%) | 116 (81.1%) | 691 (94.3%) |
| 1. PL(+) With invasion    | 0 (0.0%)   | 1 (1.9%)   | 8 (2.3%)    | 2 (6.1%)   | 0 (0.0%)  | 4 (23.5%)  | 0 (0.0%)  | 27 (18.9%)  | 42 (5.7%)   |
| Total                     | 118 (100%) | 52 (100%)  | 341 (100%)  | 33 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 143 (100%)  | 733 (100%)  |

表 6.3.b.13 他臓器浸潤 Infiltration to the other organs

|                           | IPMA-MH    | IPMA-noM  | IPMC-MH     | IPMC-noM  | ITA       | ITC       | AH-CIS    | INV-IT      | Total       |
|---------------------------|------------|-----------|-------------|-----------|-----------|-----------|-----------|-------------|-------------|
| 0. OO(-) Without invasion | 118 (100%) | 52 (100%) | 345 (99.4%) | 33 (100%) | 10 (100%) | 17 (100%) | 19 (100%) | 134 (89.9%) | 728 (97.7%) |
| 1. OO(+) With invasion    | 0 (0.0%)   | 0 (0.0%)  | 2 (0.6%)    | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 15 (10.1%)  | 17 (2.3%)   |
| Total                     | 118 (100%) | 52 (100%) | 347 (100%)  | 33 (100%) | 10 (100%) | 17 (100%) | 19 (100%) | 149 (100%)  | 745 (100%)  |

表 6.3.b.14 JPS T 因子 JPS T factor

|         | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS    | INV-IT     | Total       |
|---------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|-------------|
| JPS-Tis | 69 (59.0%) | 28 (53.8%) | 133 (39.3%) | 16 (48.5%) | 5 (50.0%) | 7 (41.2%) | 19 (100%) | 1 (0.7%)   | 278 (37.9%) |
| JPS-T1  | 13 (11.1%) | 8 (15.4%)  | 58 (17.2%)  | 2 (6.1%)   | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 11 (7.5%)  | 92 (12.6%)  |
| JPS-T2  | 34 (29.1%) | 15 (28.8%) | 99 (29.3%)  | 9 (27.3%)  | 4 (40.0%) | 3 (17.6%) | 0 (0.0%)  | 27 (18.4%) | 191 (26.1%) |
| JPS-T3  | 0 (0.0%)   | 0 (0.0%)   | 31 (9.2%)   | 2 (6.1%)   | 1 (10.0%) | 2 (11.8%) | 0 (0.0%)  | 53 (36.1%) | 89 (12.1%)  |
| JPS-T4  | 1 (0.9%)   | 1 (1.9%)   | 17 (5.0%)   | 4 (12.1%)  | 0 (0.0%)  | 5 (29.4%) | 0 (0.0%)  | 55 (37.4%) | 83 (11.3%)  |
| Total   | 117 (100%) | 52 (100%)  | 338 (100%)  | 33 (100%)  | 10 (100%) | 17 (100%) | 19 (100%) | 147 (100%) | 733 (100%)  |

表 6.3.b.15 UICC T 因子 UICC T factor

|          | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS    | INV-IT     | Total       |
|----------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|-------------|
| UICC-Tis | 30 (38.5%) | 12 (37.5%) | 139 (41.4%) | 13 (39.4%) | 4 (57.1%) | 6 (35.3%) | 19 (100%) | 1 (0.7%)   | 224 (33.6%) |
| UICC -T1 | 25 (32.1%) | 7 (21.9%)  | 61 (18.2%)  | 5 (15.2%)  | 2 (28.6%) | 2 (11.8%) | 0 (0.0%)  | 16 (11.1%) | 118 (17.7%) |
| UICC -T2 | 20 (25.6%) | 11 (34.4%) | 101 (30.1%) | 13 (39.4%) | 1 (14.3%) | 7 (41.2%) | 0 (0.0%)  | 43 (29.9%) | 196 (29.4%) |
| UICC -T3 | 3 (3.8%)   | 1 (3.1%)   | 26 (7.7%)   | 1 (3.0%)   | 0 (0.0%)  | 1 (5.9%)  | 0 (0.0%)  | 60 (41.7%) | 92 (13.8%)  |
| UICC -T4 | 0 (0.0%)   | 1 (3.1%)   | 9 (2.7%)    | 1 (3.0%)   | 0 (0.0%)  | 1 (5.9%)  | 0 (0.0%)  | 24 (16.7%) | 36 (5.4%)   |
| Total    | 78 (100%)  | 32 (100%)  | 336 (100%)  | 33 (100%)  | 7 (100%)  | 17 (100%) | 19 (100%) | 144 (100%) | 666 (100%)  |

図 6.3.b.16 JPS T 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by JPS T factors

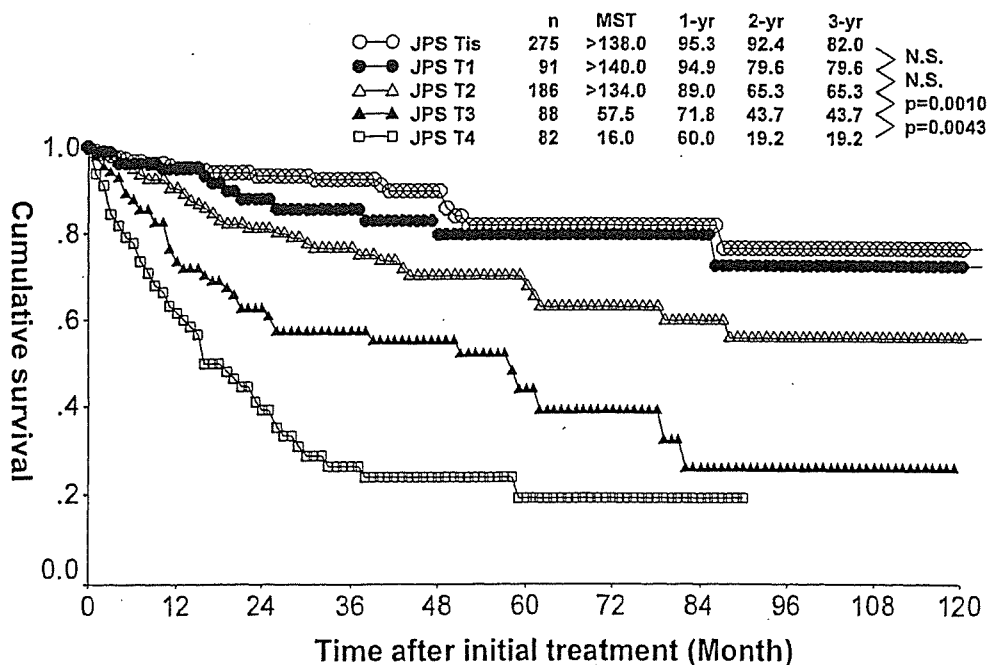
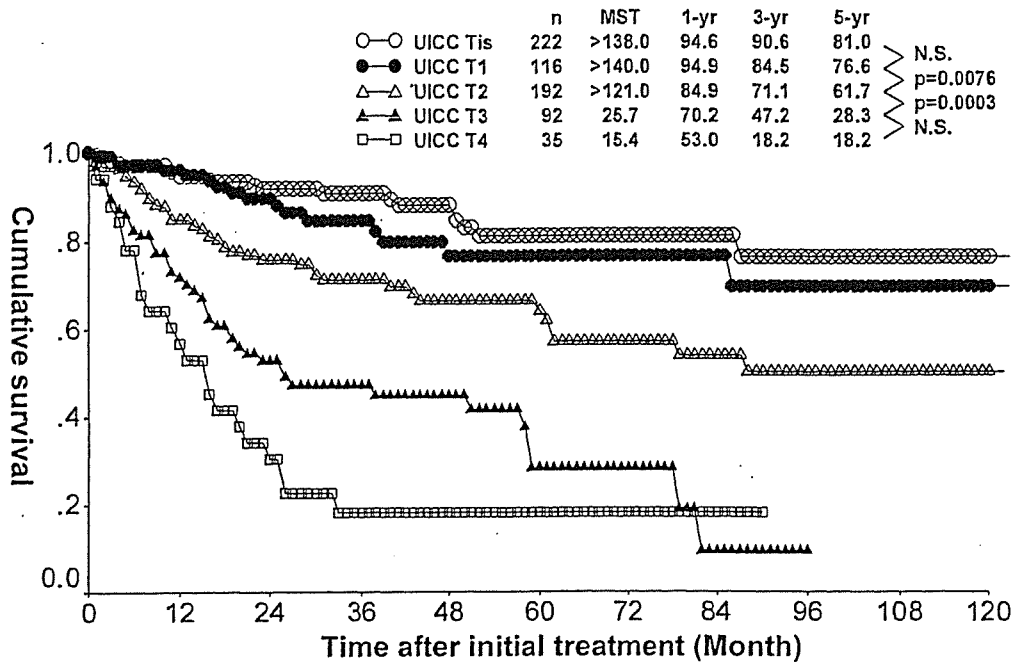


図 6.3.b.17 UICC T 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by UICC T factors



c. リンパ節転移 Lymph node metastasis

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

表 6.3.c.1 JPS N 因子 JPS N factor

|        | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|--------|------------|------------|-------------|------------|-----------|------------|-----------|------------|-------------|
| JPS-N0 | 111 (100%) | 45 (97.8%) | 264 (89.8%) | 25 (80.6%) | 10 (100%) | 13 (81.3%) | 14 (100%) | 72 (53.3%) | 554 (84.3%) |
| JPS-N1 | 0 (0.0%)   | 0 (0.0%)   | 8 (2.7%)    | 3 (9.7%)   | 0 (0.0%)  | 0 (0.0%)   | 0 (0.0%)  | 24 (17.8%) | 35 (5.3%)   |
| JPS-N2 | 0 (0.0%)   | 1 (2.2%)   | 6 (2.0%)    | 1 (3.2%)   | 0 (0.0%)  | 2 (12.5%)  | 0 (0.0%)  | 16 (11.9%) | 26 (4.0%)   |
| JPS-N3 | 0 (0.0%)   | 0 (0.0%)   | 16 (5.4%)   | 2 (6.5%)   | 0 (0.0%)  | 1 (6.3%)   | 0 (0.0%)  | 23 (17.0%) | 42 (6.4%)   |
| Total  | 111 (100%) | 46 (100%)  | 294 (100%)  | 31 (100%)  | 10 (100%) | 16 (100%)  | 14 (100%) | 135 (100%) | 657 (100%)  |

表 6.3.c.2 UICC N 因子 UICC N factor

|         | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT     | Total       |
|---------|------------|------------|-------------|------------|-----------|------------|-----------|------------|-------------|
| UICC-N0 | 120 (100%) | 50 (98.0%) | 277 (90.5%) | 26 (81.3%) | 10 (100%) | 13 (81.3%) | 15 (100%) | 74 (53.2%) | 585 (84.9%) |
| UICC-N1 | 0 (0.0%)   | 1 (2.0%)   | 29 (9.5%)   | 6 (18.8%)  | 0 (0.0%)  | 3 (18.8%)  | 0 (0.0%)  | 65 (46.8%) | 104 (15.1%) |
| Total   | 120 (100%) | 51 (100%)  | 306 (100%)  | 32 (100%)  | 10 (100%) | 16 (100%)  | 15 (100%) | 139 (100%) | 689 (100%)  |

図 6.3.c.3 JPS N 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by JPS N factors

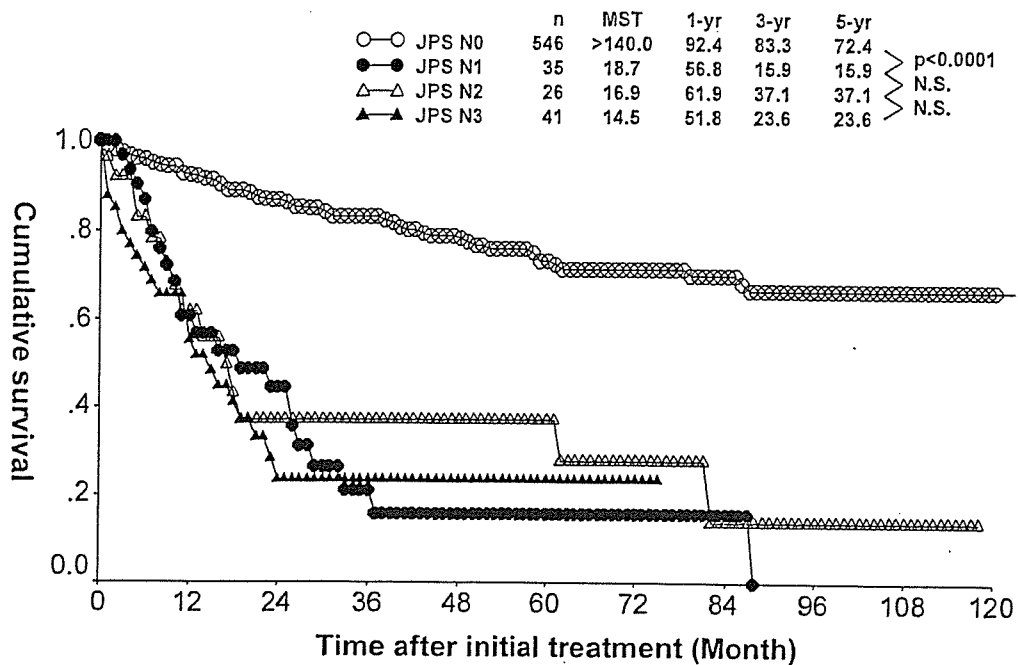
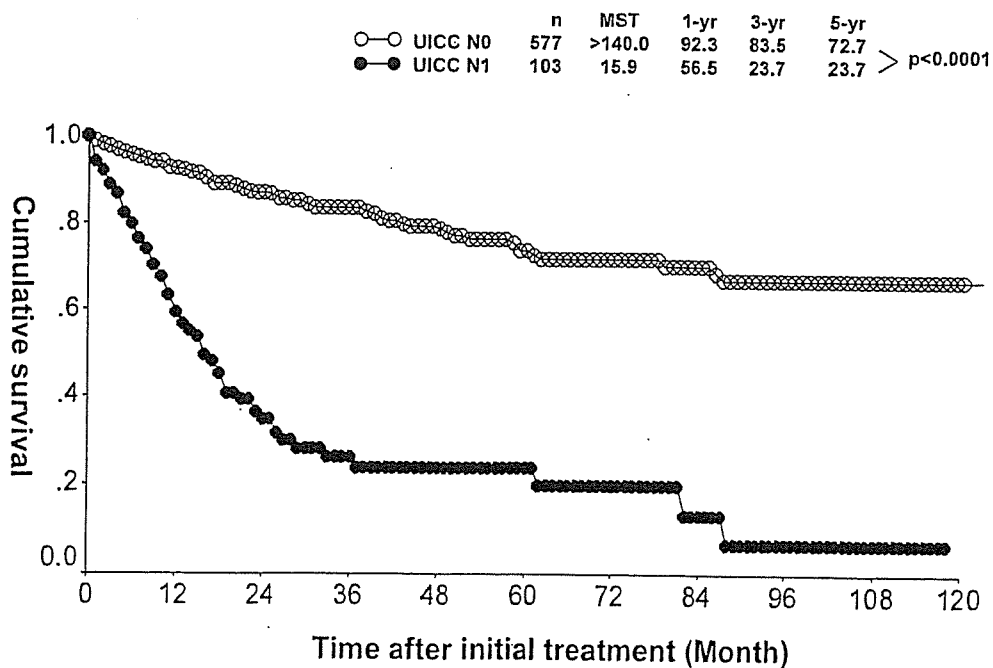


図 6.3.c.4 UICC N 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by UICC N factors



d. 遠隔転移 Distant metastasis

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

表 6.3.d.1 JPS M 因子 JPS M factor

|        | IPMA-MH     | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|--------|-------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| JPS-M0 | 124 (99.2%) | 53 (98.1%) | 326 (93.4%) | 32 (94.1%) | 10 (100%) | 15 (88.2%) | 19 (100%) | 119 (78.3%) | 698 (91.8%) |
| JPS-M1 | 1 (0.8%)    | 1 (1.9%)   | 23 (6.6%)   | 2 (5.9%)   | 0 (0.0%)  | 2 (11.8%)  | 0 (0.0%)  | 33 (21.7%)  | 62 (8.2%)   |
| Total  | 125 (100%)  | 54 (100%)  | 349 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 152 (100%)  | 760 (100%)  |

表 6.3.d.2 UICC M 因子 UICC M factor

|         | IPMA-MH     | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|---------|-------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| UICC-M0 | 123 (99.2%) | 53 (98.1%) | 325 (93.1%) | 32 (94.1%) | 10 (100%) | 15 (93.8%) | 19 (100%) | 117 (77.5%) | 694 (91.7%) |
| UICC-M1 | 1 (0.8%)    | 1 (1.9%)   | 24 (6.9%)   | 2 (5.9%)   | 0 (0.0%)  | 1 (6.3%)   | 0 (0.0%)  | 34 (22.5%)  | 63 (8.3%)   |
| Total   | 124 (100%)  | 54 (100%)  | 349 (100%)  | 34 (100%)  | 10 (100%) | 16 (100%)  | 19 (100%) | 151 (100%)  | 757 (100%)  |

表 6.3.d.3 遠隔転移部位 Site of distant metastasis

|                      | IPMA-MH  | IPMA-noM | IPMC-MH  | IPMC-noM | ITA      | ITC      | AH-CIS   | INV-IT     | Total     |
|----------------------|----------|----------|----------|----------|----------|----------|----------|------------|-----------|
| 肝転移 HEP Liver        | 0 (0.0%) | 0 (0.0%) | 4 (1.1%) | 0 (0.0%) | 0 (0.0%) | 1 (5.9%) | 0 (0.0%) | 4 (2.6%)   | 9 (1.2%)  |
| 腹膜播種 PER Peritoneal  | 0 (0.0%) | 0 (0.0%) | 6 (1.7%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 6 (4.0%)   | 12 (1.6%) |
| リンパ節 LYM lymph node  | 0 (0.0%) | 1 (1.9%) | 5 (4.0%) | 2 (5.9%) | 0 (0.0%) | 1 (5.9%) | 0 (0.0%) | 15 (18.5%) | 24 (5.3%) |
| 肺転移 PUL Pulmonary    | 1 (0.8%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%)   | 1 (0.1%)  |
| 胸膜播種 PLE Pleural     | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%)   | 0 (0.0%)  |
| 骨転移 OSS Bone         | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (0.7%)   | 1 (0.1%)  |
| 骨髄転移 MAR Bone marrow | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%)   | 0 (0.0%)  |
| 脳転移 BRA Brain        | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%)   | 0 (0.0%)  |
| 皮膚転移 SKI Skin        | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%)   | 0 (0.0%)  |
| 副腎転移 ADR Adrenal     | 0 (0.0%) | 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                | 127      | 55       | 352      | 34       | 10       | 17       | 19       | 154        | 768       |

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.

図 6.3.d.4 JPS M 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by JPS M factors

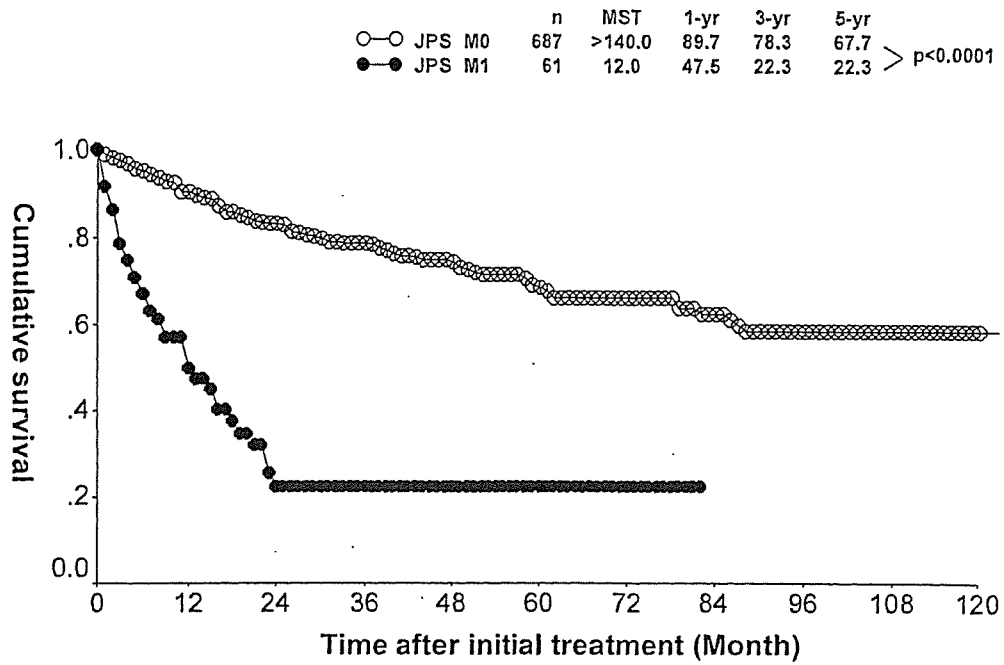
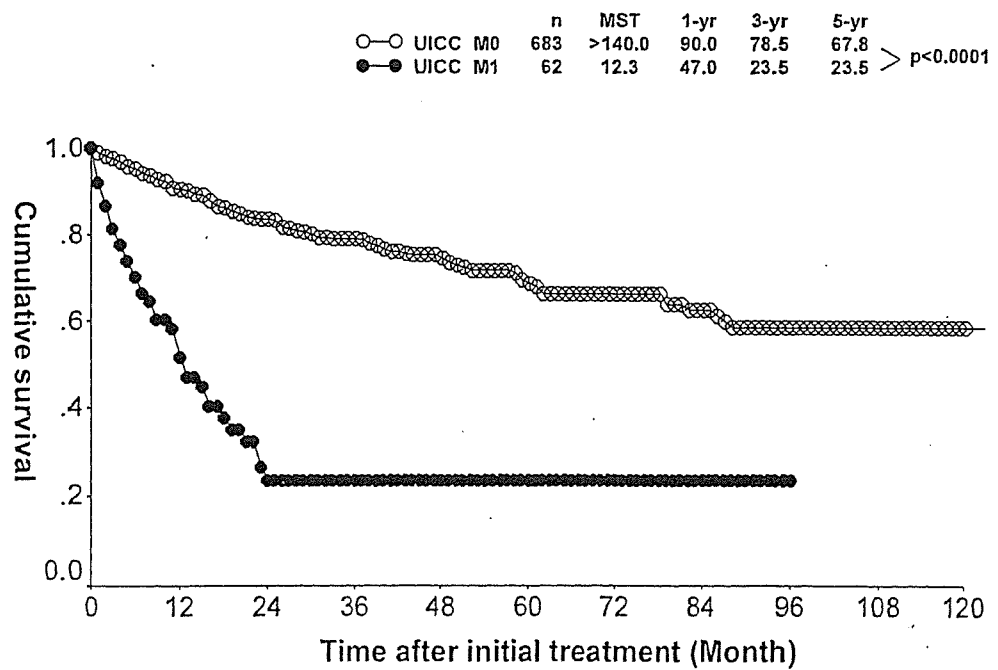


図 6.3.d.5 UICC M 因子ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by UICC M factors



e. 臨床病期 JPS and UICC stage

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

表 6.3.e.1 JPS Stage

|               | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS    | INV-IT     | Total       |
|---------------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|-------------|
| JPS Stage 0   | 62 (60.2%) | 25 (55.6%) | 111 (38.1%) | 13 (43.3%) | 5 (50.0%) | 7 (41.2%) | 14 (100%) | 0 (0.0%)   | 237 (36.8%) |
| JPS Stage I   | 10 (9.7%)  | 5 (11.1%)  | 41 (14.1%)  | 2 (6.7%)   | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 8 (6.0%)   | 66 (10.2%)  |
| JPS Stage II  | 30 (29.1%) | 14 (31.1%) | 80 (27.5%)  | 6 (20.0%)  | 4 (40.0%) | 3 (17.6%) | 0 (0.0%)  | 20 (14.9%) | 157 (24.4%) |
| JPS Stage III | 0 (0.0%)   | 0 (0.0%)   | 23 (7.9%)   | 4 (13.3%)  | 1 (10.0%) | 1 (5.9%)  | 0 (0.0%)  | 37 (27.6%) | 66 (10.2%)  |
| JPS Stage IVa | 0 (0.0%)   | 0 (0.0%)   | 11 (3.8%)   | 3 (10.0%)  | 0 (0.0%)  | 2 (11.8%) | 0 (0.0%)  | 34 (25.4%) | 50 (7.8%)   |
| JPS Stage IVb | 1 (1.0%)   | 1 (2.2%)   | 25 (8.6%)   | 2 (6.7%)   | 0 (0.0%)  | 4 (23.5%) | 0 (0.0%)  | 35 (26.1%) | 68 (10.6%)  |
| Total         | 103 (100%) | 45 (100%)  | 291 (100%)  | 30 (100%)  | 10 (100%) | 17 (100%) | 14 (100%) | 134 (100%) | 644 (100%)  |

表 6.3.e.2 UICC Stage

|                | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC       | AH-CIS    | INV-IT     | Total       |
|----------------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|-------------|
| UICC Stage 0   | 29 (37.7%) | 12 (37.5%) | 117 (38.6%) | 12 (37.5%) | 4 (57.1%) | 6 (37.5%) | 15 (100%) | 1 (0.7%)   | 196 (31.3%) |
| UICC Stage Ia  | 25 (32.5%) | 7 (21.9%)  | 48 (15.8%)  | 3 (9.4%)   | 2 (28.6%) | 2 (12.5%) | 0 (0.0%)  | 13 (9.0%)  | 100 (16.0%) |
| UICC Stage Ib  | 20 (26.0%) | 11 (34.4%) | 84 (27.7%)  | 10 (31.3%) | 1 (14.3%) | 5 (31.3%) | 0 (0.0%)  | 20 (13.9%) | 151 (24.1%) |
| UICC Stage IIa | 2 (2.6%)   | 1 (3.1%)   | 13 (4.3%)   | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 27 (18.8%) | 43 (6.9%)   |
| UICC Stage IIb | 0 (0.0%)   | 0 (0.0%)   | 10 (3.3%)   | 4 (12.5%)  | 0 (0.0%)  | 2 (12.5%) | 0 (0.0%)  | 33 (22.9%) | 49 (7.8%)   |
| UICC Stage III | 0 (0.0%)   | 0 (0.0%)   | 7 (2.3%)    | 1 (3.1%)   | 0 (0.0%)  | 0 (0.0%)  | 0 (0.0%)  | 16 (11.1%) | 24 (3.8%)   |
| UICC Stage IV  | 1 (1.3%)   | 1 (3.1%)   | 24 (7.9%)   | 2 (6.3%)   | 0 (0.0%)  | 1 (6.3%)  | 0 (0.0%)  | 34 (23.6%) | 63 (10.1%)  |
| Unknown        |            |            |             |            |           |           |           |            |             |
| Total          | 77 (100%)  | 32 (100%)  | 303 (100%)  | 32 (100%)  | 7 (100%)  | 16 (100%) | 15 (100%) | 144 (100%) | 626 (100%)  |

図 6.3.e.3 JPS Stage ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by JPS Stage

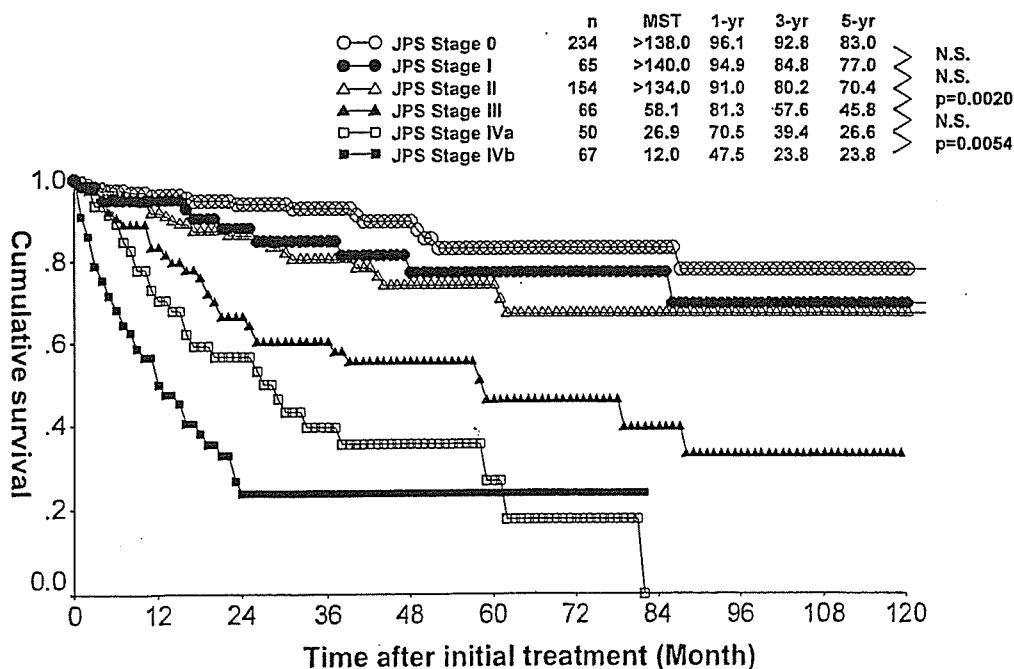
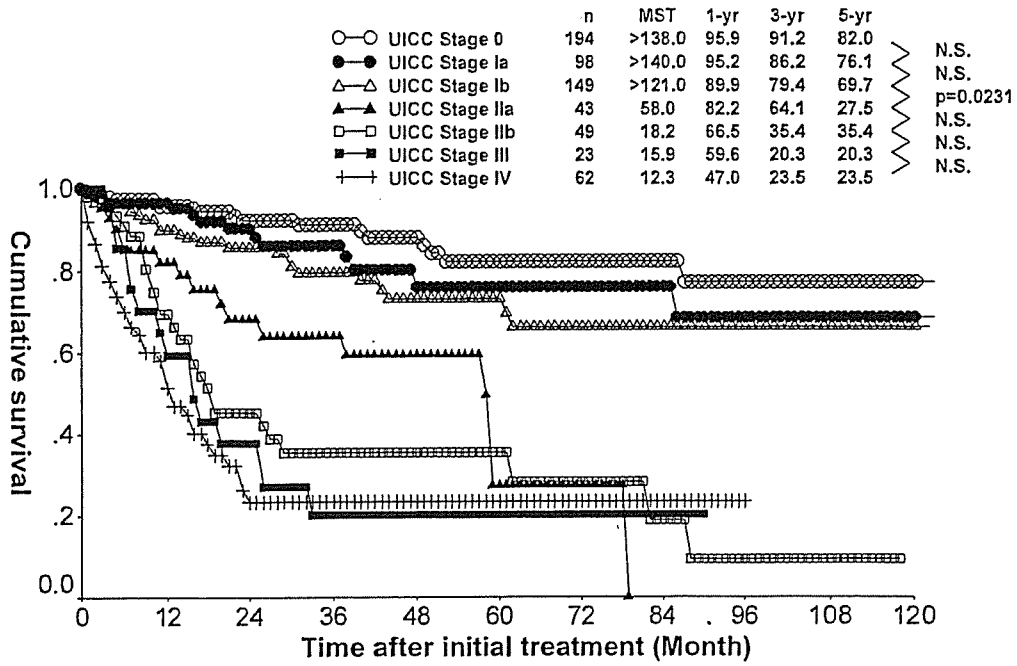




図 6.3.e.4 UICC Stage ごとにみた膵管内腫瘍の生存率 Survival of the patients with intraductal tumors by UICC Stage



IV. 手術治療 Surgical treatment  
a. 治療法 Trend of treatment

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

表 6.4.a.1 組織型分類ごとの治療法 Treatment according to the histological classification

|                               | IPMA-MH     | IPMA-noM   | IPMC-MH     | IPMC-noM   | ITA       | ITC        | AH-CIS    | INV-IT      | Total       |
|-------------------------------|-------------|------------|-------------|------------|-----------|------------|-----------|-------------|-------------|
| 1. 膵切除術 Pancreatectomy        | 117 (92.1%) | 47 (85.5%) | 343 (97.4%) | 31 (91.2%) | 7 (70.0%) | 16 (94.1%) | 19 (100%) | 139 (90.3%) | 719 (93.6%) |
| 2. 姑息手術 Palliative operation  | 0 (0.0%)    | 0 (0.0%)   | 2 (0.6%)    | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)   | 0 (0.0%)  | 5 (3.2%)    | 7 (0.9%)    |
| 3. 単開腹 Exploratory laparotomy | 0 (0.0%)    | 0 (0.0%)   | 3 (0.9%)    | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)    | 3 (0.4%)    |
| 4. 非手術 No surgical treatment  | 10 (7.9%)   | 8 (14.5%)  | 4 (1.1%)    | 3 (8.8%)   | 3 (30.0%) | 1 (5.9%)   | 0 (0.0%)  | 9 (5.8%)    | 38 (4.9%)   |
| 5. 非手術剖検 Autopsy cases        | 0 (0.0%)    | 0 (0.0%)   | 0 (0.0%)    | 0 (0.0%)   | 0 (0.0%)  | 0 (0.0%)   | 0 (0.0%)  | 1 (0.6%)    | 1 (0.1%)    |
| Total                         | 127 (100%)  | 55 (100%)  | 352 (100%)  | 34 (100%)  | 10 (100%) | 17 (100%)  | 19 (100%) | 154 (100%)  | 768 (100%)  |
| 切除率 Rate of pancreatectomy    | 92.1%       | 85.5%      | 97.4%       | 91.2%      | 70.0%     | 94.1%      | 100%      | 90.3%       | 93.6%       |

表 6.4.a.2 占拠部位別にみた治療法 Treatment according to the locus of primary tumor

|                               | 膵頭部<br>Pancreatic head | 膵体尾部<br>Pancreatic body and tail | 2区域<br>Two areas of the pancreas | 膵全体<br>Whole pancreas | Total        |
|-------------------------------|------------------------|----------------------------------|----------------------------------|-----------------------|--------------|
| 1. 膵切除術 Pancreatectomy        | 443 (95.1%)            | 175 (94.1%)                      | 73 (90.1%)                       | 26 (86.7%)            | 717 (94.0%)  |
| 2. 姑息手術 Palliative operation  | 3 (0.6%)               | 2 (1.1%)                         | 0 (0.0%)                         | 2 (6.7%)              | 7 (0.9%)     |
| 3. 単開腹 Exploratory laparotomy | 2 (0.4%)               | 1 (0.5%)                         | 0 (0.0%)                         | 0 (0.0%)              | 3 (0.4%)     |
| 4. 非手術 No surgical treatment  | 18 (3.9%)              | 8 (4.3%)                         | 8 (9.9%)                         | 2 (6.7%)              | 36 (4.7%)    |
| 5. 非手術剖検 Autopsy cases        | 0 (0.0%)               | 0 (0.0%)                         | 0 (0.0%)                         | 0 (0.0%)              | 0 (0.0%)     |
| Total                         | 466 (100.0%)           | 186 (100.0%)                     | 81 (100.0%)                      | 30 (100.0%)           | 763 (100.0%) |
| 切除率 Rate of pancreatectomy    | 95.1%                  | 94.1%                            | 90.1%                            | 86.7%                 | 94.0%        |

b. 膵切除術 Pancreatectomy

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

表 6.4.b.1 膵切除の種類 Method of pancreatectomy

|   | IPMA-MH    | IPMA-noM   | IPMC-MH     | IPMC-noM   |             |
|---|------------|------------|-------------|------------|-------------|
| 01. TP (total pancreatectomy)                             | 3 (2.6%)   | 1 (2.1%)   | 22 (6.4%)   | 2 (6.5%)   |             |
| 02. PD (pancreaticoduodenectomy)                          | 15 (12.8%) | 4 (8.5%)   | 60 (17.5%)  | 9 (29.0%)  |             |
| 03. PD (subtotal 二区域以上)                                   | 1 (0.9%)   | 1 (2.1%)   | 3 (0.9%)    | 0 (0.0%)   |             |
| 04. PPPD (pylorus-preserving PD)                          | 44 (37.6%) | 19 (40.4%) | 132 (38.5%) | 8 (25.8%)  |             |
| 05. SSPPD (subtotal stomach-preserving PD)                | 4 (3.4%)   | 2 (4.3%)   | 8 (2.3%)    | 0 (0.0%)   |             |
| 06. DPPHR (duodenum-preserving pancreatic head resection) | 2 (1.7%)   | 0 (0.0%)   | 8 (2.3%)    | 2 (6.5%)   |             |
| 07. DP (tail) (distal pancreatectomy)                     | 5 (4.3%)   | 2 (4.3%)   | 9 (2.6%)    | 0 (0.0%)   |             |
| 08. DP (body-tail)  | 19 (16.2%) | 9 (19.1%)  | 55 (16.0%)  | 4 (12.9%)  |             |
| 09. DP (subtotal 二区域以上)                                   | 3 (2.6%)   | 0 (0.0%)   | 15 (4.4%)   | 0 (0.0%)   |             |
| 10. SPDP (spleen-preserving DP)                           | 0 (0.0%)   | 1 (2.1%)   | 0 (0.0%)    | 0 (0.0%)   |             |
| 11. MP (middle pancreatectomy)                            | 9 (7.7%)   | 5 (10.6%)  | 18 (5.2%)   | 3 (9.7%)   |             |
| 12. PR (partial resection)                                | 8 (6.8%)   | 2 (4.3%)   | 2 (0.6%)    | 1 (3.2%)   |             |
| 13. その他 Others  | 4 (3.4%)   | 1 (2.1%)   | 4 (1.2%)    | 0 (0.0%)   |             |
| 99. 不明 Unknown  | 0 (0.0%)   | 0 (0.0%)   | 7 (2.0%)    | 2 (6.5%)   |             |
| Total   | 117 (100%) | 47 (100%)  | 343 (100%)  | 31 (100%)  |             |
|   | ITA        | ITC        | AH-CIS      | INV-IT     | Total       |
| 01. TP (total pancreatectomy)                             | 0 (0.0%)   | 2 (12.5%)  | 0 (0.0%)    | 13 (9.4%)  | 43 (6.0%)   |
| 02. PD (pancreaticoduodenectomy)                          | 1 (14.3%)  | 2 (12.5%)  | 3 (15.8%)   | 40 (28.8%) | 134 (18.6%) |
| 03. PD (subtotal 二区域以上)                                   | 1 (14.3%)  | 1 (6.3%)   | 0 (0.0%)    | 6 (4.3%)   | 13 (1.8%)   |
| 04. PPPD (pylorus-preserving PD)                          | 2 (28.6%)  | 4 (25.0%)  | 8 (42.1%)   | 44 (31.7%) | 261 (36.3%) |
| 05. SSPPD (subtotal stomach-preserving PD)                | 1 (14.3%)  | 1 (6.3%)   | 0 (0.0%)    | 3 (2.2%)   | 19 (2.6%)   |
| 06. DPPHR (duodenum-preserving pancreatic head resection) | 0 (0.0%)   | 0 (0.0%)   | 0 (0.0%)    | 0 (0.0%)   | 12 (1.7%)   |
| 07. DP (tail) (distal pancreatectomy)                     | 0 (0.0%)   | 0 (0.0%)   | 1 (5.3%)    | 4 (2.9%)   | 21 (2.9%)   |
| 08. DP (body-tail)  | 2 (28.6%)  | 3 (18.8%)  | 5 (26.3%)   | 21 (15.1%) | 118 (16.4%) |
| 09. DP (subtotal 二区域以上)                                   | 0 (0.0%)   | 1 (6.3%)   | 1 (5.3%)    | 3 (2.2%)   | 23 (3.2%)   |
| 10. SPDP (spleen-preserving DP)                           | 0 (0.0%)   | 1 (6.3%)   | 0 (0.0%)    | 0 (0.0%)   | 2 (0.3%)    |
| 11. MP (middle pancreatectomy)                            | 0 (0.0%)   | 0 (0.0%)   | 1 (5.3%)    | 1 (0.7%)   | 37 (5.1%)   |
| 12. PR (partial resection)                                | 0 (0.0%)   | 0 (0.0%)   | 0 (0.0%)    | 0 (0.0%)   | 13 (1.8%)   |
| 13. その他 Others  | 0 (0.0%)   | 0 (0.0%)   | 0 (0.0%)    | 2 (1.4%)   | 11 (1.5%)   |
| 99. 不明 Unknown  | 0 (0.0%)   | 1 (6.3%)   | 0 (0.0%)    | 2 (1.4%)   | 12 (1.7%)   |
| Total   | 7 (100%)   | 16 (100%)  | 19 (100%)   | 139 (100%) | 719 (100%)  |

表 6.4.b.2 占拠部位別にみた膵切除の種類 Pancrectomy according to the locus of primary tumor

|   | 膵頭部<br>Pancreatic head | 膵体尾部<br>Pancreatic body and tail | 2区域<br>Two areas of the pancreas | 膵全体<br>Whole pancreas | Total        |
|---|------------------------|----------------------------------|----------------------------------|-----------------------|--------------|
| 01. TP (total pancreatectomy)                             | 9 (2.0%)               | 3 (1.7%)                         | 10 (13.7%)                       | 21 (80.8%)            | 43 (6.0%)    |
| 02. PD (pancreaticoduodenectomy)                          | 129 (29.1%)            | 1 (0.6%)                         | 4 (5.5%)                         | 0 (0.0%)              | 134 (18.7%)  |
| 03. PD (subtotal 二区域以上)                                   | 3 (0.7%)               | 2 (1.1%)                         | 8 (11.0%)                        | 0 (0.0%)              | 13 (1.8%)    |
| 04. PPPD (pylorus-preserving PD)                          | 240 (54.2%)            | 1 (0.6%)                         | 19 (26.0%)                       | 0 (0.0%)              | 260 (36.3%)  |
| 05. SSPPD (subtotal stomach-preserving PD)                | 19 (4.3%)              | 0 (0.0%)                         | 0 (0.0%)                         | 0 (0.0%)              | 19 (2.6%)    |
| 06. DPPHR (duodenum-preserving pancreatic head resection) | 12 (2.7%)              | 0 (0.0%)                         | 0 (0.0%)                         | 0 (0.0%)              | 12 (1.7%)    |
| 07. DP (tail) (distal pancreatectomy)                     | 0 (0.0%)               | 18 (10.3%)                       | 3 (4.1%)                         | 0 (0.0%)              | 21 (2.9%)    |
| 08. DP (body-tail)  | 2 (0.5%)               | 95 (54.3%)                       | 19 (26.0%)                       | 1 (3.8%)              | 117 (16.3%)  |
| 09. DP (subtotal 二区域以上)                                   | 2 (0.5%)               | 13 (7.4%)                        | 7 (9.6%)                         | 1 (3.8%)              | 23 (3.2%)    |
| 10. SPDP (spleen-preserving DP)                           | 0 (0.0%)               | 2 (1.1%)                         | 0 (0.0%)                         | 0 (0.0%)              | 2 (0.3%)     |
| 11. MP (middle pancreatectomy)                            | 6 (1.4%)               | 30 (17.1%)                       | 1 (1.4%)                         | 0 (0.0%)              | 37 (5.2%)    |
| 12. PR (partial resection)                                | 8 (1.8%)               | 5 (2.9%)                         | 0 (0.0%)                         | 0 (0.0%)              | 13 (1.8%)    |
| 13. その他 Others  | 8 (1.8%)               | 1 (0.6%)                         | 1 (1.4%)                         | 1 (3.8%)              | 11 (1.5%)    |
| 99. 不明 Unknown  | 5 (1.1%)               | 4 (2.3%)                         | 1 (1.4%)                         | 2 (7.7%)              | 12 (1.7%)    |
| Total   | 443 (100.0%)           | 175 (100.0%)                     | 73 (100.0%)                      | 26 (100.0%)           | 717 (100.0%) |

c. 癌遺残の評価 Evaluation of residual cancer

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

表 6.4.c.1 膵切除断端における癌浸潤 Infiltration of cancer cells at pancreatic cut end margin (PCM)

|                        | IPMA-MH     | IPMA-noM  | IPMC-MH     | IPMC-noM   | ITA      | ITC        | AH-CIS    | INV-IT      | Total       |
|------------------------|-------------|-----------|-------------|------------|----------|------------|-----------|-------------|-------------|
| 0. PCM 陰性 PCM negative | 104 (98.1%) | 41 (100%) | 304 (95.6%) | 28 (93.3%) | 7 (100%) | 14 (93.3%) | 19 (100%) | 122 (93.1%) | 639 (95.8%) |
| 1. PCM 陽性 PCM positive | 2 (1.9%)    | 0 (0.0%)  | 14 (4.4%)   | 2 (6.7%)   | 0 (0.0%) | 1 (6.7%)   | 0 (0.0%)  | 9 (6.9%)    | 28 (4.2%)   |
| Total                  | 106 (100%)  | 41 (100%) | 318 (100%)  | 30 (100%)  | 7 (100%) | 15 (100%)  | 19 (100%) | 131 (100%)  | 667 (100%)  |

表 6.4.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 | 34 (100.0%) | 393 (97.0%)                  | 11 (100.0%) | 137 (90.7%)                           | 44 (95.7%)  | 619 (95.7%)  |
| 1. PCM 陽性 PCM positive | 0 (0.0%)    | 12 (3.0%)                    | 0 (0.0%)    | 14 (9.3%)                             | 2 (4.3%)    | 28 (4.3%)    |
| Total                  | 34 (100.0%) | 405 (100.0%)                 | 11 (100.0%) | 151 (100.0%)                          | 46 (100.0%) | 647 (100.0%) |

表 6.4.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)

|                        | IPMA-MH    | IPMA-noM  | IPMC-MH     | IPMC-noM  | ITA      | ITC        | AH-CIS    | INV-IT      | Total       |
|------------------------|------------|-----------|-------------|-----------|----------|------------|-----------|-------------|-------------|
| 0. BCM 陰性 BCM negative | 93 (98.9%) | 40 (100%) | 287 (99.7%) | 27 (100%) | 6 (100%) | 13 (92.9%) | 11 (100%) | 120 (98.4%) | 597 (99.2%) |
| 1. BCM 陽性 BCM positive | 1 (1.1%)   | 0 (0.0%)  | 1 (0.3%)    | 0 (0.0%)  | 0 (0.0%) | 1 (7.1%)   | 0 (0.0%)  | 2 (1.6%)    | 5 (0.8%)    |
| Total                  | 94 (100%)  | 40 (100%) | 288 (100%)  | 27 (100%) | 6 (100%) | 14 (100%)  | 11 (100%) | 122 (100%)  | 602 (100%)  |

表 6.4.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)

|                        | IPMA-MH     | IPMA-noM  | IPMC-MH     | IPMC-noM  | ITA      | ITC        | AH-CIS    | INV-IT      | Total       |
|------------------------|-------------|-----------|-------------|-----------|----------|------------|-----------|-------------|-------------|
| 0. DPM 陰性 DPM negative | 103 (99.0%) | 42 (100%) | 310 (97.2%) | 30 (100%) | 7 (100%) | 14 (93.3%) | 19 (100%) | 115 (87.1%) | 640 (95.8%) |
| 1. DPM 陽性 DPM positive | 1 (1.0%)    | 0 (0.0%)  | 9 (2.8%)    | 0 (0.0%)  | 0 (0.0%) | 1 (6.7%)   | 0 (0.0%)  | 17 (12.9%)  | 28 (4.2%)   |
| Total                  | 104 (100%)  | 42 (100%) | 319 (100%)  | 30 (100%) | 7 (100%) | 15 (100%)  | 19 (100%) | 132 (100%)  | 668 (100%)  |

表 6.4.c.5 術式とDPM Procedure of pancreatectomy and DPM

|                        | TP          | PD, subtotal<br>PD, PPPD,<br>SSPPD | DPPHR       | DP, subtotal<br>DP, spleen<br>preserving<br>DP | MP, PR      | Total        |
|------------------------|-------------|------------------------------------|-------------|--|-------------|--------------|
| 0. DPM 陰性 DPM negative | 41 (95.3%)  | 381 (94.5%)                        | 12 (100.0%) | 143 (97.3%)                                    | 43 (100.0%) | 620 (95.7%)  |
| 1. DPM 陽性 DPM positive | 2 (4.7%)    | 22 (5.5%)                          | 0 (0.0%)    | 4 (2.7%)                                       | 0 (0.0%)    | 28 (4.3%)    |
| Total                  | 43 (100.0%) | 403 (100.0%)                       | 12 (100.0%) | 147 (100.0%)                                   | 43 (100.0%) | 648 (100.0%) |

表 6.4.c.6 癌遺残度 Residual tumor

|       | IPMA-MH     | IPMA-noM  | IPMC-MH     | IPMC-noM   | ITA      | ITC        | AH-CIS    | INV-IT     | Total       |
|-------|-------------|-----------|-------------|------------|----------|------------|-----------|------------|-------------|
| 0. R0 | 100 (97.1%) | 42 (100%) | 198 (71.0%) | 29 (93.5%) | 7 (100%) | 14 (87.5%) | 6 (46.2%) | 86 (67.7%) | 482 (78.0%) |
| 1. R1 | 3 (2.9%)    | 0 (0.0%)  | 68 (24.4%)  | 2 (6.5%)   | 0 (0.0%) | 2 (12.5%)  | 7 (53.8%) | 19 (15.0%) | 101 (16.3%) |
| 2. R2 | 0 (0.0%)    | 0 (0.0%)  | 13 (4.7%)   | 0 (0.0%)   | 0 (0.0%) | 0 (0.0%)   | 0 (0.0%)  | 22 (17.3%) | 35 (5.7%)   |
| Total | 103 (100%)  | 42 (100%) | 279 (100%)  | 31 (100%)  | 7 (100%) | 16 (100%)  | 13 (100%) | 127 (100%) | 618 (100%)  |

表 6.4.c.7 術式と癌遺残度 Procedure of pancreatectomy and residual tumor

|       | TP          | PD, subtotal<br>PD, PPPD,<br>SSPPD | DPPHR       | DP, subtotal<br>DP, spleen<br>preserving<br>DP | MP, PR      | Total        |
|-------|-------------|------------------------------------|-------------|--|-------------|--------------|
| 0. R0 | 30 (81.1%)  | 306 (77.7%)                        | 6 (60.0%)   | 93 (78.2%)                                     | 34 (82.9%)  | 469 (78.0%)  |
| 1. R1 | 2 (5.4%)    | 66 (16.8%)                         | 4 (40.0%)   | 20 (16.8%)                                     | 7 (17.1%)   | 99 (16.5%)   |
| 2. R2 | 5 (13.5%)   | 22 (5.6%)                          | 0 (0.0%)    | 6 (5.0%)                                       | 0 (0.0%)    | 33 (5.5%)    |
| Total | 37 (100.0%) | 394 (100.0%)                       | 10 (100.0%) | 119 (100.0%)                                   | 41 (100.0%) | 601 (100.0%) |

図 6.4.c.8 IPMA-MH 切除例における膵切除断端所見と生存率 Survival of patients with IPMA-MH according to the pancreatic cut end margin (PCM)

|             | n   | MST   | 1-yr | 3-yr | 5-yr |
|-------------|-----|-------|------|------|------|
| ○-○ PCM (-) | 102 | >47.0 | 94.7 | 90.6 | -    |
| ●-● PCM (+) | 2   | >20.0 | 100  | -    | -    |

> N.S.

