

36) 文献-2

- 28) Yonemura Y, Ishibashi H, Canbay E, Tsukiyama G, Mizumoto Y, Ichinose M, Takao N, Yabuki S, TanaKa H, Hirano M, Fushida S, Endou Y. Treatment results of diffuse malignant peritoneal mesothelioma. *Jpn J Cancer Chemother.* 39 (12):2416-2419,2012.
- 29) Canbay E, Ishibashi H, Sako S, Miyata R, Nishino E, Yonemura Y. Management of peritoneal dissemination of recurrences granulose cell tumor of ovary. *Jpn J Cancer Chemother.* 39 (12):2435-2437, 2012
- 30) Hagiya Y, Endo Y (equal contribution), Yonemura Y, Okura I, Ogura S: Tumor Suppressor Protein p53-dependent Cell Death Induced by 5-Aminolevulinic Acid (ALA)-based Photodynamic Sensitization of Cancer cells in Vitro. *ALA-Porphyrin Science*, 2012 Sep;9(3):204-14. Epub 2012 Jan 4.
- 31) Yonemura Y: Effect of neoadjuvant systemic/intraperitoneal chemotherapy (Bidirectional chemotherapy) on peritoneal carcinomatosis of gastric cancer. *Chinese J Clin Oncol.* 39 (22) 1699-1705, 2012
- 32) Oliver Glehen, Yutaka Yonemura, Paul H Sugarbaker. Prevention and treatment of peritoneal metastasis from gastric cancer. *Cytoreductive surgery & Perioperative Chemotherapy for Peritoneal Surface Malignancy.* Ed., by Paul H Sugarbaker (Washington DCV), 2013, ISBN: 978-0-9846171-5-9, Cin-Med Publishing Inc. Woodbury, CT 06795 Canbay E, Ishibashi H, Sako S, Mizumoto A, Hirano M, Ichinose M, Takao N, Yonemura Y. Preoperative carcinoembryonic antigen level predicts prognosis in patients with pseudomyxoma peritonei treated with cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. *World J Surg.* Doi 10.1007/s00268-013-1988-7, 2013
- 33) Canbay E, Ishibashi H, Sako S, Kitai T, Nishino E, Hirano M, Mizumoto A, Endo Y, Ogura S, Yonemura Y. Photodynamic detection and management of intraperitoneal spreading of primary peritoneal papillary serous carcinoma in a man: report of a case. *Surg Today*; DOI 10.1007/s00595-013-0500-1, 2013
- 34) Canbay E, Ishibashi H, Sako S, Kitai T, Nishino E, H, Yonemura Y. Late recurrence of benign multicystic peritoneal mesothelioma complicated with an incisional hernia. Case report in surgery. 2013, Article ID 903795, 2013
- 35) Yonemura Y, Canbay E, Ishibashi H. Prognostic factors of peritoneal metastasis from colorectal cancer following cytoreductive surgery and perioperative chemotherapy. *The Scientific World Journal.* 2013, Article ID:978394,
- 36) Miki H, Tsunemi K, Toyoda M, Senzaki H, Yonemura Y, Tsubura A. A case report of surgical resections with local and systemic chemotherapy for three recurrences of colon cancer occurring ten years after colectomy. *Case Rep Oncol.* 2012 May;5(2):373-9. doi: 10.1159/000341258. Epub 2012 Jul 19.
- 37) Nagata H, Yonemura Y, Canbay E, Ishibashi H, Narita M, Miike M, Kano N. Differentiating a large abdominal cystic lymphangioma from multicystic mesothelioma: report of a case. *Surg Today.* 2013 Jun 27. [Epub ahead of print]. PMID:23807639
- 38) Kitai T, Hirai T, Fujita T, Yonemura Y, Canbay E, *Gan To Kagaku Ryoho.* 2013 Aug;40(8):1043-8. Survey on the incidence and management of pseudomyxoma peritonei in Japan.
- 38) Coccolini F, Cotte E, Glehen O, Lotti M, Poiasina E, Catena F, Yonemura Y, Ansaloni L. Intraperitoneal chemotherapy in advanced gastric cancer. Meta-analysis of randomized trials. *Eur J Surg Oncol.* 2014 Jan;40(1):12-26. doi: 10.1016/j.ejso.2013.10.019. Epub 2013 Nov 5.
- 39) Canbay E, Mizumoto A, Ichinose M, Ishibashi H, Sako S, Hirano M, Takao N, Yonemura Y. Outcome data of patients with peritoneal carcinomatosis from gastric origin treated by a strategy of bidirectional chemotherapy prior to cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in a single specialized center in Japan. *Ann Surg Oncol.* 2014 Apr;21(4):1147-52. doi: 10.1245/s10434-013-3443-2. Epub 2013 Dec 20.
- 40) Liu Y, Ishibashi H, Sako S, Takeshita K, Li Y, Elncmr A, Yonemura Y. A giant mesentery malignant solitary fibrous tumor recurring as dedifferentiated liposarcoma- a report of a very rare case and literature review. *Gan To Kagaku Ryoho.* 2013 Nov;40(12):2466-9.
- 41) Yonemura Y, Canbay E, Sako S, Endou Y, Ishibashi H, Hirano M, Mizumoto A, Takeshita K, Takao N, Ichinose M, Lee CY, Li Y, Liu Y. Effects of laparoscopic hyperthermic intraperitoneal chemotherapy for peritoneal metastasis from gastric cancer. *Cancer and Clinical Oncology*; Vol 2, No2;2013 ISSN 1927-4858 E-ISSN 1927-4866
- 42) Yonemura Y, Canbay E, Endou Y, Ishibashi H, Mizumoto A, Miura M, Li Y, Liu Y, Takeshita K, Ichinose M, Takao N, Hirano M, Sako S, Tsukiyama G. Author information INPO Organization to Support Peritoneal Surface Malignancy Treatment , Oosaka , Peritoneal cancer treatment. *Expert Opin Pharmacother.* 2014 Apr;15(5):623-36. doi: 10.1517/14656566.2014.879571.
- 43) Liu Y, Endo Y, Fujita T, Ishibashi H, Nishioka T, Canbay E, Li Y, Ogura S, Yonemura Y. *Ann Surg Oncol.* Cytoreductive Surgery Under Aminolevulinic Acid-Mediated Photodynamic Diagnosis Plus Hyperthermic Intraperitoneal Chemotherapy in Patients with Peritoneal Carcinomatosis from Ovarian Cancer and Primary Peritoneal Carcinoma: Results of a Phase I Trial. 2014 Jul 24. 21;(13):4256-62, doi: 10.12434/s10434-014-3901-5. [Epub 2014 Jul 24. PMID:25056850]
- 44) Canbay E, Yonemura Y, Brucher B, Baik SH, Sugarbaker PH. *Chin J Cancer Res.* Intraperitoneal chemotherapy and its evolving role in management of gastric cancer with peritoneal metastases. 2014 Feb;26(1):1-3. doi: 10.3978/j.issn.1000-9604.2014.02.06.
- 45) Yutaka Yonemura, Emel Canbay, Shouzou Sako, Haruaki Ishibashi, Masamitsu Hirano, Akiyoshi Mizumoto, Kazuyosi Takeshita, Kousuke Noguchi, Nobuyuki Takao, Masumi Ichinose, Yang Liu, Yan Li Management of Peritoneal Metastases developed from Gastric Cancer: laparoscopic hyperthermic intraperitoneal chemotherapy in neoadjuvant setting. *Integrative Oncology*, 2014, 3 : 1, <http://dx.doi.org/10.4172/2339-6771.1000117>
- 46) Yutaka Yonemura, Emel Canbay, Shouzou Sako, Haruaki Ishibashi, Masamitsu Hirano, Akiyoshi Mizumoto, Kazuyosi Takeshita, Nobuyuki Takao, Masumi Ichinose, Chai Yung Lee, Yang Liu, Yan Li. Effects of laparoscopic hyperthermic intraperitoneal chemotherapy for peritoneal metastasis from gastric cancer. *Cancer and Clinical Oncol.* 2014, 3;2, 43-50, ISSN 1927-4858 E-ISSN 1927-4866, Published by Canadian Center of Science and Education
- 47) Yutaka Yonemura, Emel Canbay, Shouzou Sako, Haruaki Ishibashi, Masamitsu Hirano, Akiyoshi Mizumoto, Kazuyosi Takeshita, Nobuyuki Takao, Masumi Ichinose, Yang Liu, Yan Li, Satoshi Ikeda, Yoshimichi Sai, and Yoshio Endou. Phase II Study of a Comprehensive Treatment Using Perioperative Chemotherapy Combined with Cytoreductive Surgery for Curatively Resected Gastric Cancer Patients with Positive Peritoneal Wash Cytology, *Global J Gastroenterol & Hepatol.* 2014,2,108-113.
- 48) Huang CQ, Yang XJ, Yu Y, Wu HT, Liu Y, Yonemura Y, Li Y. Cytoreductive Surgery plus Hyperthermic Intraperitoneal Chemotherapy Improves Survival for Patients with Peritoneal Carcinomatosis from Colorectal Cancer: A Phase II Study from a Chinese Center. *PLoS One.* 2014 Sep 26;9(9):e108509. doi: 10.1371/journal.pone.0108509. eCollection 2014.

36) 文献-3

- 49) Yutaka Yonemura, Emel Canbay, Yoshio Endou, Haruaki Ishibashi, Akiyoshi Mizumoto, Masahiro Miura, Yan Li, Yang Liu, Kazuyosi Takeshita, Masumi Ichinose, Nobuyuki Takao, Masamitsu Hirano, Shouzou Sako, Gorou Tsukiyama. Mechanisms of the formation of peritoneal surface malignancy on omental milky spots from low grade appendiceal mucinous carcinoma. *J Clin & Experimental Oncology*. 2014;3:3. <http://dx.doi.org/10.4172/2324-9110.1000130>.
- 50) Liu Y, Ishibashi H, Hirano M, Takeshita K, Mizumoto A, Ichinose M, Nishino E, Kashu I, Yamamoto Y, Sugarbaker PH, Yonemura Y. Cytoreductive Surgery Plus Hyperthermic Intraperitoneal Chemotherapy for Pseudomyxoma Peritonei Arising from Urachus. *Ann Surg Oncol*. 2015 Jan 9.
- 51) Schwarz L, Votanopoulos K, Morris D, Yonemura Y, Deraco M, Piso P, Moran B, Levine EA, Tuech JJ. *Ann Surg*. Is the Combination of Distal Pancreatectomy and Cytoreductive Surgery With HIPEC Reasonable? Results of an International Multicenter Study 2015 Apr 24. [Epub ahead of print].
- 52) Coccolini F, Catena F, Glehen O, Yonemura Y, Sugarbaker PH, Piso P, Montori G, Ansaloni L. Complete versus incomplete cytoreduction in peritoneal carcinosis from gastric cancer, with consideration to PCI cut-off. Systematic review and meta-analysis. *Eur J Surg Oncol*. 2015 Apr 14. pii: S0748-7983(15)00366-2. doi: 10.1016/j.ejso.2015.03.231. [Epub ahead of print].
- 53) Yonemura Y, Canbay E, Endou Y, Ishibashi H, Mizumoto A, Li Y, Liu Y, Takeshita K, Ichinose M, Takao N, Saitou T, Noguchi K, Hirano M, Glehen O, Brücher B, Sugarbaker PH. Comprehensive treatment for the peritoneal metastasis from gastric cancer. *World J Surg* 2015; 5(2): 187-197.
- 54) Tomita A, Satani M, Morimoto A, Ishibashi H, Yonemura Y. Postoperative Analgesia in Peritonectomy for Patients with Peritoneal Surface Malignancy. *Masui*. 2015 Feb;64(2):208-11
- 55) Yutaka Yonemura, Yoshio Endo, Emel Canbay, Yang Liu, Haruaki Ishibashi, Kazuyoshi Takeshita, Akiyoshi Mizumoto, Masamitsu Hirano, Nobuyuki Takao, Masumi Ichinose, Yan Li, Shun-ichirou Ogura Selection of Patients by Membrane Transporter Expressions for Aminolevulinic Acid (ALA)-Guided Photodynamic Detection of Peritoneal Metastases International J Science. DOI: 10.18483/ijSci.802 Downloads: 7 Views: 39 Pages: 66-77 Volume 4 - September 2015 (09 - See more at: <http://www.ijscien.com/pub/article/802#sthash.0zWizqtn.dpuf> - See more at: <http://www.ijsciences.com/pub/article/802#sthash.0zWizqtn.dpuf>
- 56) Liu Y, Ishibashi H, Takeshita K, Mizumoto A, Hirano M, Sako S, Takegawa S, Takao N, Ichinose M, Yonemura Y. *Ann Surg Oncol*. 2015 Dec 30. DOI 10.1245/s10434-015.5056-4 Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy for Peritoneal Dissemination from Small Bowel Malignancy: Results from a Single Specialized Center.
- 57) Sun JH1,2, Ji ZH1, Peng KW1, Wu HT1, Zhang Q1, Yonemura Y3, Li Y1,4 Cytoreductive surgery combined with hyperthermic intraperitoneal chemotherapy for the treatment of primary peritoneal serous carcinoma: Results of a Chinese retrospective study. *Int J Hyperthermia*. 2016 Mar 16:1-9
- 58) Yutaka Yonemura, Emel Canbay, Yan Li, Federico Coccolini, Oliver Glehen, Paul H Sugarbaker, David Morris, Brendan Moran, Santiago Gonzalez-Moreno, Marcello Deraco, Pompilliu Piso, Dominique Elias, David Batlett, Haruaki Ishibashi, Akiyoshi Mizumoto, Vic Verwaal, Haile Mahtem. A comprehensive treatment for peritoneal metastases from gastric cancer with curative intent. *Eur. J Surg Oncol*. 2016 available in online doi:10.1016/j.ejso.2016.03.016
- 59) Yutaka Yonemura, Emel Canbay, Haruaki Ishibashi, Eisei Nishino, Yoshio Endou, Shouzou Sako, Shun-ichirou Ogura. 5-Aminolevulinic acid fluorescence in detection of peritoneal metastases. *Asian Pacific J Cancer Prev*. 2016, 17, 1-5, DOI: <http://dx.doi.org/10.7314/APJCP.2016.17>
- 60) Coccolini F, Catena F, Glehen O, Yonemura Y, Sugarbaker PH, Piso P, Ceresoli M, Montori G, Ansaloni L. Effect of intraperitoneal chemotherapy and peritoneal lavage in positive peritoneal cytology in gastric cancer. Systematic review and meta-analysis. *Eur J Surg Oncol*. 2016 Apr 19. pii: S0748-7983(16)30053-1. doi: 10.1016/j.ejso.2016.03.035. [Epub ahead of print] Review.
- 61) Liu Y, Mizumoto A, Ishibashi H, Takeshita K, Hirano M, Ichinose M, Takegawa S, Yonemura Y. Should total gastrectomy and total colectomy be considered for selected patients with severe tumor burden of pseudomyxoma peritonei in cytoreductive surgery? *Eur J Surg Oncol*. 2016 May 19. pii: S0748-7983(16)30148-2. doi: 10.1016/j.ejso.2016.04.059. [Epub ahead of print]
- 62) Tsuji A, Sunakawa Y, Ichikawa W, Nakamura M, Kochi M, Denda T, Yamaguchi T, Shimada K, Takagane A, Tani S, Kotaka M, Kuramochi H, Furushima K, Koike J, Yonemura Y, Takeuchi M, Fujii M, Nakajima T. Early Tumor Shrinkage and Depth of Response as Predictors of Favorable Treatment Outcomes in Patients with Metastatic Colorectal Cancer Treated with FOLFOX Plus Cetuximab (JACCRO CC-05). *Target Oncol*. 2016 Jun 15. [Epub ahead of print]
- 63) Yutaka Yonemura, Haruaki Ishibashi, Masamitsu Hirano, Akiyoshi Mizumoto, Kazuyosi Takeshita, Kousuke Noguchi, Nobuyuki Takao, Masumi Ichinose, Yang Liu, Yan Li. Effects of Neoadjuvant Laparoscopic Hyperthermic Intraperitoneal Chemotherapy and Neoadjuvant Intraperitoneal/systemic Chemotherapy on Peritoneal Metastases from Gastric Cancer. *Ann Surg Oncol*. In press 2016.

36) 文献-4

著書

- 1) Okamoto H, Yamamoto H, Yonemura Y. (1985) Poly(ADP-Ribose) synthetase inhibitors induce islet B-cell regeneration in partially depancreatized rats. In ADP-ribosylation of proteins, ed. R. Althaus. et. al., Berlin, Springer-Verlag. 411-416.
- 2) Terazono K, Watanabe T, Yonemura Y. (1992) A novel gene, *reg*, expressed in regenerating islets. In Molecular Biology of the Islets of Langerhans, ed. H. Okamoto, Cambridge, New York, Port Chester, Melbourne, Sydney, Cambridge University, 301-313.
- 3) Ninomiya I, Endo Y, Yonemura Y, Sasaki T. (1995) Reverse transcription/quantitative PCR to detect changes in gene expression in disease. In PCR Applications in Pathology Principles and Practice Oxford Medical Pub, ed. D.S. Latchman, Oxford. 247-261.
- 4) Yonemura Y, Sugarbaker PH., Bidirektionale Inductions-chemotherapie für Magenkarzinome mit Peritonealmetastasierung. pp189-195, Regionale Therapie maligner Tumoren, Ed by Aigner Stephens, and Vogl Padberg, Springer, (2013), ISBN;-13 978-3-642-35013-9, DOI 10.1007/978-3-642-35014-6, ISBN 978-3-642-35014-6 (eBook)
- 5) Contemporary Approaches toward Cure of Gastric Cancer. (1996) ed. Yonemura Y, Maeda Shoten, Kanazawa.
- 6) Yonemura Y. (1998) Peritoneal Dissemination -Molecular mechanisms and the latest therapy-, Yonemura Y, Ed., Maeda Shoten, Kanazawa, 107-116.
- 7) Yonemura Y, Fujimura T, Fushida S, Fujita H, Bando E, Taniguchi K, Nishimura G, Miwa K, Ohyama S, Sugiyama K, Sasaki T, Endo Y. (1999) Peritonectomy as a treatment modality for patients with peritoneal dissemination from gastric cancer. Multimodality Therapy for Gastric Cancer. Nakashima T, Yamaguchi T, Ed, Springer-Verlag, Tokyo, 71-80.
- 8) Yonemura Y, Endou Y, Sasaki T, Sugiyama K, Yamashima T, Partanen T, Alitalo K. (2002) VEGF-C/VEGFRs and cancer metastasis. Growth factors and their receptors in cancer metastasis. Edited by Jian WG, Matsumoto K, Nakamura T, Kluwer Academic Publishers. Dordrecht, 223-240.
- 9) Yonemura Y, Bandou E, Kinoshita K, Kawamura T, Takahashi S, Endou Y, Sasaki T. (2003) Effective therapy for peritoneal dissemination in gastric cancer. Surgical Oncology Clinics of North America. Vol 12/3 : 635-648
- 10) Yonemura Y, Bando E, Kawamura T, Ito H, Endo Y, Miura M, Kiyosaki K, Sasaki T. (2007) Cytoreduction and intraperitoneal chemotherapy for carcinomatosis from gastric cancer. Peritoneal Carcinomatosis: A multidisciplinary approach. Wim P Ceelen. Eg., Springer Berlin. Pp357-369.
- 11) Yutaka Yonemura, Taiichi Kawamura, Etsuro Bandou, Yoshio Endou, Masahiro Miura The natural history of free cancer cells in the peritoneal cavity. 2007 Advances in Peritoneal Surface Oncology, S. Gonzalez-Moreno. Ed., Springer, Berlin, pp11-23
- 12) Yutaka Yonemura, Taiichi Kawamura, Etsuro Bandou, Yoshio Endou, Masahiro Miura. 2007 Advances in Peritoneal Surface Oncology, S. Gonzalez-Moreno. Ed., Springer, Berlin, pp157-164 Yonemura Y, Ed., by Yutaka Yonemura. Atlas and principles of peritonectomy for peritoneal surface malignancy. NPO to support peritoneal surface malignancy treatment. Kobe, Oosaka, Kyoto, Shiga, Shizuoka, 2011.
- 13) Yonemura Y, Sugarbaker PH., Bidirektionale Inductions-chemotherapie für Magenkarzinome mit Peritonealmetastasierung. pp189-195, Regionale Therapie maligner Tumoren, Ed by Aigner Stephens, and Vogl Padberg, Springer, 2013, ISBN;-13 978-3-642-35013-9, DOI 10.1007/978-3-642-35014-6, ISBN 978-3-642-35014-6 (eBook)
- 14) 厚生労働科学研究費補助金<難知性疾患克服研究事業>腹膜義粘液腫の本邦における発生頻度・病態の改名・治療法の開発に関する研究(H23-難治-一般-068、平成23年度総括・分担研究報告書、
- 15) 厚生労働科学研究費補助金<難知性疾患克服研究事業>腹膜義粘液腫の本邦における発生頻度・病態の改名・治療法の開発に関する研究(H24.25 - 難治等(難)-指定-007、平成24.25年度総括・分担研究報告書
- 16) 腹膜播種に対する包括的治療(周術期化学療法と腹膜切除による新しい治療)のトレーニング コース. JAPANESE SCHOOL OF PERITONEAL SURFACE ONCOLOGY. Training course of Hyperthermic Intraoperative Intraperitoneal Chemotherapy and comprehensive treatment for peritoneal surface malignancy. Sponsored by Peritoneal Surface Oncology Group International (PSOGI), Japanese Society of Hyperthermic Oncology Asia Clinical Hyperthermic Oncology and Japanese Society of Disseminated Metastasis. 国際腹膜播種学会・日本播種性転移研究会. 日本温熱療法学会・アジア温熱療法学会. *Yutaka Yonemura, Kanji Katayama, Paul H Sugarbaker, Brendan Moran, Marcello Deraco, Santiago Moreno-Gonzalez, Haile Mahtem, Pompilliu Piso, Dadid L Morris, Frans AN Zoetmulder, Oliver Glehen, Francoir Gilly, Yan Li, Dominique Elias, Vic Verwaal, 2015*
- 17) Glehen O, Yonemura Y, Sugarbaker PH. Cytoreductive surgery & perioperative chemotherapy for peritoneal surface malignancy. Chapter 4; Prevention and treatment of peritoneal metastases from gastric cancer. P79-89. 2013, Textbook and Video Atlas. Ed. Paul Sugarbaker PH, Cine-Med Publishing, Inc., North Woodbury, CT, USA
- 18) Canbay E, Yonemura Y. Peritoneal Surface Malignancies. A curative Approach.. Canbay E, Yonemura Y. ed., Elsevier, Oct. 2015
- 19) Yonemura Y, Mizumoto A, Ishibashi H, Takeshita K, Glehen O, Sugarbaker PH. A new comprehensive treatment for peritoneal metastases using cytoreductive surgery combined with hyperthermic intraperitoneal chemotherapy. Pp371-396. Hyperthermic Oncology from Bench to Bedside. Editors: Satoshi Kokura, Toshikazu Yoshikawa, Takeo Ohnishi, Springer, ISBN 978-981-10-0717-0, ISBN 978-981-10-0719-4 (e-book), DOI 10.1007/978-981-10-0719-4.
- 20) Yutaka Yonemura, Comprehensive treatment for peritoneal surface malignancy with an intent of cure. Ed. by Yutaka Yonemura, Japanese School of Peritoneal Surface Oncology. Tamekuni Publisher. Kyoto, 2016,

38) NICE interventional procedure guidance [IPG331]-1

Published date: February 2010: <http://www.nice.org.uk/guidance/IPG331>

Cytoreduction surgery followed by hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomatosis
NICE interventional procedure guidance [IPG331] Published date: February 2010

[Register an interest in this interventional procedure](#)

•[Colorectal cancer](#)

•[Next](#)

The National Institute for Health and Clinical Excellence (NICE) has issued full guidance to the NHS in England, Wales, Scotland and Northern Ireland on Cytoreduction surgery followed by hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomatosis.

It replaces the previous guidance on Cytoreduction surgery followed by hyperthermic intraoperative peritoneal chemotherapy for peritoneal carcinomatosis (Interventional Procedures Guidance no. 116, November 2004).

•Description

Peritoneal metastases commonly result from the regional spread of gastrointestinal, gynaecological and other malignancies.

Peritoneal carcinomatosis is an advanced form of cancer associated with short survival and poor quality of life, which may lead to bowel obstruction, ascites and pain.

This procedure was developed by Paul Sugarbaker at the Washington Cancer Institute. A laparotomy is performed under general anaesthesia and all gross tumour is removed along with the involved organs, peritoneum and tissue. The surgery includes:

- removal of the right hemicolon, spleen, gall bladder, parts of the stomach, greater omentum and lesser omentum
- stripping of the peritoneum from the pelvis and diaphragm
- stripping of tumour from the surface of the liver
- removal of the uterus and ovaries in women
- removal of the rectum in some cases.

The aim of the surgery is to remove all macroscopic tumour, although residual tumour is sometimes left behind.

In the second stage of the procedure, the abdomen is perfused with fluid containing a chemotherapy agent, heated to between 40 and 48° C. The fluid is perfused for 60 to 120 minutes and then drained from the abdomen, before the laparotomy is closed. A further course of systemic or intraperitoneal chemotherapy may be administered after the surgery.

Intraoperative intraperitoneal administration of chemotherapy allows the drug to be distributed uniformly to all surfaces of the abdomen and pelvis. Potential advantages of heating the perfusion fluid are that it increases drug penetration and the cytotoxic effect of drugs such as mitomycin C and cisplatin.

•OPCS4.6 Code(s)

This procedure cannot be expressed in the OPCS-4 classification by a single code. The current guidance would be to code each organ removed as per normal coding rules, and to combine this with the ICD-10 diagnosis code **C78.6 Secondary malignant neoplasm of retroperitoneum and peritoneum**. The appropriate code for the primary malignant neoplasm is also recorded, if this is not stated or unspecified then a code from category **C80.- Malignant neoplasm, without specification of site** is recorded. Heated chemotherapy cannot currently be specifically captured using OPCS-4. At present this is captured using the following codes:

T48.2 Introduction of cytotoxic substance into peritoneal cavity plus a code from categories **X70-X71 Procurement of drugs for chemotherapy for neoplasm in Bands 1-10** dependent on the regimen prescribed.

The NHS Classifications Service of NHS Connecting for Health is the central definitive source for clinical coding guidance and determines the coding standards associated with the classifications (OPCS-4 and ICD-10) to be used across the NHS. The NHS Classifications Service and NICE work collaboratively to ensure the most appropriate classification codes are provided. www.connectingforhealth.co.uk/clinicalcoding

38) NICE interventional procedure guidance [IPG331]-2

1 Guidance

1 Guidance

1.1 Current evidence on the efficacy of cytoreduction surgery (CRS) followed by hyperthermic intraoperative peritoneal chemotherapy (HIPEC) for peritoneal carcinomatosis shows some improvement in survival for selected patients with colorectal metastases, but evidence is limited for other types of cancer. The evidence on safety shows significant risks of morbidity and mortality which need to be balanced against the perceived benefit for each patient. Therefore, this procedure should only be used with special arrangements for clinical governance, consent and audit or research.

1.2 Clinicians wishing to undertake CRS followed by HIPEC for peritoneal carcinomatosis should take the following actions.

- Inform the clinical governance leads in their Trusts.
- Ensure that patients and their carers understand the uncertainty about the procedure's safety and efficacy in relation to the potential morbidity and mortality and the prolonged recovery period, and provide them with clear written information. In addition, the use of NICE's [information for patients](#) ('Understanding NICE guidance') is recommended.
- Audit and review clinical outcomes of all patients having CRS followed by HIPEC for peritoneal carcinomatosis (see section 3.1).

1.3 Patient selection and treatment should be carried out in the context of a multidisciplinary team, including oncologists and surgeons with experience in this operation.

1.4 NICE encourages further research into this procedure which should take the form of randomised controlled trials (RCTs) with clear descriptions of patient selection criteria and the types of cancer being treated. The chemotherapy regimens used should be well defined. Outcome measures should include survival and quality of life.

2 The procedure

[2.1 Indications and current treatments](#)

[2.2 Outline of the procedure](#)

[2.3 Efficacy](#)

[2.4 Safety](#)

2 The procedure

2.1 Indications and current treatments

2.1.1 Peritoneal carcinomatosis is advanced cancer associated with short survival and poor quality of life.

2.1.2 Current treatments include systemic chemotherapy with the aim of prolonging survival, and/or surgery for short-term palliation of complications such as bowel obstruction.

2.2 Outline of the procedure

2.2.1 Cytoreduction surgery aims to remove all macroscopic tumours. Intraoperative intraperitoneal administration of chemotherapy aims to distribute the drug uniformly to all surfaces of the abdomen and pelvis.

2.2.2 With the patient under general anaesthesia, appropriate CRS is carried out, followed by perfusion of the abdomen with heated chemotherapy solution (heating increases penetration and cytotoxic effects). The abdomen is drained prior to closure. A further course of systemic or early postoperative intraperitoneal chemotherapy (EPIC) may be administered.

2.3 Efficacy

2.3.1 A systematic review of 4500 patients with peritoneal carcinomatosis of colorectal origin reported an overall median 5-year survival of 19% (16 studies).

2.3.2 A non-randomised comparative study of 506 patients with peritoneal carcinomatosis of colorectal origin comparing CRS and HIPEC (271 patients) with CRS and EPIC (123 patients) and CRS and HIPEC plus EPIC (112 patients) reported no significant difference in median survival between the groups (19.2 months, 19.2 months and 21.6 months respectively) ($p = 0.61$).

2.3.3 A case series of 96 patients with peritoneal carcinomatosis of varying primary tumour origin treated by CRS and HIPEC reported a significant improvement in quality of life (using the Short Form-36 questionnaire), with an increase in mean score from 69.5 to 80 at 6-month follow-up (significance not stated).

2.3.4 The Specialist Advisers listed key efficacy outcomes as survival, quality of life, symptom palliation, recurrence rate and return to work and recreational activities.

2.4 Safety

2.4.1 A meta-analysis of 4 comparative studies included in the systematic review of 4500 patients reported a 3-year survival hazard ratio of 0.55 (95% confidence interval: 0.4–0.75), indicating that patients were more likely to survive if they received CRS plus HIPEC or EPIC (total number of patients not stated).

2.4.2 The systematic review of 4500 patients reported a mortality range of 0–12% (27 studies) (follow-up not stated). A postoperative mortality rate of 4% (20/506) was reported in the non-randomised comparative study of 506 patients. Deaths were attributed to the following causes: septic shock (9), respiratory complications (5), pulmonary embolus (1), stroke (1), peritonitis (1), acute renal failure (1), aplasia (not otherwise described) (1) and unknown causes (1) (timing of events not stated). In an RCT of 105 patients (CRS, HIPEC and systemic chemotherapy group), 3 patients died from abdominal sepsis (2 within 40 days, 1 more than 3 months after the procedure) and 1 patient died of pulmonary embolism more than 3 months after the procedure.

2.4.3 Myocardial necrosis and myocardial infarction were reported in 1 patient each in case series of 207 and 122 patients (varying tumour origin; timing of events not stated).

2.4.4 Acute renal failure was reported in 3% (2/59) (successfully treated by medical therapy) and 1% (1/140) (requiring dialysis in intensive care) of patients in case series of 59 and 140 patients respectively (varying tumour origin). Haemolytic-uraemic syndrome occurred in 1 patient in the case series of 122 patients.

2.4.5 The Specialist Advisers listed possible adverse events as bowel obstruction, bleeding, abdominal pain, eating disturbances, vascular, ureteric and bile duct injury, liver dysfunction and failure, neuropathy and anaphylaxis.

38) NICE interventional procedure guidance [IPG331]-3

3 Further information

[Information for patients](#)

3 Further information

3.1 This guidance requires that clinicians undertaking the procedure make special arrangements for audit. NICE has identified relevant audit criteria and developed [audit support](#) (which is for use at local discretion).

3.2 For related NICE guidance see our [website](#).

Information for patients

NICE has produced [information on this procedure for patients and carers](#) ('Understanding NICE guidance'). It explains the nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

4 About this guidance

4 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE [interventional procedure guidance](#) process.

It updates and replaces NICE interventional procedure guidance 116.

This guidance has been incorporated into the [NICE pathway on colorectal cancer](#), along with other related guidance and products.

We have produced a [summary of this guidance for patients and carers](#). Tools to help you put the guidance into practice and information about the evidence it is based on are also [available](#).

Changes since publication

5 January 2012: minor maintenance.

Your responsibility

This guidance represents the views of NICE and was arrived at after careful consideration of the available evidence.

Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

38) 日本腹膜播種学校-1

従来、腹膜偽粘液腫は臨床的にindolentな経過をたどるため、症状を緩和する手術が漫然とおこなわれてきた。このような緩和的手術では患者は長期間にわたり何回もの手術を受けるためQOLは不良で、体内から癌が消えることはない。そのため腫瘍による臓器圧迫によるイレウス・瘻孔形成による感染や出血などにより長期入院の末死亡する例が多くみられた。そこで我々は1992年から腹膜偽粘液腫にたいし、本邦で初めて腹膜切除＋術中温熱化学療法を臨床に導入した。この治療法は非常に高度な手術技術と術後管理が必要なばかりでなく、幅広い腫瘍学・栄養学・抗がん剤・解剖・生理学的・緩和医療や消化器手術以外の泌尿器科的・婦人科的知識を必要とするため包括的治療 (Comprehensive treatment) と呼ばれている。

過去20数年間の多数例の包括的治療後の長期予後解析から、腹膜偽粘液腫に対する腹膜切除＋術中温熱化学療法はこの疾患の予後を改善させるきわめて有効な方法であることが判明した。

そこで、この方法を日本で広く広めるため、2016年から日本腹膜播種治療学校を開設することになった。

日本腹膜播種治療トレーニング プログラム

Japanese School of Peritoneal Surface Oncology And Japanese Peritoneal Surface Oncology Training Program
A Joint Venture of Peritoneal Surface Oncology Group International European Peritoneal Surface Oncology Training Program Web Site:

ESPSO:<http://www.essoweb.org/eursso/education/ool-of-peritoneal-surface-oncology-esspo/8-education/244-european-school-of-peritoneal-surface-oncology-training-programme.html>

PSOGI: <http://www.psogi2016.com/index.php?id=17>

目的

腹膜播種に関する基礎的・臨床的知識の習得、エビデンスに基づいた腹膜播種の包括的治療の習得

Peritoneal Surface Oncologyとは

腹膜播種の発生機構を分子生物学的あるいは病理学的に研究するとともに、その診断方法や治療法を開発する分野である。

対象疾患

腹膜播種を有する疾患と、播種はないが細胞診陽性例

胃癌・大腸癌・虫垂癌・卵巣癌・腹膜偽粘液腫・子宮癌・膵癌・胆管癌・胆嚢癌・肝臓癌からの腹膜播種・原発性腹膜癌・腹膜中皮腫・のう胞性中皮腫・顆粒細胞腫・肉腫などを対象とする。

背景

Peritoneal Surface Oncology Group International (PSOGI)とEuropean Society of Surgical Oncology (ESSO)が後援するEuropean School of Peritoneal Surface Oncology (ESPSO)が2013年に設立された。JSPSOはPSOGOとESPSOの支部として2016年9月1日に開校する。

近年、腹膜播種にたいし腹膜播種をすべて切除する外科手術と周術期腹腔内化学療法を組み合わせた包括的治療が開発された。従来は不治の病と考えられてきた腹膜播種が、この包括的治療により目を見張るばかりの治療成績の改善が得られるようになった。この包括的治療を安全にかつ高い治癒率をめざして行なうためには、外科腫瘍学・解剖学・生理学・病理学・化学療法・外科手術手技(外科・婦人科・泌尿器科領域)・術後管理における豊富な知識と経験が必要である。しかしながら、従来から行なわれてきた外科トレーニングのみでこの治療を行なうと患者にかかるリスクが高いと考えられている。

そこで、この包括的治療を初心者が修得できるようにするために2016年9月1日からJSPSOが開校する。その後援を行なうPSOGIは腹膜播種の治療で世界を牽引するグループであり、腹膜播種の国際規約分類・データ解析・新しい治療法の開発を行ってきた。また、1998年から2年おきに国際学会を開催し、包括的治療の普及に貢献してきた。

JSPSOの機構と指導医

JSPSOの代表は米村豊(Mail: y.yonemura@coda.ocn.ne.jp)である。

委員会とそのメンバー

研修内容の作成・指導医の選択・認定・その他をおこなう。メンバーはPSOGIの幹事と日本の委員数名である。

片山寛次、石橋治昭、水本明良、左古昌蔵、藤村隆、鍛利幸、遠藤良夫、村田聡 (日本)、Paul H Sugarbaker (USA), Emel Canbay (Turkey), Brendan Moran (UK), Marcello Deraco (Italy), Santiago Moreno-Gonzalez (Spain), Haile Mahtem (Sweden), Pompiliu Piso (Germany), David L Morris (Australia), Frans A.N. Zoetmulder (the Netherland), Oliver Glehen (France), Beate Rau (Germany), François Gilly (France), Yan Li (China), Dominique Elias (France), David Bartlett (USA), Vic Verwaal (Denmark), Kurt van del Speeten (Belgium), Mao-Chi Shier (Taiwan)

活動

JSPSOは研修希望者にたいし腹膜播種に関する基礎的・臨床的トレーニングを行なう。終了後は研修者には卒業修了書が与えられる。研修者はカンファレンスに参加し、患者のプレゼンテーションをおこない、手術適応・治療法の選択などを学ぶ。また、多数の治療経験のあるhigh volume centerで腹膜切除と温熱化学療法に参加し、術後管理も習得する。

習得する内容

術前審査腹腔鏡と腹膜播種係数の診断・腹腔鏡下温熱化学療法の方法。

術前化学療法特に術前・腹腔内・全身化学療法・腹腔ポート挿入法・副作用対策

手術適応・除外症例

腹膜切除の手順・腹腔内洗浄療法

術中温熱化学療法の方法と副作用対策

術後早期腹腔内化学療法

切除標本の切り出し方法。病理診断と疾患別の免疫パネル。腹膜播種特異遺伝子

術後管理の方法

術後化学療法とフォローアップ法

統計処理の方法

学会発表・論文作成・プロトコール作成と倫理委員会への提出

などを研修する。

研修者の経験年数や技量にもよるが、60~130例以上の手術に参加する必要がある。

2年に一回開催されている国際学会Peritoneal Surface Oncology Group Internationalか、年1回行なわれる日本ハイパーサーミア学会の温熱

38) 日本腹膜播種学校-2

療法トレーニング コースに参加する。

また、学会発表や審査が行なわれる英文論文を投稿する。この論文が卒業論文となる。

また、PSOGIの幹事の海外の施設での短期研修も行なうことができる。。

研修資格

日本の医師免許を有し、腹膜播種の治療に興味がある医師。卒後初期研修を終了した医師。外科医・産婦人科医・麻酔医・画像診断医など。

外国人医師であっても研修病院が厚生省からの研修許可病院であれば研修可能である。

研修期間

6ヶ月-3年間。研修者の希望と立場により変更可能(週2日なども可能)。

研修方法

経験豊富な指導医が直接指導に当たる。指導内容は術前診断・患者選択と手術適応・周術期化学療法・術後管理・術後フォローアップ・病理診断・学会発表・論文の作成などである。指導医は研修者が完全に上記のことが終了するまで責任を持って指導に当たる。

研修病院

福井大学医学部附属病院がん診療推進センター

岸和田徳洲会病院・腹膜播種センター

草津総合病院・腹膜播種センター

滋賀医科大学・腫瘍センター

岸和田市民病院・外科

申し込み先

米村 豊:y.yonemura@coda.ocn.ne.jp

ISBN 978-4-9906097-2-6

2016年8月16日印刷・2016年9月1日発行

発行所 NOP 腹膜播種治療支援機構、

日本腹膜播種学校; Asian School of Peritoneal Surface Oncology: 理事長 米村 豊

印刷所 為国印刷株式会社

〒604-8457 京都市中京区西ノ京馬代町6-16