

Clinical Practice Guidelines for Pancreatic Cancer 2025 From the Japan Pancreas Society: A Synopsis

Toshiya Abe, MD, PhD,*  Masafumi Nakamura, MD, PhD,*
Chigusa Morizane, MD, PhD,† Masahiro Yoshida, MD, PhD,‡
Masayuki Kitano, MD, PhD,§ Takao Ohtsuka, MD, PhD,||
Kohei Nakata, MD, PhD,* Masanori Someya, MD, PhD,¶
Nobumasa Mizuno, MD, PhD,# Yousuke Nakai, MD, PhD,**
Masato Ozaka, MD, PhD,†† Keiji Hanada, MD, PhD,‡‡
Atsushi Masamune, MD, PhD,§§ and
on behalf of the Committee for the Revision of Clinical Guidelines for
Pancreatic Cancer of the Japan Pancreas Society

Objectives: The Clinical Practice Guidelines for Pancreatic Cancer were first published in 2006 by the Japan Pancreas Society and have been revised in 2009, 2013, 2016, 2019, and 2022. In July 2025, a newly revised version was released in Japanese.

Methods: This latest revision was developed in accordance with the Minds Manual for Guideline Development 2020, which incorporates the principles of GRADE (Grading of Recommendations Assessment, Development, and Evaluation) to improve clarity, transparency, and reliability of the recommendations. Patients and citizens were actively involved in both the development and implementation processes.

Results: The guideline provides updated algorithms for the diagnosis, treatment, drug therapy, and precision medicine of pancreatic cancer, comprising 8 domains: diagnosis, surgical therapy, adjuvant therapy, radiation therapy, drug therapy, stent therapy, supportive and palliative care, and patient and citizen involvement. It includes 63 clinical questions and 99 corresponding statements, each accompanied by an evidence level, strength of recommendation, and consensus rate.

Conclusions: These guidelines represent the most comprehensive and standardized resource currently available in Japan for the clinical management of pancreatic cancer. This English synopsis aims to disseminate the 2025 edition of the Japanese Clinical

Received for publication September 1, 2025; accepted October 8, 2025. From the *Department of Surgery and Oncology, Graduate School of Medical Sciences, Kyushu University, Fukuoka; †Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, Tokyo; ‡Department of Hepato-Biliary-Pancreatic and GI Surgery, International University of Health and Welfare, Ichikawa; §Second Department of Internal Medicine, Wakayama Medical University, Wakayama; ||Department of Digestive Surgery, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima; ¶Department of Radiology, Sapporo Medical University School of Medicine, Sapporo; #Department of Gastroenterology, Aichi Cancer Center Hospital, Nagoya; **Department of Internal Medicine, Institute of Gastroenterology, Tokyo Women's Medical University; ††Department of Hepato-Biliary-Pancreatic Medicine, Cancer Institute Hospital of Japanese Foundation for Cancer Research, Tokyo; ‡‡Department of Gastroenterology, Onomichi General Hospital, Onomichi; and §§Division of Gastroenterology, Tohoku University Graduate School of Medicine, Sendai, Japan.

The funding of the guidelines was supported by the Japan Pancreas Society (President, Atsushi Masamune).

M.N. has received research funding from Olympus Corporation, Taiho Pharmaceutical Co., Ltd., Covidien Japan Inc., Chugai Pharmaceutical Co., Ltd., Eli Lilly Japan K.K., and Otsuka Pharmaceutical Co., Ltd., and honoraria from Intuitive Surgical G.K., Johnson & Johnson K.K., Yakult Honsha Co., Ltd., Taiho Pharmaceutical Co., Ltd., Daiichi Sankyo Co., Ltd., Otsuka Pharmaceutical Co., Ltd., Novartis Pharma K.K., Olympus Corporation, Covidien Japan Inc., and Servier Japan Co., Ltd. C.M. has received honoraria and research funding from AstraZeneca K.K.; honoraria from Servier Japan Co., Ltd. and MSD K.K.; and research funding from Taiho Pharmaceutical Co., Ltd., Nippon Boehringer Ingelheim Co., Ltd., and Takara Bio Inc. C.M. has received consulting fees from MSD K.K., Servier Japan Co., Ltd., Boehringer Ingelheim Japan, Inc., AbbVie Inc., AstraZeneca K.K., Pfizer Japan Inc., BioNTech SE, and Revolution Medicines, Inc.; honoraria from Novartis Pharma K.K., Taiho Pharmaceutical Co., Ltd., Eisai Co., Ltd., MSD K.K.,

AstraZeneca K.K., Servier Japan Co., Ltd., Guardant Health, Inc., Chugai Pharmaceutical Co., Ltd., and Myriad Genetics, Inc.; and research funding through their institution from Eisai Co., Ltd., Yakult Honsha Co., Ltd., Ono Pharmaceutical Co., Ltd., Taiho Pharmaceutical Co., Ltd., AstraZeneca K.K., Daiichi Sankyo Co., Ltd., Hitachi, Ltd., Boehringer Ingelheim Japan, Inc., Chugai Pharmaceutical Co., Ltd., and Labcorp Drug Development. M.K. has received honoraria and research funding from AstraZeneca K.K., and research funding from GE HealthCare Pharma Ltd., Medtronic Japan Co., Ltd., and Sumitomo Bakelite Co., Ltd. N.M. has received research funding from Novartis Pharma K.K., MSD K.K., Incyte Corporation, Ono Pharmaceutical Co., Ltd., Seagen Inc., Boehringer Ingelheim Japan, Inc., Pfizer Japan Inc., AstraZeneca K.K., and Servier Japan KK; honoraria from Yakult Honsha Co., Ltd., AstraZeneca K.K., Novartis Pharma K.K., FUJIFILM Toyama Chemical Co., Ltd., Taiho Pharmaceutical Co., Ltd., Miyarisan Pharmaceutical Co., Ltd., Servier Japan KK, and Teijin Pharma Limited; and has served on advisory boards or data safety monitoring boards for MSD K.K., Boehringer Ingelheim Japan, Inc., and Novartis Pharma K.K. Y.N. has received honoraria from Olympus Corporation, Boston Scientific Japan K.K., Gadelius Medical K.K., J-MIT Co., Ltd., and AstraZeneca K.K., and research funding from FUJIFILM Corporation, HOYA Corporation, Boston Scientific Japan K.K., Gadelius Medical K.K., Taiho Pharmaceutical Co., Ltd., and Century Medical, Inc. M.O. has received honoraria from Taiho Pharmaceutical Co., Ltd., Ono Pharmaceutical Co., Ltd., MSD K.K., Novartis Pharma K.K., Servier Japan Co., Ltd., and AstraZeneca K.K. K.H. has received honoraria from Medicos Hirata Inc., Toray Industries, Inc., Viatrix Pharmaceuticals Japan Inc., Gadelius Medical K.K., and Olympus Corporation. The authors declare no conflict of interest.

Address correspondence to: Masafumi Nakamura, MD, PhD, Department of Surgery and Oncology, Graduate School of Medical Sciences, Kyushu University, 3-1-1, Maidashi, Higashi-ku 812-8582, Japan (e-mail: nakamura.masafumi.861@m.kyushu-u.ac.jp). Copyright © 2025 Wolters Kluwer Health, Inc. All rights reserved. DOI: 10.1097/MPA.0000000000002600

Practice Guidelines for Pancreatic Cancer to a global audience and highlight the Japanese approach to pancreatic cancer care.

Key Words: pancreatic cancer, clinical guidelines, Japan Pancreas Society, Minds, GRADE system

(*Pancreas* 2026;55:e120–e133)

The Clinical Practice Guidelines for Pancreatic Cancer, based on evidence-based medicine, were first published in 2006 by the Japan Pancreas Society (JPS),¹ and have since undergone multiple revisions—in July 2009,^{2,3} October 2013,^{4,5} October 2016,^{6,7} July 2019,^{8,9} and July 2022.^{10,11} The most recent revision was published in July 2025.¹²

This latest edition was developed in accordance with the Minds Manual for Guideline Development 2020.¹³ Notably, the composition of the guideline committee was revised to include a broader range of specialists from various disciplines to minimize bias and enhance the objectivity of the recommendations.

This guideline represents the most standardized and comprehensive reference currently available in Japan for the clinical and practical management of pancreatic cancer. The English synopsis of the 2025 Japanese guidelines has been prepared with the purpose of international dissemination and sharing of the Japanese approach to pancreatic cancer care with the global community.

GENERAL OUTLINE OF THE REVISION PROCESS

The committee for the revision of the Clinical Practice Guidelines for Pancreatic Cancer under the JPS was composed as follows: Masafumi Nakamura (Chairman), Chigusa Morizane (Vice-Chairman), Masahiro Yoshida, Masayuki Kitano, Takao Ohtsuka, Kohei Nakata, Masanori Someya, Nobumasa Mizuno, Yousuke Nakai, Masato Ozaka, and Keiji Hanada served as chiefs of the respective working groups. In addition, 48 other specialists participated as members of the revision committee, including physicians from diverse fields such as internal medicine, surgery, gastroenterology, medical oncology, radiology, endoscopy, psycho-oncology, nutrition, and palliative and supportive care. Other members included a nurse specialized in cancer therapeutics, a cancer pharmacist, and medical social workers.

Four representatives of patients and/or citizens participated as full committee members. The committee's work was further supported by 48 assistants and 2 librarians. The revision process officially began in September 2023.

The newly developed guideline includes updated algorithms for diagnosis (Fig. 1), treatment (Fig. 2), drug therapy (Fig. 3), and precision medicine (Fig. 4) for pancreatic cancer. It also presents general consensus statements on established topics such as diagnosis, surgical therapy, adjuvant therapy, radiotherapy, drug therapy, stent therapy, supportive and palliative care, and patient and citizen involvement. More focused and evidence-based recommendations are provided in the form of clinical questions (CQs) and corresponding statements.

For each CQ, a comprehensive literature search was conducted by 2 librarians (Mr Naohiko Yamaguchi and Ms Natsuki Narita), targeting articles published after January 1990—the year the original literature search for the guidelines began. Relevant articles were identified from

PubMed and Igaku Chuo Zasshi (ICHUSHI), a Japanese bibliographic database, covering the period from January 1990 to January 2024.

The guidelines cover 7 major topics:

- Diagnosis of pancreatic cancer (16 CQs, 16 statements)
- Treatment of resectable disease (12 CQs, 15 statements)
- Treatment of borderline resectable disease (4 CQs, 7 statements)
- Treatment of locally advanced disease (13 CQs, 28 statements)
- Treatment of metastatic disease (nine CQs, 28 statements)
- Supportive and palliative care (10 CQs, 18 statements)
- Patient and citizen involvement (2 CQs, 2 statements)

The corresponding CQ numbers are integrated into the treatment algorithms. Each CQ is associated with a statement, the level of evidence, the strength of the recommendation, and the rate of agreement.

The guidelines were developed using the Minds Manual for Guideline Development, adopting the GRADE system. The overall quality of evidence was assessed across studies for each outcome and graded on a 4-point scale from A (strongest) to D (weakest). For each topic, experts drafted the statements, assessed the quality of evidence, and proposed the strength of each recommendation. Additional references and meta-analyses were provided by the committee members as needed. These drafts were subsequently reviewed, discussed, and finalized by the entire committee.

The strength of each recommendation was determined based on 4 key factors: the level of evidence, the balance between benefits and harms, patient preferences, and cost-effectiveness. Recommendations were categorized into 5 levels: (1) strong, indicating a clear recommendation to adopt the approach; (2) weak, suggesting adoption; (3) weak, suggesting not to adopt; (4) strong, recommending against adoption; and (5) no recommendation, applied when at least 67% of committee members participated in the vote without any consensus.

If a recommendation was supported by $\geq 50\%$ and opposed by $< 20\%$, it was accepted. If $\geq 70\%$ agreed, it was considered a strong recommendation. If $\geq 50\%$ supported “no recommendation” and $< 20\%$ supported any other option, “no recommendation” was accepted. If none of the criteria were met, a second round of discussion and voting was conducted. If the result still did not meet any criteria, “no recommendation” was finalized. Voting was conducted online among participating committee members.

Patients and citizens were actively involved in both the development and implementation of the guidelines. A dedicated Patient and Citizen Group was established, comprising 4 representatives from pancreatic cancer patient organizations and 7 health professionals. The health professionals supported the patient and citizen representatives by mitigating barriers to participation and facilitating effective engagement throughout the process.

A separate survey team, consisting of 1 patient, 1 citizen, and 1 health professional, conducted an online self-administered questionnaire to collect input from a broader population. In parallel, a systematic review team composed of 2 health professionals conducted literature reviews to support the formulation of CQs.

In the 2025 edition, 2 CQs proposed by the Patient and Citizen Group were adopted, demonstrating logical integration of public perspectives into the guideline development. Patient and citizen representatives attended all JPS

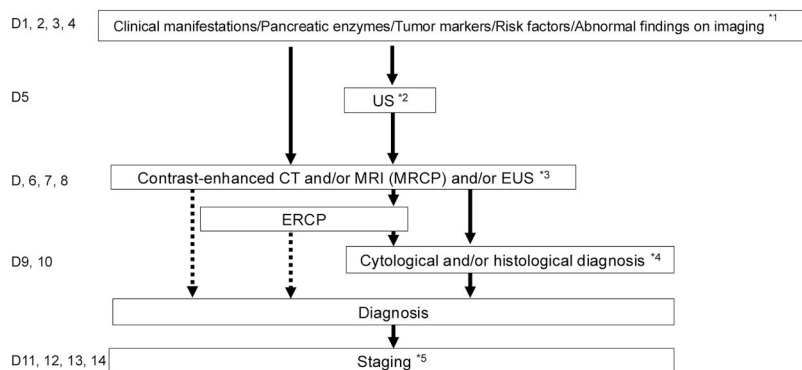


FIGURE 1. Algorithm for the diagnosis of pancreatic cancer. *1: Includes findings from health checkups, comprehensive medical examinations (eg, ultrasonography), screening, and follow-up for other diseases. *2: Interpretation depends on the proficiency of the attending technician; full pancreatic evaluation may be limited. This step may be skipped if other high-quality imaging studies are available. *3: It is desirable that EUS be performed at an institution with a high level of expertise. *4: A histopathological diagnosis should be established whenever possible. *5: Dynamic CT, dynamic MRI, EUS, PET, and/or laparoscopic examination should be performed as needed. ERCP indicates endoscopic retrograde cholangiopancreatography; EUS, endoscopic ultrasonography; MRI, magnetic resonance imaging; MRCP, magnetic resonance cholangiopancreatography; US, ultrasonography.

committee and subgroup meetings and contributed to discussions that led to the final recommendations.

The Patient and Citizen Group played a central and influential role in the 2025 revision of the JPS guidelines.

To ensure transparency and enhance validity, the draft guidelines were published on the JPS website to solicit public comments. In parallel, 2 independent external appraisal committees reviewed the draft using the AGREE

Reporting Checklist (a tool to improve reporting of clinical practice guidelines) of the EQUATOR (Enhancing the QUALity and Transparency Of health Research) Network for reporting guidelines.

The first committee, appointed by JPS, consisted of physicians specializing in internal medicine [Junji Furuse (Chair), Masafumi Ikeda, Minoru Tada, Kazuo Hara, and Terumi Kamisawa] and surgery (Hiroki Yamaue, Katsuhiko

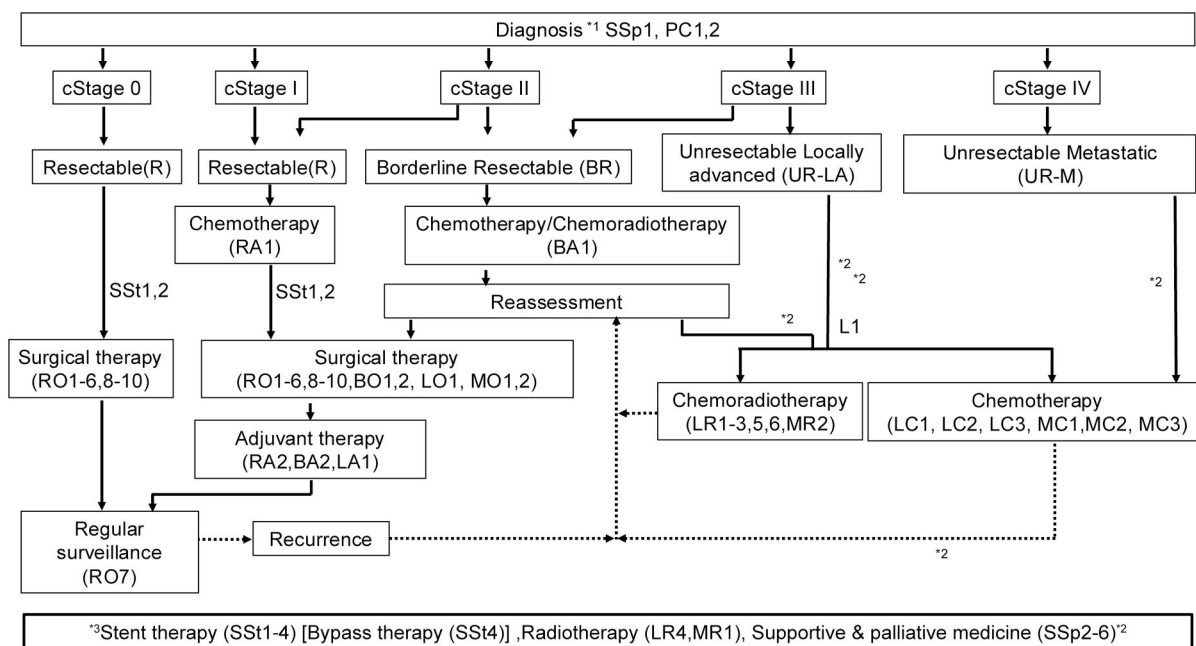


FIGURE 2. Algorithm for the treatment of pancreatic cancer. *1: Supportive care for pain, digestive and absorptive dysfunction, pancreatic diabetes, and anxiety should be initiated even in the early stages after diagnosis. For further details, refer to the guidelines or the website of the Japanese Society for Palliative Medicine (<https://www.jspm.ne.jp/publication/guidelines/index.html>). *2: Refer to the algorithm for precision medicine (Fig. 4). *3: Stent therapy, bypass surgery, radiotherapy, supportive/palliative care, and/or surgical therapy should be considered according to individual patient conditions. Cancer staging and resectability classification are based on the General Rules for the Study of Pancreatic Cancer, Seventh Edition, Revised and Enlarged Version, Japan Pancreas Society.¹²

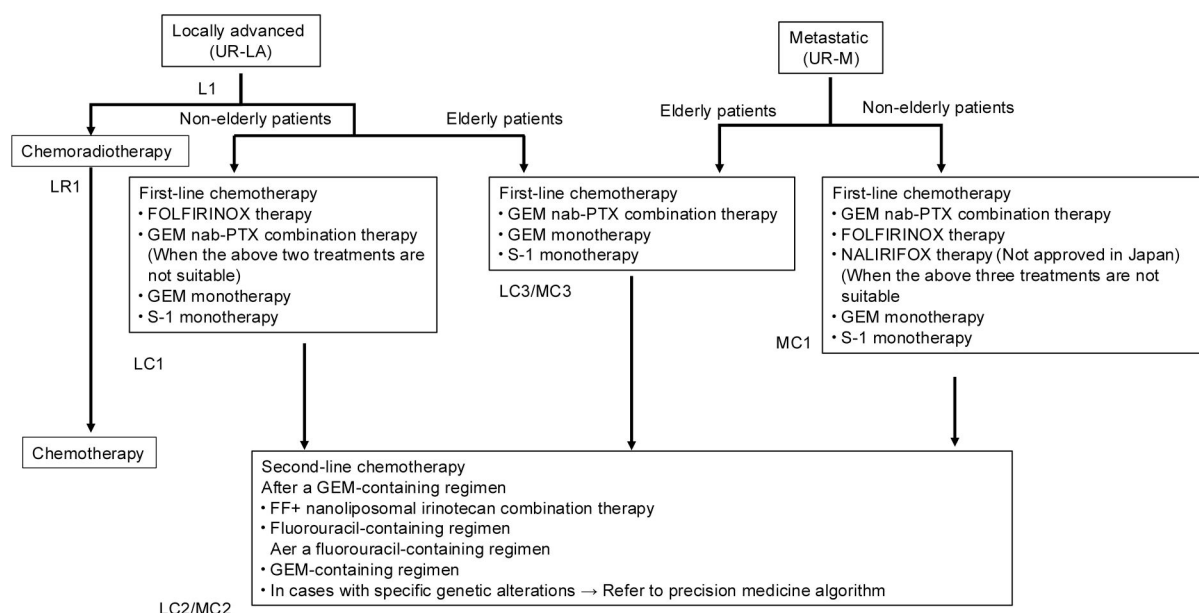


FIGURE 3. Algorithm for drug therapy of pancreatic cancer. GEM indicates gemcitabine; nab-PTX, nab-paclitaxel; FF, fluorouracil + calcium folinate; NALIRIFOX, nanoliposomal irinotecan + leucovorin + fluorouracil + oxaliplatin.

Uesaka, Fuyuhiko Motoi, and Taku Aoki). It also included an expert in medical sociology and research ethics (Kaori Muto) and one representative of patients with pancreatic cancer.

The second committee, appointed by Minds, was composed of guideline methodology specialists (Eiji Ishikawa, Hiroshi Okamoto, Hatoko Sasaki, Yasuto Sato, and

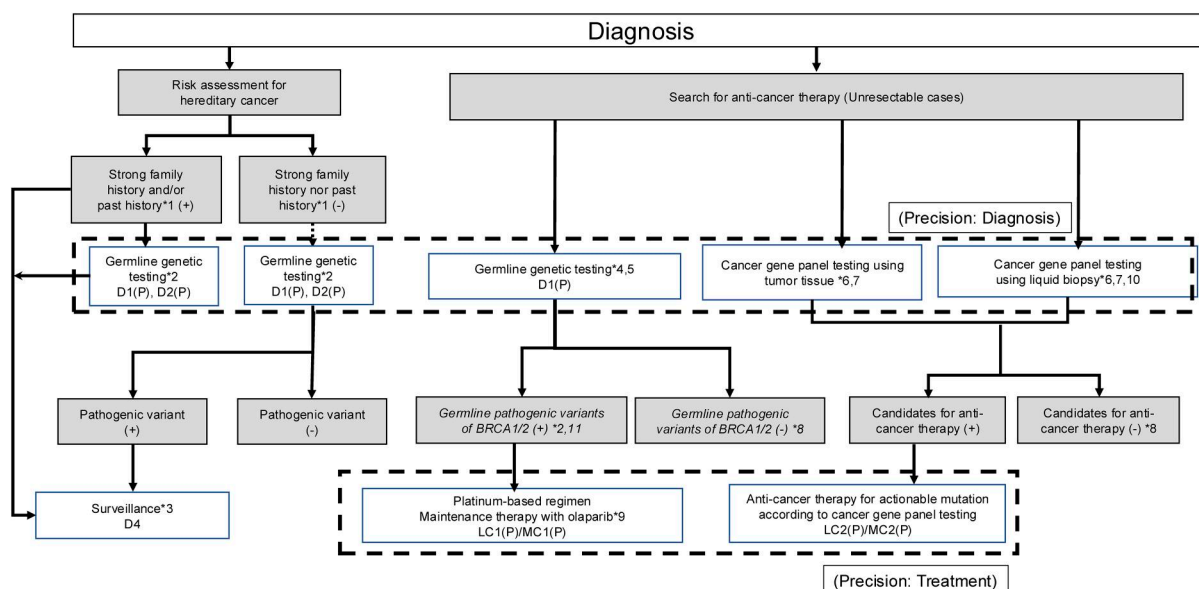


FIGURE 4. Algorithm for precision medicine of pancreatic cancer. *1: Refer to D4 for further details. *2: Genetic counseling is recommended. *3: Surveillance for hereditary cancer is recommended for blood relatives of patients with pancreatic cancer; surveillance for nonpancreatic cancers is also proposed for the patients themselves. *4: Companion diagnostics (BRACAnalysis). *5: This test is covered by Japanese national health insurance when performed before systemic chemotherapy. *6: This test is covered by insurance after completion of standard chemotherapy. *7: Genetic counseling is recommended for patients with a pathogenic germline variant or a somatic mutation suspected to be a pathogenic germline variant. *8: Standard chemotherapy is recommended regardless of genomic findings. *9: Maintenance therapy with olaparib is recommended for patients whose disease has not progressed during platinum-based chemotherapy. *10: Blood-based cancer gene panel testing is covered by insurance in Japan when tumor tissue testing is not feasible or yields no result. *11: "Positive for a deleterious mutation" and "genetic variant, suspected deleterious" are based on BRACAnalysis results.

Shuhei Fujimoto), all of whom were independent of the revision committee.

Finally, after incorporating feedback from both the public and external reviewers, the JPS committee revised and finalized the guidelines. The Clinical Practice Guidelines for Pancreatic Cancer 2025¹² are compliant with the General Rules for the Study of Pancreatic Cancer (Revised Edition, published by JPS in July 2023¹⁴).

NOTES ON THE USE OF THE GUIDELINES

These guidelines represent the most standardized and widely accepted recommendations currently available in Japan for the clinical and practical management of patients with pancreatic cancer.

However, they are not intended to be applied uniformly across all clinical settings. Treatment decisions should be made based on each patient's individual clinical circumstances and the professional judgment of the attending physician. The JPS assumes responsibility for the content of these guidelines; however, neither the JPS nor the guideline committee members bear legal liability for clinical outcomes, which remains the sole responsibility of the treating physician.

ALGORITHMS

The algorithms present the clinical workflows for the diagnosis, treatment, drug therapy, and precision medicine of pancreatic cancer. For detailed explanations of each CQ, please refer to the corresponding sections indicated in Figures 1–4.

Diagnosis or D

D1 Are further investigations recommended in patients with new-onset diabetes and exacerbation of diabetes, in consideration of the possibility of pancreatic cancer?

Statement: Further investigations are suggested in patients with new-onset diabetes and diabetes exacerbation, in consideration of the possibility of pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%*

* N = number of voters; 1 = strong, recommended adoption of the approach; 2 = propose adoption of the approach; 3 = propose not to adopt the approach; 4 = strong, recommended against adoption of the approach; 5 = no recommendation.

D2 Is follow-up observation recommended, in view of the possible development of pancreatic cancer, in patients with chronic pancreatitis?

Statement: Follow-up observation is suggested in consideration of the possible development of pancreatic cancer in patients with chronic pancreatitis.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 4%, 2 = 95%, 3 = 0%, 4 = 0%, and 5 = 2%

D3 In patients with intraductal papillary mucinous neoplasms, are further investigations and follow-up observation recommended, in consideration of the possibility of concomitant pancreatic cancer?

Statement: Further investigations and follow-up observation are suggested in consideration of the possibility of concomitant pancreatic cancer in patients with intraductal papillary mucinous neoplasms.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

D4 Are further investigations and follow-up observations for pancreatic cancer recommended for individuals with pathogenic germline variants in genes associated with pancreatic cancer risk or close relatives of patients with familial pancreatic cancer?

Statement: Further investigations and follow-up observations are suggested in individuals with pathogenic germline variants in genes associated with pancreatic cancer risk or in close relatives of patients with familial pancreatic cancer, in consideration of the possibility of pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

D5 Is abdominal ultrasonography (US) recommended as a first-step screening method in patients with suspected pancreatic cancer?

Statement: Abdominal US is suggested as a first-step screening method in patients with suspected pancreatic cancer.

Recommendation strength: weak; evidence level: B; agreement rates (N = 57): 1 = 5%, 2 = 95%, 3 = 0%, 4 = 0%, and 5 = 0%

D6 Is abdominal magnetic resonance imaging (MRI) recommended as a diagnostic tool in patients with suspected pancreatic cancer?

Statement: Abdominal MRI is suggested as a diagnostic tool in patients with suspected pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

D7 Is endoscopic ultrasonography (EUS) recommended as a diagnostic tool in patients with suspected pancreatic cancer?

Statement: EUS is suggested as a diagnostic tool in patients with suspected pancreatic cancer.

Recommendation strength: weak; evidence level: B; agreement rates (N = 55): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

D8 Is fluorodeoxyglucose positron emission tomography (FDG-PET) recommended as a diagnostic method in patients with suspected pancreatic cancer?

Statement: FDG-PET is not suggested as a diagnostic or qualitative tool in patients with suspected pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 11%, 3 = 82%, 4 = 0%, and 5 = 7%

D9 In patients with a pancreatic mass suspicious for pancreatic cancer, is endoscopic ultrasound (EUS)-guided fine-needle aspiration or biopsy recommended as a diagnostic procedure?

Statement: EUS-guided fine-needle aspiration or biopsy is suggested for the histopathological diagnosis of mass lesions in the pancreas.

Recommendation strength: weak; evidence level: B; agreement rates (N = 55): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

D10 Is endoscopic retrograde cholangiopancreatography (ERCP) with pancreatic fluid cytology recommended in patients with abnormal pancreatic duct findings suspicious for pancreatic cancer without detectable mass lesions?

Statement: ERCP with pancreatic fluid cytology is suggested in patients with abnormal pancreatic duct findings suspicious for pancreatic cancer but without detectable mass lesions. However, particular attention should be paid to the possibility of post-ERCP pancreatitis.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 2%

D11 Is abdominal MRI recommended for the staging of patients with pancreatic cancer?

Statement: Contrast-enhanced MRI is suggested for pancreatic cancer staging due to its superiority in detecting liver metastasis.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

D12 Is EUS recommended for the staging of patients with pancreatic cancer?

Statement: EUS is suggested as an additional tool for staging pancreatic cancer when contrast-enhanced CT alone is insufficient, due to its superiority in the T staging.

Recommendation Strength: weak; evidence level: B; agreement rates (N = 56): 1 = 2%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 2%

D13 Is FDG-PET recommended for the staging of patients with pancreatic cancer?

Statement: FDG-PET is suggested for the staging of pancreatic cancer due to its superiority in detecting distant metastases.

Recommendation Strength: weak; evidence level: C; agreement rates (N = 57): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

D14 Is staging laparoscopy recommended for the staging evaluation of pancreatic cancer in patients scheduled to undergo curative resection?

Statement: Staging laparoscopy is suggested for the staging of pancreatic cancer in patients scheduled to undergo curative resection, as it is useful for identifying small metastases on the surface of the liver and peritoneal metastases, as well as for the evaluation of peritoneal cytology.

Recommendation strength: weak; evidence level: C; agreement rates (N = 57): 1 = 0%, 2 = 95%, 3 = 2%, 4 = 0%, and 5 = 4%

D1(P) Is germline BRCA testing recommended in patients with unresectable pancreatic cancer?

Statement: Germline BRCA testing is suggested in patients with unresectable pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 6%, 2 = 92%, 3 = 0%, 4 = 0%, and 5 = 2%

D2(P) Is genetic testing recommended in unaffected individuals suspected of having a hereditary risk of pancreatic cancer based on family history, personal medical history, or genetic variants identified in blood relatives?

Statement: Genetic testing is suggested in unaffected individuals suspected of having a hereditary risk of pancreatic cancer based on family history, personal medical history, or genetic variants identified in blood relatives.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

TREATMENT

Treatment of Resectable Disease or R

Operation or O

RO1 Is surgical treatment for patients with pancreatic cancer recommended at a facility with a large volume of surgical cases?

Statement: Surgical treatment for patients with pancreatic cancer is suggested at high-volume facilities.

Recommendation strength: weak; evidence level: B; agreement rates (N = 56): 1 = 0%, 2 = 13%, 3 = 88%, 4 = 0%, and 5 = 0%

RO2 Is surgical treatment recommended for patients with pancreatic cancer with positive peritoneal cytology?

Statement: Surgical treatment is not suggested for patients with pancreatic cancer with positive peritoneal cytology.

Recommendation strength: weak; evidence level: C; agreement rates (N = 55): 1 = 0%, 2 = 13%, 3 = 84%, 4 = 2%, and 5 = 2%

RO3 Is a multidisciplinary enhanced recovery after surgery (ERAS) approach recommended in the perioperative management of patients with pancreatic cancer?

Statement: The efficacy of ERAS in the perioperative management of patients with pancreatic cancer remains unclear.

Recommendation strength: no recommendation; evidence level: C; agreement rates (N = 56): 1 = 2%, 2 = 25%, 3 = 0%, 4 = 0%, and 5 = 73%

RO4 Is prophylactic regional lymphadenectomy recommended in patients with pancreatic cancer?

Statement: Whether prophylactic regional lymphadenectomy should be recommended for pancreatic cancer cannot be clearly stated at this time.

Recommendation strength: no recommendation; evidence level: D; agreement rates (N = 56): 1 = 0%, 2 = 7%, 3 = 2%, 4 = 0%, and 5 = 91%

RO5 Is minimally invasive pancreaticoduodenectomy (laparoscopic or robotic) recommended in patients with pancreatic cancer who are candidates for pancreaticoduodenectomy?

Statement: Minimally invasive pancreaticoduodenectomy is suggested in patients with pancreatic cancer who are candidates for pancreaticoduodenectomy, but only at high-volume centers.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 2%, 2 = 88%, 3 = 2%, 4 = 2%, and 5 = 7%

RO6 Is minimally invasive distal pancreatectomy recommended in patients with pancreatic cancer who are candidates for distal pancreatectomy?

Statement: Minimally invasive distal pancreatectomy is suggested in patients with pancreatic cancer who are candidates for distal pancreatectomy.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 2%, 2 = 95%, 3 = 0%, 4 = 0%, and 5 = 4%

RO7 Is long-term postoperative surveillance (beyond 5 y) recommended for patients who have undergone resection for pancreatic cancer?

Statement: Continued long-term surveillance is suggested for patients who survive more than 5 years after resection for pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 4%, 2 = 93%, 3 = 0%, 4 = 0%, and 5 = 4%

RO8 Is perioperative pancreatic enzyme replacement therapy recommended in patients with pancreatic cancer?

Statement: Perioperative pancreatic enzyme replacement therapy is suggested in patients with pancreatic cancer with suspected/confirmed pancreatic exocrine insufficiency.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 4%, 2 = 95%, 3 = 2%, 4 = 0%, and 5 = 0%

RO9 Is surgical treatment recommended for elderly patients with pancreatic cancer who are 80 years of age or older?

Statement: Surgical treatment is suggested even in elderly patients with pancreatic cancer who are 80 years of age or older, when curative resection is expected.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 4%

RO10 Is total pancreatectomy recommended to achieve R0 resection in patients with pancreatic cancer?

Statement: Total pancreatectomy is suggested to achieve R0 resection in patients with pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

Adjuvant or A

RA1 Is neoadjuvant therapy recommended for patients with resectable pancreatic cancer?

Statement: Combined gemcitabine hydrochloride + S-1 therapy is suggested as preoperative neoadjuvant therapy for patients with resectable pancreatic cancer.

Recommendation strength: weak; evidence level: D; agreement rates (N = 47): 1 = 2%, 2 = 89%, 3 = 0%, 4 = 0%, and 5 = 9%

RA2 Is adjuvant chemotherapy recommended for patients with resectable pancreatic cancer?

Statement:

1. Postoperative adjuvant chemotherapy is recommended for patients with pancreatic cancer who have received macroscopically radical resection.

Recommendation strength: strong; evidence level: A; agreement rates (N = 49): 1 = 94%, 2 = 6%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Adjuvant S-1 monotherapy is recommended for patients with pancreatic cancer.

Recommendation strength: strong; evidence level: A; agreement rates (N = 47): 1 = 94%, 2 = 6%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Gemcitabine hydrochloride monotherapy is recommended for patients who are unable to tolerate S-1.

Recommendation strength: strong; evidence level: A; agreement rates (N = 49): 1 = 90%, 2 = 10%, 3 = 0%, 4 = 0%, and 5 = 0%

4. Combination therapy with gemcitabine hydrochloride and capecitabine, as well as modified FOLFIRIN OX (fluorouracil, leucovorin, irinotecan, and oxaliplatin), is suggested for patients with pancreatic cancer based on the results of phase III studies conducted outside Japan. These regimens are not currently covered by the Japanese national health insurance.

Recommendation strength: weak; evidence level: A; agreement rates (N = 49): 1 = 10%, 2 = 88%, 3 = 0%, 4 = 0%, and 5 = 2%

Treatment of Borderline Resectable Disease or B Operation or O

BO1 Is surgical treatment recommended for patients with borderline resectable pancreatic cancer?

Statement: In patients with borderline resectable pancreatic cancer, it is suggested that reassessment be performed prior to surgery to determine whether the cancer can be curatively resected by evaluating the therapeutic efficacy of preoperative neoadjuvant therapy.

Recommendation strength: weak; evidence level: C; agreement rates (N = 55): 1 = 2%, 2 = 95%, 3 = 4%, 4 = 0%, and 5 = 0%

BO2 Is combined arterial resection recommended in patients with pancreatic cancer?

Statement:

1. Distal pancreatectomy with celiac artery resection is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 93%, 3 = 4%, 4 = 0%, and 5 = 4%

2. Combined resection of the hepatic artery is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 96%, 3 = 4%, 4 = 0%, and 5 = 0%

3. Combined resection of the superior mesenteric artery is not suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 7%, 3 = 89%, 4 = 4%, and 5 = 0%

Adjuvant or A

BA1 What is the recommended preoperative neoadjuvant therapy for patients with borderline resectable pancreatic cancer?

Statement:

As neoadjuvant therapy for patients with borderline resectable pancreatic cancer,

1. Chemoradiotherapy is suggested.

Recommendation strength: weak; evidence level: B; agreement rates (N = 52): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Chemotherapy alone is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

BA2 Is postoperative adjuvant chemotherapy recommended for patients with borderline resectable pancreatic cancer?

Statement: Postoperative adjuvant chemotherapy is suggested for patients with borderline resectable pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 10%, 2 = 90%, 3 = 0%, 4 = 0%, and 5 = 0%

Treatment of Locally Advanced Disease or L

L1 What is the first-line treatment recommended for patients with locally advanced unresectable pancreatic cancer?

Statement: Chemoradiotherapy or chemotherapy alone is suggested as first-line treatment for locally advanced unresectable pancreatic cancer.

Recommendation strength: weak; **evidence level:** B; **agreement rates (N = 53):** 1 = 13%, 2 = 87%, 3 = 0%, 4 = 0%, and 5 = 0%

Radiation or R

LR1 What is the chemoradiotherapy regimen recommended in patients with locally advanced unresectable pancreatic cancer?

Statement: For patients with locally advanced unresectable pancreatic cancer scheduled to receive chemoradiotherapy, concurrent use of fluoropyrimidine or gemcitabine hydrochloride with radiotherapy is suggested.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 53):** 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

LR2 Is prophylactic irradiation of regional lymph nodes recommended in radiotherapy in patients with locally advanced unresectable pancreatic cancer?

Statement: In patients with locally advanced unresectable pancreatic cancer scheduled to receive radiotherapy, prophylactic irradiation of regional lymph nodes is suggested.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 54):** 1 = 0%, 2 = 96%, 3 = 2%, 4 = 0%, and 5 = 2%

LR3 Is induction chemotherapy recommended prior to chemoradiotherapy in patients with locally advanced unresectable pancreatic cancer?

Statement: Gemcitabine hydrochloride monotherapy is not suggested as induction chemotherapy prior to chemoradiotherapy in patients with locally advanced unresectable pancreatic cancer.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 52):** 1 = 0%, 2 = 10%, 3 = 88%, 4 = 2%, and 5 = 0%

LR4 Is radiotherapy or chemoradiotherapy recommended in patients with symptomatic locally advanced or metastatic unresectable pancreatic cancer?

Statement: Radiotherapy alone or chemoradiotherapy for the primary lesion is suggested in patients with symptomatic locally advanced or metastatic unresectable pancreatic cancer.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 54):** 1 = 0%, 2 = 98%, 3 = 2%, 4 = 0%, and 5 = 0%

LR5 Is dose escalation with high-precision radiotherapy (intensity-modulated radiation therapy, stereotactic body radiotherapy, and particle beam therapy) recommended as radiation therapy in patients with locally advanced unresectable pancreatic cancer?

Statement: Dose escalation with high-precision radiotherapy is suggested in patients with locally advanced unresectable pancreatic cancer.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 54):** 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

LR6 Is hyperthermia in combination with chemoradiotherapy recommended in patients with locally advanced unresectable pancreatic cancer?

Statement: There is insufficient evidence at present to recommend hyperthermia in combination with

chemoradiotherapy in patients with locally advanced unresectable pancreatic cancer.

Recommendation strength: no recommendation; **evidence level:** D; **agreement rates (N = 54):** 1 = 0%, 2 = 2%, 3 = 13%, 4 = 4%, and 5 = 81%

Chemotherapy or C

LC1 What is the recommended first-line chemotherapy for patients with locally advanced unresectable pancreatic cancer?

Statement:

1. Combined fluorouracil, leucovorin, irinotecan, and oxaliplatin (FOLFIRINOX) therapy is suggested.

Recommendation Strength: Weak; **Evidence Level:** C; **agreement rates (N = 52):** 1 = 0%, 2 = 98%, 3 = 2%, 4 = 0%, and 5 = 0%

2. Combined gemcitabine hydrochloride + nab-paclitaxel therapy is suggested.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 51):** 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

If the above treatments are not feasible,

3. Gemcitabine hydrochloride monotherapy is suggested.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 52):** 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

4. S-1 monotherapy is suggested.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 52):** 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

LC2(MC2) What is the recommended second-line chemotherapy for patients with locally advanced unresectable pancreatic cancer?

Statement:

1. Combined fluorouracil + calcium folinate + nanoliposomal irinotecan is recommended after first-line treatment with a gemcitabine hydrochloride-containing regimen.

Recommendation strength: strong; **evidence level:** B; **agreement rates (N = 51):** 1 = 80%, 2 = 20%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Use of a fluorouracil-containing regimen (including FOLFIRINOX therapy) is suggested after first-line therapy with a gemcitabine hydrochloride-containing regimen.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 52):** 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Use of a gemcitabine hydrochloride-containing regimen is suggested after first-line treatment with a fluorouracil-containing regimen.

Recommendation strength: weak; **evidence level:** C; **agreement rates (N = 52):** 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

LC3 (MC3) What is the recommended first-line chemotherapy for elderly patients with advanced pancreatic cancer?

Statement:

As first-line chemotherapy for elderly patients with advanced pancreatic cancer, in consideration of the performance status and comorbidities,

1. Combined gemcitabine hydrochloride + nab-paclitaxel therapy is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 51): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Gemcitabine hydrochloride monotherapy is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

3. S-1 monotherapy is suggested.

Recommendation Strength: Weak; Evidence Level: C; agreement rates (N = 52): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

LC1(P)/MC1(P) What is the chemotherapy regimen recommended for patients with pancreatic cancer possessing a germline pathogenic variant of *BRCA*?

1. Use of a platinum-containing regimen is suggested for patients with pancreatic cancer possessing a germline pathogenic variant of *BRCA*.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 51%, 2 = 49%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Maintenance therapy with olaparib is suggested as one of the treatment options for patients with pancreatic cancer having distant metastases whose disease has not progressed for a certain period of time with a platinum-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Maintenance therapy with olaparib is suggested as one of the treatment options for patients with locally advanced pancreatic cancer whose disease has not progressed for a certain period of time with a platinum-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

LC2(P)/MC2(P) Is tumor-agnostic molecular targeted therapy recommended for patients with advanced pancreatic cancer harboring actionable gene alterations?

1. Entrectinib is suggested for patients with advanced or recurrent pancreatic cancer harboring *NTRK* gene fusions.

Recommendation Strength: Weak; Evidence Level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Larotrectinib is suggested for patients with advanced or recurrent pancreatic cancer harboring *NTRK* gene fusions.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Pembrolizumab is suggested for patients with MSI-high advanced or recurrent pancreatic cancer that has progressed after chemotherapy and is refractory to standard therapies.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

4. Pembrolizumab is suggested for patients with TMB-high advanced or recurrent pancreatic cancer that has progressed after chemotherapy and is refractory to standard therapies.

Recommendation strength: weak; evidence level: D; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

5. Combination therapy with trametinib and dabrafenib is suggested for patients with advanced or recurrent pancreatic cancer harboring *BRAF* V600E mutations.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

6. Selpercatinib is suggested for patients with advanced or recurrent pancreatic cancer with *RET* fusion genes.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

Operation or O

LO1 Is resection of the primary lesion after multidisciplinary treatment recommended in patients with locally advanced cancer who were judged as being unsuitable candidates for resection at the first examination?

Statement: Resection of the primary lesion after multidisciplinary treatment is suggested as one of the treatment options for patients with locally advanced pancreatic cancer in whom the disease was judged as being unresectable at the first examination, if the treatment is successful and the cancer becomes resectable.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

Adjuvant or A

LA1 Is adjuvant chemotherapy recommended after resection of the primary tumor for patients with initially diagnosed locally advanced unresectable pancreatic cancer at the time of the initial visit?

Statement: Adjuvant chemotherapy after primary tumor resection is suggested for patients with locally advanced unresectable pancreatic cancer at the time of initial diagnosis.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 10%, 2 = 90%, 3 = 0%, 4 = 0%, and 5 = 0%

Treatment of Metastatic Disease or M

Chemotherapy or C

MC1 What is the first-line chemotherapy recommended for patients with pancreatic cancer with distant metastases?

Statement: As first-line chemotherapy for patients with pancreatic cancer with distant metastases,

1. Combined gemcitabine hydrochloride + nab-paclitaxel therapy is recommended.

Recommendation strength: strong; evidence level: A; agreement rates (N = 51): 1 = 92%, 2 = 8%, 3 = 0%, 4 = 0%, and 5 = 0%

2. FOLFIRINOX therapy is recommended.

Recommendation strength: strong; evidence level: A; agreement rates (N = 52): 1 = 88%, 2 = 12%, 3 = 0%, 4 = 0%, and 5 = 0%

3. NALIRIFOX therapy (not approved for use in Japan) is suggested.

Recommendation strength: weak; evidence level: B; agreement rates (N = 51): 1 = 4%, 2 = 86%, 3 = 0%, 4 = 0%, and 5 = 10%

However, in patients for whom the above treatments are not appropriate due to poor general condition or advanced age,

4. Gemcitabine hydrochloride monotherapy is suggested.

Recommendation strength: weak; evidence level: A; agreement rates (N = 52): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

5. S-1 monotherapy is suggested.

Recommendation strength: weak; evidence level: A; agreement rates (N = 52): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

MC2(LC2) What is the recommended second-line chemotherapy for patients with locally advanced unresectable pancreatic cancer?

Statement:

1. Combined fluorouracil + calcium folinate + nanopliposomal irinotecan is recommended after first-line treatment with a gemcitabine hydrochloride-containing regimen.

Recommendation strength: strong; evidence level: B; agreement rates (N = 51): 1 = 80%, 2 = 20%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Use of a fluorouracil-containing regimen (including FOLFIRINOX therapy) is suggested after first-line therapy with a gemcitabine hydrochloride-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Use of a gemcitabine hydrochloride-containing regimen is suggested after first-line treatment with a fluorouracil-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

MC3 (LC3) What is the recommended first-line chemotherapy for elderly patients with advanced pancreatic cancer?

Statement:

As first-line chemotherapy for elderly patients with advanced pancreatic cancer in consideration of the performance status and comorbidities,

1. Combined gemcitabine hydrochloride + nab-paclitaxel therapy is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 51): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Gemcitabine hydrochloride monotherapy is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

3. S-1 monotherapy is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 52): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

MC1(P)/LC1(P) What is the chemotherapy regimen recommended for patients with pancreatic cancer harboring a germline pathogenic variant of *BRCA*?

1. Use of a platinum-containing regimen is suggested for patients with pancreatic cancer harboring a germline pathogenic variant of *BRCA*.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 51%, 2 = 49%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Maintenance therapy with olaparib is suggested as one of the treatment options for patients with pancreatic cancer having distant metastases whose disease has not progressed for a certain period of time with a platinum-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Maintenance therapy with olaparib is suggested as one of the treatment options for patients with locally advanced pancreatic cancer whose disease has not progressed for a certain period of time with a platinum-containing regimen.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

MC2(P)/LC2(P) Is tumor-agnostic molecular targeted therapy recommended for patients with advanced pancreatic cancer harboring actionable gene alterations?

1. Entrectinib is suggested for patients with advanced or recurrent pancreatic cancer harboring *NTRK* gene fusions.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Larotrectinib is suggested for patients with advanced or recurrent pancreatic cancer harboring *NTRK* gene fusions.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Pembrolizumab is suggested for patients with MSI-high advanced or recurrent pancreatic cancer that has progressed after chemotherapy and is refractory to standard therapies.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

4. Pembrolizumab is suggested for patients with TMB-high advanced or recurrent pancreatic cancer that has progressed after chemotherapy and is refractory to standard therapies.

Recommendation strength: weak; evidence level: D; agreement rates (N = 49): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

5. Combination therapy with trametinib and dabrafenib is suggested for patients with advanced or recurrent pancreatic cancer harboring *BRAF* V600E mutations for whom standard treatment options are limited.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

6. Selpercatinib is suggested for patients with advanced or recurrent pancreatic cancer with *RET* fusion genes.

Recommendation strength: weak; evidence level: C; agreement rates (N = 49): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

Operation or O

MO1 Is surgical resection recommended for patients with pancreatic cancer presenting with postoperative metastases/recurrences?

Statement:

1. Surgical resection of the remnant pancreas is suggested in patients with postoperative metastases/recurrences.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 96%, 3 = 2%, 4 = 0%, and 5 = 2%

2. Surgical resection is suggested for lung metastases after carefully confirming the surgical indication.

Recommendation strength: weak; evidence level: C; agreement rates (N = 55): 1 = 0%, 2 = 89%, 3 = 4%, 4 = 0%, and 5 = 7%

3. Surgical resection is not suggested for metastases other than lung metastases (eg, liver metastases).

Recommendation strength: weak; evidence level: C; agreement rates (N = 55): 1 = 0%, 2 = 2%, 3 = 96%, 4 = 2%, and 5 = 0%

MO2 Is surgical treatment after multidisciplinary treatment recommended for distant metastases that are unresectable at the time of first diagnosis in patients with advanced pancreatic cancer?

Statement: In patients with pancreatic cancer presenting with distant metastasis that cannot be resected at the time of first diagnosis, it is not clear whether surgical treatment should be performed, even if a response to multidisciplinary treatment is obtained at the primary site and/or distant metastasis.

Recommendation: No recommendation; evidence level: D; agreement rates (N = 56): 1 = 0%, 2 = 2%, 3 = 7%, 4 = 2%, and 5 = 89%

Radiation or R

MR1 Is radiotherapy recommended for the management of painful bone metastases in patients with advanced pancreatic cancer?

Statement: Radiotherapy is recommended for the management of painful bone metastases in patients with advanced pancreatic cancer.

Recommendation strength: strong; evidence level: B; agreement rates (N = 54): 1 = 87%, 2 = 11%, 3 = 2%, 4 = 0%, and 5 = 0%

MR2 Is radiotherapy recommended for patients with pancreatic cancer having postoperative metastases/recurrences?

Statement:

1. Radiotherapy is suggested for the management of local recurrences and regional lymph node metastases.

Recommendation strength: weak; evidence level: D; agreement rates (N = 54): 1 = 2%, 2 = 94%, 3 = 0%, 4 = 2%, and 5 = 2%

2. Radiotherapy is suggested for the management of lung metastases.

Recommendation strength: weak; evidence level: D; agreement rates (N = 54): 1 = 0%, 2 = 93%, 3 = 2%, 4 = 0%, and 5 = 6%

3. Radiotherapy is not suggested for the management of liver metastases.

Recommendation strength: weak; evidence level: D; agreement rates (N = 54): 1 = 2%, 2 = 15%, 3 = 83%, 4 = 0%, and 5 = 0%

Supportive and Palliative Medicine or S

Stenting or St

SS1 Is the endoscopic transpapillary drainage recommended as a method of biliary drainage in patients with pancreatic cancer?

1. Endoscopic transpapillary drainage is suggested as the approach for biliary drainage in patients with unresectable pancreatic cancer.

Recommendation strength: weak; evidence level: B; agreement rates (N = 47): 1 = 11%, 2 = 87%, 3 = 2%, 4 = 0%, and 5 = 0%

2. Endoscopic transpapillary drainage is suggested as the approach for biliary drainage in patients with pancreatic cancer planned for surgical resection.

Recommendation strength: weak; evidence level: C; agreement rates (N = 47): 1 = 13%, 2 = 87%, 3 = 0%, 4 = 0%, and 5 = 0%

SST2 Is a covered metallic stent recommended for endoscopic transpapillary biliary drainage in patients with pancreatic cancer, indicated with obstructive jaundice?

Statements:

1. Metallic stents are suggested for patients with resectable pancreatic cancer, indicated with obstructive jaundice, although the superiority of covered versus uncovered stents is unclear.

Recommendation strength: weak; evidence level: B; agreement rates (N = 47): 1 = 4%, 2 = 94%, 3 = 0%, 4 = 0%, and 5 = 2%

2. However, plastic stents are also suggested if the waiting period before surgery is short.

Recommendation strength: weak; evidence level: C; agreement rates (N = 47): 1 = 6%, 2 = 94%, 3 = 0%, 4 = 0%, and 5 = 0%

3. A covered metallic stent is suggested for patients with unresectable pancreatic cancer, indicated with obstructive jaundice.

Recommendation strength: weak; evidence level: B; agreement rates (N = 46): 1 = 9%, 2 = 91%, 3 = 0%, 4 = 0%, and 5 = 0%

SST3 Is endoscopic ultrasound-guided biliary drainage (EUS-BD) recommended for obstructive jaundice caused by pancreatic cancer with gastric outlet obstruction?

Statement: EUS-BD is suggested at high-volume centers for obstructive jaundice in pancreatic cancer with gastric outlet obstruction.

Recommendation strength: weak; evidence level: C; agreement rates (N = 47): 1 = 4%, 2 = 94%, 3 = 0%, 4 = 0%, and 5 = 2%

SST4 Is endoscopic gastrointestinal stent insertion recommended for patients with unresectable pancreatic cancer with gastrointestinal obstruction?

Statement: Endoscopic gastrointestinal stent insertion is suggested for patients with unresectable pancreatic cancer with gastrointestinal obstruction.

In contrast, in patients with a prolonged life expectancy, surgical gastro-jejunal anastomosis is recommended.

Recommendation strength: weak; evidence level: C; agreement rates (N = 47): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

Supportive and Palliative Medicine or Sp

SSp1 Are interventions directed at reducing the psychological distress recommended for patients with pancreatic cancer and their families?

Statement: Interventions directed at reducing the psychological distress are suggested for patients with pancreatic cancer and their families.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 7%, 2 = 93%, 3 = 0%, 4 = 0%, and 5 = 0%

SSp2 Are nonopioid analgesics, opioid analgesics, nerve blocks, and adjuvant analgesics recommended for patients with pancreatic cancer experiencing cancer pain?

Statement:

1. Pain treatment with nonopioid and/or opioid analgesics is recommended for patients with pancreatic cancer experiencing cancer pain.

Recommendation strength: strong; evidence level: C; agreement rates (N = 56): 1 = 80%, 2 = 20%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Nerve blocks are suggested for patients with pancreatic cancer experiencing cancer pain.

Recommendation strength: weak; evidence level: B; agreement rates (N = 56): 1 = 4%, 2 = 96%, 3 = 0%, 4 = 0%, and 5 = 0%

3. No clear recommendation can be made for the use of adjuvant analgesics in patients with pancreatic cancer experiencing cancer pain.

Recommendation strength: no recommendation; evidence level: D; agreement rates (N = 56): 1 = 0%, 2 = 18%, 3 = 7%, 4 = 2%, and 5 = 73%

SSp3 Is advanced care planning recommended for patients with advanced pancreatic cancer?

Statement: Advanced care planning is suggested for patients with advanced pancreatic cancer.

However, it is important to fully consider the preferences and circumstances of individual patients and their families.

Recommendation strength: weak; evidence level: B; agreement rates (N = 55): 1 = 2%, 2 = 98%, 3 = 0%, 4 = 0%, and 5 = 0%

SSp4 Are pregabalin, duloxetine, and mirogabalin recommended for the management of peripheral neuropathy associated with platinum-containing and taxane-containing regimens in patients with pancreatic cancer?

Statement:

1. Use of duloxetine is suggested for managing peripheral neuropathy associated with platinum-containing and taxane-containing regimens in patients with pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

2. Use of pregabalin is suggested for managing peripheral neuropathy associated with platinum-containing and taxane-containing regimens in patients with pancreatic cancer.

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

3. Use of mirogabalin is suggested for managing peripheral neuropathy associated with platinum-containing and taxane-containing regimens in patients with pancreatic cancer.

Recommendation strength: weak; evidence level: D; agreement rates (N = 56): 1 = 0%, 2 = 100%, 3 = 0%, 4 = 0%, and 5 = 0%

SSp5 Is anticoagulant therapy for preventing venous thromboembolism recommended in patients with unresectable pancreatic cancer undergoing chemotherapy?

Statement:

1. Anticoagulant therapy with low-molecular-weight heparin to prevent new onset of venous thromboembolism is suggested in patients with pancreatic cancer undergoing chemotherapy (not approved for use in Japan).

Recommendation strength: weak; evidence level: B; agreement rates (N = 56): 1 = 0%, 2 = 86%, 3 = 4%, 4 = 0%, and 5 = 11%

2. Anticoagulant therapy with direct-acting oral anti-coagulants to prevent new onset of venous thromboembolism is suggested in patients with pancreatic cancer undergoing chemotherapy (anticoagulant therapy for preventing venous thromboembolism is not approved in Japan).

Recommendation strength: weak; evidence level: C; agreement rates (N = 56): 1 = 0%, 2 = 88%, 3 = 2%, 4 = 0%, and 5 = 11%

SSp6 Are ghrelin receptor agonists recommended for cachexia in patients with advanced pancreatic cancer?

Statement: Ghrelin receptor agonists are suggested for cachexia in patients with advanced pancreatic cancer.

Recommendation strength: weak; evidence level: D; agreement rates (N = 54): 1 = 0%, 2 = 96%, 3 = 2%, 4 = 2%, and 5 = 0%

Patient and Citizen or PC

PC1 Is participation in programs aimed at sharing experiences and providing knowledge for patients with pancreatic cancer and their families recommended?

Statement: Participation in programs (eg, patient groups or pancreatic cancer education classes) aimed at sharing experiences and providing knowledge for patients with pancreatic cancer and their families is suggested.

Recommendation strength: weak; evidence level: C; agreement rates (N = 54): 1 = 2%, 2 = 93%, 3 = 0%, 4 = 0%, 5 = 6%

PC2 Is geriatric assessment recommended for elderly patients with pancreatic cancer?

Statement: Geriatric assessment before treatment is suggested for elderly patients with pancreatic cancer.

Recommendation strength: weak; evidence level: D; agreement rates (N = 55): 1 = 2%, 2 = 93%, 3 = 0%, 4 = 0%, 5 = 5%

COMMITTEE MEMBERS

Structure of the Committee for the Revision of the Clinical Guidelines for Pancreatic Cancer of the Japan Pancreas Society:

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Vice-chairman: Chigusa Morizane (National Cancer Center Hospital)

Guidelines Methodology:

Masahiro Yoshida (International University of Health and Welfare)

Toshiya Abe (Kyushu University)

Yasunari Sakamoto (International University of Health and Welfare Atami Hospital)

Diagnosis:

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Dai Inoue (Kanazawa University)

Atsushi Irisawa (Dokkyo Medical University)

Kazuhiro Kikuta (Tohoku University)

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 Masato Ozaka (Cancer Institute Hospital of the Japanese Foundation for Cancer Research)
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 Hironari Kato (Okayama City Hospital)
 Tonozuka Ryosuke (Tokyo Medical University)
 Susumu Hijioka (National Cancer Center Hospital)
- Supportive and Palliative Medicine:
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 Asao Ogawa (National Cancer Center Hospital East)
 Taro Shiga (The Cancer Institute Hospital of Japanese Foundation for Cancer Research)
 Yoshihisa Matsumoto (Cancer Institute Hospital of Japanese Foundation for Cancer Research)
 Shuichi Mitsunaga (National Cancer Center Hospital East)
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 Sawako Furutani (PanCAN Japan)
 Yoshiyuki Majima (PanCAN Japan)
 Masanori Mori (Seirei Mikatahara General Hospital)
- Librarians who were Responsible for the Comprehensive Literature Search:
 Naohiko Yamaguchi (Seirei Sakura Citizen Hospital)
 Natsuki Narita (Saitama Sekishinkai Hospital)
- Secretariat:
 Toshiya Abe (Kyushu University)
- Specialists for the Revision as Assistants:
 Hirofumi Akita (Osaka University)
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- Reiko Ashida (Wakayama Medical University)
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 Nozomu Ogura (National Cancer Center Hospital)
 Norio Katoh (Hokkaido University)
 Keiko Kamei (Kindai University)
 Yusuke Kawamoto (Tokyo Women's Medical University)
- Yutaro Kikuchi (Yokohama City University)
 Hiroaki Osakabe (Tokyo Medical University)
 Satoshi Kobayashi (Kanagawa Cancer Center)
 Nobuhiro Shibata (Kansai Medical University Hospital)
 Kazuto Shibuya (University of Toyama)
 Akinori Shimizu (JA Onomichi General Hospital)
 Atsushi Shimizu (Wakayama Medical University)
 Hidenori Takahashi (Yamaguchi University)
 Takayoshi Tsuchiya (Tokyo Medical University)
 Fumihito Toshima (Kanazawa University)
 Ken Tomoda (Okayama City Hospital)
 Kazumasa Nagai (Tokyo Medical University)
 Kenji Nakagawa (Nara Medical University)
 Koki Hashimoto (Cancer Institute Hospital of the Japanese Foundation for Cancer Research)
 Sara Hayakawa (Tokyo Metropolitan Komagome Hospital)
 Satomi Higashigawa (Shizuoka Cancer Center)
 Koh Fukushi (Dokkyo Medical University)
 Atsushi Masamune (Tohoku University)
 Atsuhiro Masuda (Kobe University)
 Ryotaro Matsumoto (Tohoku University)
 Takafumi Mie (Cancer Institute Hospital of Japanese Foundation for Cancer Research)
 Takayuki Miura (Tohoku University)
 Yusaku Miyata (Kurume University)
 So Yamaki (Kansai Medical University)
 Tomohiro Yamazaki (Kindai University)
 Daiki Yamashige (National Cancer Center Hospital)
 Tatsuya Yamashita (Kanazawa University)

Yasunobu Yamashita (Wakayama Medical University)
 Akira Yamamiya (Dokkyo Medical University)
 Yukihiro Yokoyama (Nagoya University)
 Yuta Yoshida (Kindai University)
 External Appraisal Committee Assigned by the JPS:
 Junji Furuse (Kanagawa Cancer Center)
 Hiroki Yamaue (Showa University)
 Katsuhiko Uesaka (Shizuoka Cancer Center)
 Fuyuhiko Motoi (Yamagata University)
 Taku Aoki (Dokkyo Medical University)
 Masafumi Ikeda (National Cancer Center Hospital East)
 Minoru Tada (Chiba Medical Center)
 Kazuo Hara (Aichi Cancer Center Hospital)
 Terumi Kamisawa (Tokyo Metropolitan Komagome Hospital)
 Kaori Muto (The University of Tokyo)
 Anonymous (Patient Representative)
 External Appraisal Committee Assigned by the Department of EBM and Guidelines Japan Council for Quality Health Care (Minds):
 Eiji Ishikawa (Saiseikai Matsusaka General Hospital)
 Hiroshi Okamoto (St. Luke's International Hospital)
 Hatoko Sasaki (Shizuoka Graduate University of Public Health)
 Yasuto Sato (National Institute of Public Health / Shizuoka Graduate University of Public Health)
 Shuhei Fujimoto (Shizuoka Graduate University of Public Health)

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