PROGRAM

August 28 (Tue.) Room A

Opening and Award Ceremony (16:00-18:30)

General Chairperson: Satoshi Kokura, Secretary General

Opening Remarks	16:00-16:05

Toshikazu Yoshikawa, Kyoto Pref. Univ. of Med.

Keynote Lecture	16:05-16:30

Chairperson: Toshikazu Yoshikawa, President of ICHO2012

KL **Hyperthermia & chemotherapy; from sarcoma to pancreatic cancer - a path for mainline of tumor treatment?**

Rolf D. Issels

Med. Clinic III, Univ. of Munich - Campus Grosshadern

Sugahara Award Ceremony of IAHO	16:30-16:35

Chairperson: Rolf D. Issels, Univ. of Munich

Sugahara Award Lecture	16:35-17:00

Chairperson: Rolf D. Issels, Univ. of Munich

Hyperthermia anno 2012: quality must be controlled and accurately documented

Gerard C. van Rhoon

Erasmus MC Daniel den Hoed, Dept. Radiat. Oncol., Unit Hyperthermia

Award Ceremony of ASHO	17:00-17:05

Chairperson: Hiroyuki Kuwano, President of ASHO

ASHO Award Lecture	17:05-17:20

Chairperson: Hiroyuki Kuwano, President of ASHO

Roles of intracellular oxidative stress in the enhancement of hyperthermia-induced apoptosis

Takashi Kondo

Dept. of Radiol. Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama

Welcome Remarks	17:20-17:25

Takeo Ohnishi, Honorary President of ICHO&JCTM 2012, President of JSTM

Award Ceremony of Abe Award and JSTM Young Investigator Award | 17:25-17:30

Chairperson: Koichi Ito, Grad. Sch. of Eng., Chiba Univ.

Award Ceremony of Excellent Paper in Thermal Medicine and Int J Hyperthermia | 17:30-17:35

Chairperson: Akihisa Takahashi, ASRLD Unit, Gunma Univ.

Abe Award Lecture | 17:35-17:50

Chairperson: Koichi Ito, Grad. Sch. of Eng., Chiba Univ.

Surgery and hyperthermia

Kanji Katayama[1], Makoto Murakami[2], Mitsuhiro Morikawa[2], Katsuji Sawai[2], Kenji Koneri[2], Yasuo Hirono[2], Takanori Goi[2], Atsushi Iida[2], Akio Yamaguchi[2]

[1]Cancer Care Promotion Center, Univ. of Fukui, [2]Surgery 1, Univ. of Fukui

Report of JSTM Young Investigator Award | 17:50-18:10

Chairperson: Koichi Ito, Grad. Sch. of Eng., Chiba Univ.

JSTM-YIA1

Hyperthermia enhances the efficacy of adoptive naive T-cell therapy

Satoko Adachi, Sotoshi Kokura, Takeshi Ishikawa, Naoyuki Sakamoto, Tetsuya Okayama, Reiko Tsuchiya, Yuji Naito, Toshikazu Yoshikawa

Dept. of Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med.

JSTM-YIA2

Re-irradiation plus regional hyperthermia for recurrent non-small cell lung cancer: A potential modality for inducing long-term survival in selected patients

Takayuki Ohguri[1], Hajime Imada[2], Katsuya Yahara[1], Yukunori Korogi[1]

[1]Dept. of Radiology, Univ. of Occupational and Environmental Health, [2]Dept. of Cancer Therapy Center, Tobata Kyoritsu Hosp.

Award Lecture for Excellent Paper in Thermal Medicine | 18:10-18:20

Chairperson: Akihisa Takahashi, ASRLD Unit, Gunma Univ.

18F-fluorodeoxyglucose positron tomography is useful in evaluating the efficacy of multidisciplinary treatments for so-called borderline unresectable pancreatic head cancers

Murakami Makoto, Kanji Katayama, Kenji Koneri, Yasuo Hirono, Takanori Goi, Atsushi Iida, Akio Yamaguchi

First Dept. of Surg., Univ. of Fukui, Sch. of Med.

Award Lecture for Excellent Paper in Int J Hyperthermia | 18:20-18:30

Chairperson: Akihisa Takahashi, ASRLD Unit, Gunma Univ.

Hyperthermia enhances the effect of β-lapachone to cause γH2AX formations and cell death in human osteosarcoma cells

Takeshi Hori[1], Takashi Kondo[2], Chang W Song[3]

[1]Dept. of Orthop. Surg., Fac. of Med., Univ. of Toyama, [2]Dept. of Radiological Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [3]Radiat. Biology Lab., Dept. of Therapeutic Radiology, Univ. of Minnesota Med. Sch.

Special Performance of Music | 18:30-19:00

ESHO BSD Award Session 9:10-9:40

Chairperson: **Michael R. Horsman**
Dept. Experimental Clinical Oncol., Aarhus Univ. Hosp.

Ceremony & Lecture

Break 9:40-9:50

Symposium 1 9:50-11:50

HIPEC for peritoneal dissemination today

Chairpersons: **Yutaka Yonemura**
Org. to Support Peritoneal Dissemination Treatment

Shigeki Kusamura
Dept. of Surg., Fondazione IRCCS Istituto Nazionale dei Tumori di Milano

S01-1 **Hyperthermic intraperitoneal chemotherapy with gastrectomy and lymphadenectomy for the treatment of gastric cancer patients with peritoneal carcinomatosis**

Hiroshi Yamamoto, Satoshi Murata, Tsuyoshi Yamaguchi, Eiji Mekata, Tomoharu Shimizu, Hiromichi Sonoda, Hisanori Shiomi, Shigeyuki Naka, Hiroya Akabori, Koichiro Murakami, Tohru Tani

Dept. of Surg., Shiga Univ. of Med. Sci.

S01-2 **MUC2 protein expression status is useful in judging the effects of HIPEC for peritoneal dissemination of colon cancer**

Takanori Goi, Kanji Katayama, Toshiyuki Nakazawa, Katsuji Sawai, Mitsuhiro Morikawa, Atsushi Iida, Akio Yamaguchi

First Dept. of Surg., Univ. of Fukui

S01-3 **Laparoscopy assisted hyperthermic intraperitoneal chemotherapy and gastrectomy combined peritonectomy for advanced gastric cancer with peritoneal carcinomatosis**

Masumi Ichinose[1], Yutaka Yonemura[2], Nobuyuki Takao[1], Akiyoshi Mizumoto[1], Masamitsu Hirano[1]

[1]Dept. of General Surg., Kusatsu General Hosp., [2]NPO Org. to Support Peritoneal Dissemination Treatment

S01-4 **Safety and survival after cytoreductive surgery with peritonectomy procedures and hyperthermic intraperitoneal chemotherapy**

Emel Canbay, Yutaka Yonemura

Peritoneal Surface Malignancy Treatment Center, Kishiwada Tokushukai Hosp., Kishiwada City, Osaka Japan

S01-5 **Clinical outcomes of laparoscopic hyperthermic intraperitoneal chemotherapy (LHIPEC) in stomach and colorectal cancer patients with peritoneal carcinomatosis**

Chai Young Lee[1], Hyun Choon Shin[2], Yoon Hee Park[2], Jeong Ho Lee[3], Jin Ho Choi[2], Jeong Ho Seo[2], Seh Jong Park[2], Dae Hee Lee[2]

[1]Dept. of Oncologic Surg., Anyang Sam Hosp. Integrative Cancer Center, [2]Dept. of Hematology and Oncol., Anyang Sam Hosp. Integrative Cancer Center, [3]Dept. of Family Med., Anyang Sam Hosp. Integrative Cancer Center

S01-6 **Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for peritoneal metsastases from appendix and colon cancer: Current perspectives and future trends**

Lana Bijelic

Dept. of Surg., Washington Hosp. Center, Washington DC

S01-7 **Cytoreductive surgery with HIPEC in diffuse malignant peritoneal mesothelioma, epithelial ovarian cancer and peritoneal sarcomatosis: current evidence**

Shigeki Kusamura, Dario Baratti, Marcello Deraco

Dept. of Surg., Fondazione IRCCS Istituto Nazionale dei Tumori di Milano

Break 11:50-12:00

Luncheon Seminar 1 12:00-13:00

Chairperson: Kazuhide Higuchi
2nd Dept. of Internal Med., Osaka Med. Coll.

LS1 **Protective role for HSP70 against various gastrointestinal diseases and other diseases**

Tohru Mizushima

Dept. of Analytical Chem., Fac. of Pharm., Keio Univ.

Sponsored by Eisai Co., Ltd.

Symposium 2 13:00-15:00

Clinical aspects of regional hyperthermia combined with radiotherapy

Chairpersons: Yasumasa Nishimura
Dept. of Radiat. Oncol. Kinki Univ. Fac. of Med.

Jacoba van der Zee
Hyperthermia Unit, Dept. Radiat. Oncol., Erasmus MC - Daniel den Hoed Cancer Center

S02-1 **Review of clinical experience with radiotherapy and hyperthermia in pelvic tumours**

Jacoba van der Zee

Hyperthermia Unit, Dept. Radiat. Oncol., Erasmus MC - Daniel den Hoed Cancer Center

S02-2 Hyperthermo-chemoradiotherapy with regional hyperthermia, pelvic radiotherapy, infusional 5-fluorouracil and l-leucovorin for patients with locally advanced lower rectal carcinoma

Jun-ichi Saitoh[1], Hiroki Kiyohara[1], Mariko Shioya[1], Yoshiyuki Suzuki[1], Takashi Nakano[1], Hideyuki Sakurai[2], Takeo Takahashi[3], Souichi Tsutsumi[4], Takayuki Asao[4], Hiroyuki Kuwano[4]

[1]Dept. of Radiat. Oncol., Gunma Univ. Grad. Sch. of Med., [2]Dept. of Radiat. Oncol., Univ. of Tsukuba, [3]Dept. of Radiat. Oncol., Saitama Med. Center, [4]Dept. of General Surg. Sci., Gunma Univ. Grad. Sch. of Med.

S02-3 Six long-term survivors among 14 cases with malignant pleural mesothelioma (MPM) treated with intrathoracic chemotherapy, hyperthermia and radiation therapy

Katsuyuki Karasawa, Takuya Shimizuguchi, Shun-ichirou Kageyama, Hiroshi Tanaka, Hiromi Izawa, Yumiko Machitori, TaChen Chang, Masakatsu Onozawa, Keiji Nihei, Nahoko Hanyu

Dept. of Radiology, Tokyo Metropolitan Cancer and Infectious diseases Center Komagome Hosp.

S02-4 The role of hyperthermia in the treatment of locally advanced prostate cancer

Sergio Maluta, Stefano Dall'Oglio, Mario Palazzi, Fabio Pioli, Antonio Grandinetti, Mario Romano, Nadia Marciai, Milena Gabbani, Anna D'Amico

Dept. of Radiotherapy Univ. Hosp. of Verona

S02-5 Gemcitabine, cisplatin combined with hyperthermia in pancreatic cancer: Retrospective data and two ongoing clinical trials

Katharina E. Lechner[1,2], Christiane Bruns[3], Nelli Dieterle[1], Lars Lindner[1,2], Sultan Abdel-Rahman[1], Christoph Salat[4], Volker Heinemann[1], Ulrich Mansmann[5], Wolfgang Hiddemann[1], Rolf D. Issels[1,2]

[1]Med. clinic III, Univ. of Munich, LMU, [2]Clinical Cooperation Group Hyperthermia, Helmholtz Zentrum, Munich, [3]Dept. of Surg., Univ. of Munich, LMU, [4]HäCmato-Onkologische Schwerpunktpraxis, Munich, [5]IBE, Univ. of Munich, LMU

Break	**15:00-15:15**

Poster-Short Oral pr. 01	**15:15-18:00**

Chairperson: Hiromasa Kurosaki
Dept. of Radiat. Oncol., Tokyo Kousei Nenkin Hosp.

Pa-01 A case of submandibular gland carcinoma treated with chemo-radiotherapy plus hyperthermia using magnetite nanoparticle-loaded liposome

Shin Ohta[1], Hajime Imada[1], Hiroyuki Narisada[1], Yoshinori Tomoda[1], Katsuya Yahara[2], Takayuki Ohguri[2], Takeshi Kobayashi[3]

[1]Cancer Therapy Center, Tobata Kyoritsu Hosp., [2]Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan, [3]Chubu Univ.

Pa-02 Hyperthermia for protruded tumor from the skin

Shin Ohta[1], Hajime Imada[1], Hiroyuki Narisada[1], Yoshinori Tomoda[1], Katsuya Yahara[2], Takayuki Ohguri[2]

[1]Cancer Therapy Center, Tobata Kyoritsu Hosp., [2]Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan

Pa-03 Novel hyperthermia using magnetic materials for metastatic bone tumors

Kunihiro Asanuma, Akihiko Matsumine, Takao Matsubara, Toru Ooi, Atsumasa Uchida, Akihiro Sudo

Dept. of Orthop. Surg. Mie Univ. Grad. Sch. of Med.

Pa-04 Palliative chemo-hyperthermia for primary or post-operative gastric carcinoma with organ metastasis or peritoneal dissemination

Hajime Imada, Hiroyuki Narisada, Yoshinori Tomoda, Shin Ohta

Cancer Therapy Center, Tobata Kyoritsu Hosp.

Pa-05 The investigation of cases with long term chemo-hyperthermia of same regimen

Hiroyuki Narisada, Hajime Imada, Yoshinori Tomoda, Shin Ohta

Cancer Therapy Center, Tobata Kyoritsu Hosp.

Pa-06 Chemo-hyperthermia for pre-end stage recurrent ovarian cancer

Hiroyuki Narisada, Hajime Imada, Yoshinori Tomoda, Shin Ohta

Cancer Therapy Center, Tobata Kyoritsu Hosp.

Pa-07 Retrospective analysis of combined modality therapy for unresectable soft tissue sarcoma, clinical outcome of 14 cases

Takuya Shimizuguchi, Katsuyuki Karasawa

Cancer and Infectious Disease Center Tokyo Metropolitan Komagome Hosp.

Poster-Short Oral pr. 02 | 15:15-18:00

Chairperson: Hideaki Takahashi
Section of Neurosurgery, Niigata Cancer Center Hosp.

Pa-08 An advanced pancreatic cancer patient treated with a combination of proton beam therapy, chemotherapy and hyperthermia: Case report

Mikako Harada, Takeshi Arimura, Takashi Ogino, Yoshio Hishikawa

Medipolis Proton Therapy and Res. Center

Pa-09 Intraoperative hyperthermia for metastatic brain tumors

Seung Hoon Lee[1], Heon Yoo[1], Yung Ho Jo[2], Ho Shin Gwak[1], E Suk Yang[1], Sang Hoon Shin[1]

[1]Neurooncology Clinic, Nat'l Cancer Center, [2]Branch of Biomed. Eng., Nat'l Cancer Center

Pa-10 Survival analysis of radiofrequency ablation combined with liver resection for dual lobe multifocal hepatocellular carcinoma

Kuansheng Ma, Jun Yan, Xiaowu Li, Feng Xia, Xiaobin Feng, Li Liu, Ping Bie

The Inst. of Hepatobiliary Surg., Southwest Hosp., Third Military Med. Univ, Chongqing, P.R.China

Pa-11 Early tolerance of interstitial prostate hyperthermia in combination with HDR brachytherapy

Andrzej Kukielka[1,2], Piotr Brandys[2], Tomasz Dabrowski[1,2], Tomasz Walasek[1,2]

[1]Dept. of Brachytherapy, Centrum Onkologii - Instytut im. M. Sklodowskiej-Curie, Oddzial Krakow, [2]Dept. of Radiotherapy, Centrum Onkologii - Instytut im. M. Sklodowskiej-Curie, Oddzial Krakow

Pa-12 Efficacy of intrathoracic thermochemotherapy for the treatment of malignant effusion in patients with non-small cell lung cancer

Akira Mogi, Takayuki Kosaka, Ei Yamaki, Shigebumi Tanaka, Hiroyuki Kuwano

Dept. of General Surgical Sci., Gunma Univ. Grad. Sch. of Med.

Pa-13 Castration-resistant prostate cancer treated with combining low dose chemotherapy and regional hyperthermia for obtaining long survival

Kosuke Ueda[1], Fumiko Maeda[1], Yasuhiko Ito[2]

[1]Nagoya Prostatic Center, Hachiya Orthop. Hosp., [2]Dept. of Urology, Holy Spirit Hosp.

Pa-14 Immunological enhancement and long term remissions achieved in HIV patients receiving HL-WBH 'heatheal' hyperthermia treatment

Alexei Suvernev[1,2], George Ivanov[1], Milton Yatvin[2,3]

[1]Siberian Sci. Res. Inst. of Hyperthermia, [2]Heatheal, Washington DC, USA, [3]Biology Dept. Reed Coll., Portland OR, USA

Poster-Short Oral pr. 03 | 15:15-18:00

Chairperson: Takayuki Asao
Dept. of General Surgical Sci., Grad. Sch. of Med., Gunma Univ.

Pa-15 Thermochemoradiotherapy using superselective intra-arterial infusion via superficial temporal and occipital arteries for oral cancer with N3 cervical lymph node metastases

Kenji Mistudo[1], Toshiyuki Koizumi[1], Masaki Iida[1], Toshinori Iwai[1], Senri Oguri[1], Noriyuki Yamamoto[2], Minoru Ueda[2], Mitomu Kioi[1], Makoto Hirota[1], Iwai Tohnai[1]

[1]Dept. of Oral and Maxillofacial Surg., Yokohama City Univ. Grad. Sch. of Med., [2]Dept. of Oral and Maxillofacial Surg., Nagoya Univ. Grad. Sch. of Med.

Pa-16 Clinical application of oncothermia against the tumors developed in the deep tissues in veterinary medicine

Yoshiharu Okamoto, Gabor Andocs, Tomohiro Osaki, Takeshi Tsuka, Tomohiro Imagawa, Saburo Minami

Dept. of Veterinary Clinical Med., Fac. of Agric., Tottori Univ.

Pa-17 Chemo-hyperthemia for non-small cell lung cancer with multiple pulmonary metastases

Hajime Imada[1], Hiroyuki Narisada[1], Yoshinori Tomoda[1], Shin Ohta[1], Katsuya Yahara[2], Takayuki Ohguri[2]

[1]Cancer Therapy Center, Tobata Kyoritsu Hosp., [2]Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan

Pa-18 Superficial hyperthermia in head and neck malignancies. A review of 164 patients

Stefano Dall'Oglio[1], Mario Palazzi[1], Andrea Fior[2], Mario Romano[1], Nadia Marciai[1], Sergio Maluta[1]

[1]Dept. of Radiat. Oncol., Univ. Hosp., Verona, Italy, [2]Section of Oral and Maxillo-facial Surg., Dept. of Surg., Univ. Hosp., Verona, Italy.

Pa-19 Results of chemothermoradiation therapy for locally advanced laryngeal cancer

Orazakhmet Kurpeshev[1], Vyacheslav Andreyev[2], Vladimir Pankratov[2], Igor Gulidov[3], Kamila Strelkova[1]

[1]Dept. of Hyperthermia, Med. Radiological Res. Center, [2]Dept. of Oncological Oto-Rhino-Laryngology, Med. Radiological Res. Center, [3]Dept. of Radiat. Therapy, Med. Radiological Res. Center

Pa-20 Clinical evaluation of thermochemoradiotherapy for advanced head and neck cancer

Masaki Iida[1], Kenji Mitsudo[1], Toshiyuki Koizumi[1,2], Toshinori Iwai[1], Senri Oguri[1], Mitomu Kioi[1], Makoto Hirota[1], Hideyuki Nakashima[1], Iwai Tohnai[1]

[1]Dept. of Oral and Maxillofacial Surg., Yokohama City Univ. Grad. Sch. of Med., [2]Dept. of Oral and Maxillofacial Surg., Tokyo Med. Univ.

Pa-21 Thermochemoradiotherapy using superselective intra-arterial infusion via superficial temporal and occipital arteries for advanced oral cancer with cervical lymph node metastases

Toshiyuki Koizumi[1], Kenji Mitsudo[2], Masaki Iida[2], Toshinori Iwai[2], Senri Oguri[2], Mitomu Kioi[2], Makoto Hirota[2], Iwai Tohnai[2]

[1]Dept. of Oral and Maxillofacial Surg., Fac. of Med., Tokyo Med. Univ., [2]Dept. of Oral and Maxillofacial Surg., Yokohama City Univ. Grad. Sch. of Med.

Poster-Short Oral pr. 04 | 15:15-18:00

Chairperson: Hideo Baba
Dept. of Gastroenterological Surg. Grad. Sch. of Med. Sci. Kumamoto Univ.

Pa-22 Multidisciplinary therapy including hyperthermia for colorectal cancer

Hiroyuki Narisada, Hajime Imada, Yoshinori Tomoda, Shin Ohta

Cancer Therapy Center, Tobata Kyoritsu Hosp.

Pa-23 Chemo-radiotherapy plus regional hyperthermia and hyperbaric oxygen therapy for locally advanced pancreatic carcinoma

Hiroyuki Narisada[1], Hajime Imada[1], Yoshinori Tomoda[1], Shin Ohta[1], Katsuya Yahara[2], Takayuki Ohguri[2]

[1]Cancer Therapy Center, Tobata Kyoritsu Hosp., [2]Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan

Pa-24 Efficacy of neoadjuvant termochemotherapy in localized and locally advanced breast cancers

Orazakhmet Kurpeshev

Dept.of Hyperthermia, Med. Radiological Res. Center

Pa-25 Local control rate after the combination of re-irradiation and hyperthermia for recurrent breast cancer: Results in 250 patients

Marianne Linthorst[1], Albert N van Geel[2], Margreet Baaijens[3], Wendim Ghidey[4], Gerard C van Rhoon[1], Jacoba van der Zee[1]

[1]Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC-Daniel den Hoed Cancer Center, [2]Dept. of Surgical Oncol., Erasmus MC-Daniel den Hoed Cancer Center, [3]Dept. of Radiat. Oncol., Erasmus MC-Daniel den Hoed Cancer Center, [4]Dept. of Trial and Med. Statistics, Erasmus MC-Daniel den Hoed Cancer Center

Pa-26 Radio-hyperthermia (RT-HT) in the retreatment of superficial breast cancer recurrences

Giovanni De Pascalis, Alessia Monaco, Cristina Caruso, Michele Cianciulli, Cinzia Chiostrini, Vittorio Donato

Dept. of Radiat. Oncol., San Camillo Forlanini Hosp., Rome

Pa-27 Chemo-radiation using paclitaxel and carboplatin plus regional hyperthermia for stage III non-small cell lung cancer

Hajime Imada[1], Hiroyuki Narisada[1], Yoshinori Tomoda[1], Shin Ohta[1], Katsuya Yahara[2], Takayuki Ohguri[2]

[1]Cancer Therapy Center, Tobata Kyoritsu Hosp., [2]Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan

Pa-28 Chemo-radiotherapy plus regional hyperthermia and hyperbaric oxygen therapy for locally advanced or post-operative loco-regional recurrence of gastric carcinoma

Hajime Imada, Hiroyuki Narisada, Yoshinori Tomoda, Shin Ohta

Cancer Therapy Center, Tobata Kyoritsu Hosp.

Poster-Short Oral pr. 05 | 15:15-18:00

Chairperson: Takefumi Ohga
Fukuoka Higashi Med. Center, Dept. of Surg.

Pa-29 Usefulness of combined treatment with continuous tirapazamine administration and mild temperature hyperthermia in gamma-Ray irradiation, referring to lung metastatic potential

Shin-ichiro Masunaga[1], Yoshinori Sakurai[2], Hiroki Tanaka[2], Minoru Suzuki[1], Natsuko Kondo[1], Masaru Narabayashi[1], Akira Maruhashi[2], Koji Ono[1]

[1]Particle Radiat. Oncol. Res. Center, Res. Reactor Inst., Kyoto Univ., [2]Radiat. Med. Phys., Res. Reactor Inst., Kyoto Univ.

Pa-30 Re-irradiation plus hyperthermia for recurrent breast cancer in previously irradiated area; size matters!

Sabine Oldenborg[1], Vanessa Griesdoorn[1], Yoka Kusumanto[1], Rob van Os[1], Bing Oei[2], Jack Venselaar[2], Hans Crezee[1], Paul Zum Vorde[1], Coen Rasch[1], Geertjan van Tienhoven[1]

[1]Academic Med. Center, Dept. of Radiat. Oncol., Amsterdam, [2]Inst. Verbeeten, Dept. of Radiat. Oncol., Tilburg, The Netherlands

Pa-31 Comparison of 4 to 8 hyperthermia treatments combined with re-irradiation for breast cancer

Marianne Linthorst[1], Gerard C van Rhoon[1], Margreet Baaijens[2], Wendim Ghidey[3], Jacoba van der Zee[1]

[1]Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC-Daniel den Hoed Cancer Center, [2]Dept. of Radiat. Oncol., Erasmus MC-Daniel den Hoed Cancer Center, [3]Dept. of Trial and Med. Statistics, Erasmus MC-Daniel den Hoed Cancer Center

Pa-32 Whole body hyperthermia combined with chemotherapy and radiotherapy for the treatment of patients with advanced stage nasopharyngeal carcinoma

Xunfan Shao, Jingfeng Deng, Naiying Zheng, Jianjun Shi, Zhiwen Mo

Dept.of Radiat. Oncol., Guangzhou Med. Coll. affiliated Cancer Hosp.

Pa-33 Efficacy of sequential combination of hyperthermia and gemcitabine in the treatment of advanced pancreatic cancer: Phase II study

Takeshi Ishikawa[1,2], Satoshi Kokura[1,2], Naoyuki Sakamoto[3], Reiko Tsuchiya[2], Manabu Okajima[2], Tatsuzo Matsuyama[2], Satoko Adachi[1], Tetsuya Okayama[1,2], Nobuaki Yagi[2], Yuji Naito[2], Toshikazu Yoshikawa[1]

[1]Dept. of Cancer Immunocell Regulation, Kyoto Pref. Univ. of Med., [2]Dept. of Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., [3]Iseikai Hyakumanben Clinic

Pa-34 Clinical research of hyperthermic intraperitoneal perfusion chemotherapy combined with vein chemotherapy in treating advanced colon cancer

Shenglin Ma, Zhibing. Wu, Xiadong Li, Yuelong Pan

Dept. of Radiat. Oncol., The first People's Hosp. of Hangzhou

Poster-Short Oral pr. 06 | 15:15-18:00

Chairperson: Masaru Morita
Dept. of Surg. and Sci., Kyushu Univ.

Pa-35 Radiotherapy of cervical carcinoma: combined with hyperthermia or chemotherapy? Results of the RADCHOC study

Ludy C Lutgens[1], Jan J Jobsen[2], Elzbieta M van der Steen[3], Helena C van Doorn[4], Gerard C van Rhoon[5], Jacoba van der Zee[5]

[1]Maastro Clinic, Maastricht, [2]Dept. of Radiat. Oncol., Medisch Spectrum Twente, Enschede, The Netherlands, [3]ARTI, Arnhem, the Netherlands, [4]Dept. of Gynaecologic Oncol., Erasmus MC, Rotterdam, the Netherlands, [5]Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC, Rotterdam, the Netherlands

Pa-36 Long-term outcome and efficacy of hyperthermochemotherapy for residual recurrence esophageal cancer after definitive chemoradiotherapy

Yasue Kimura[1], Masaru Morita[2], Koji Ando[1], Satoshi Ida[1], Hiroshi Saeki[1], Eiji Oki[1], Tetsuya Kusumoto[1], Yoshiyuki Shioyama[2], Yoshihiko Maehara[1]

[1]Dept. of Surg. and Sci., Grad. Sch. of Med. Sci., Kyushu Univ., [2]Dept. of Clinical Radiology, Grad. Sch. of Med. Sci., Kyushu Univ.

Pa-37 Early response to neo-adjuvant chemotherapy (NAC) in combination with regional hyperthermia (RHT) predicts long-term survival

Lars H. Lindner[1], Eric Kampmann[1], Nelli Dieterle[1], Ulrich Mansmann[2], Thomas Kirchner[3], Rolf D. Issels[1]

[1]Univ. Hosp. Med. Center - Medizinische Klinik III, [2]Inst. of Med. Informatics, Biostatistics, and Epidemiology, Univ. of Munich, [3]Inst. of Pathology, Ludwig-Maximilian-Univ. Munich

Pa-38 The clinical study of tumor local hyperthermia treatment for 808 cases

Yingquan Cai

Dept. of Radiotherapy Center, Shanxi Provincial Tumor Hosp.

Pa-39 Local control rate after the combination of surgery, re-irradiation and hyperthermia for radio-induced angiosarcoma of the chest wall

Marianne Linthorst[1], Albert N van Geel[2], Cees Verhoef[2], Elizabeth Baartman[3], Bing Oei[4], Wendim Ghidey[5], Gerard C van Rhoon[1], Jacoba van der Zee[1]

[1]Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC-Daniel den Hoed Cancer Center, [2]Dept. of Surgical Oncol., Erasmus MC-Daniel den Hoed Cancer Center, [3]Dept. of Radiat. Oncol., Erasmus MC-Daniel den Hoed Cancer Center, [4]Dept. of Radiat. Oncol., Verbeeten Inst., [5]Dept. of Trial and Med. Statistics, Erasmus MC-Daniel den Hoed Cancer Center

Pa-40 A methodological approach to the treatment of multiple/large lesions with 434 MHz hyperthermia and tomotherapy

Rocco Panaia, Amalia Di Dia, Gabriele Petrilli, Giovanni Penduzzu, Pietro Gabriele

Inst. for Res. and Treatment of Cancer, Candiolo (TO) Italy

Pa-41 Introduction of HIPEC for treating peritoneal surface malignancy at a community hospital

Toshiyuki Kitai, Masafumi Kogire, Katusyoshi Furumoto, Daisuke Ito, Tomohiko Mori, Hidenobu Kojima, Yuya Miyauchi, Daisuke Nagashima

Dept. of Surg., Kishiwada City Hosp.

Poster-Short Oral pr. 07 | 15:15-18:00

Chairperson: Erito Mochiki
Dept. of General Surg. Sci., Gunma Univ.

Pa-42 Hyperthermic intraperitoneal chemotherapy (HIPEC) following a curative resection of advanced gastric cancer

Satoshi Murata[1], Hiroshi Yamamoto[1], Tsuyoshi Yamaguchi[1], Hiroyuki Naitoh[2], Tomoharu Shimizu[1], Hisanori Shiomi[1], Shigeyuki Naka[1], Hiromichi Sonoda[1], Eiji Mekata[1], Hajime Abe[1], Tohru Tani[1]

[1]Dept. of Surg., Shiga Univ. of Med. Sci., [2]Dept. of Surg., Hino Memorial Hosp.

Pa-43 Temperature dependence of magnetic resonance signals of lipid proton components and its application to fat thermometry

Kagayaki Kuroda[1,2], Shuhei Morita[1], Khalid Albarodi[2], Makoto Obara[3], Paul Baron[4], Mie Kee Lam[4], Wilbert Bartels[4], Masatoshi Honda[3], Tomohiko Horie[5], Yutaka Imai[5]

[1]Dept. of Human and Information Sci., Sch. of Information Sci. and Tech., Tokai Univ., [2]Course of Information Sci. and Tech., Grad. Sch. of Eng., Tokai Univ., [3]MR Marketing, Philips Electronics Japan Med. Systems, Shinagawa, Tokyo, Japan, [4]Image Sci. Inst., Univ. Med. Center Utrecht, Utrecht, Netherlands, [5]Dept. of Radiology, Tokai Univ., Japan

Pa-44 Clinically significant urethral stricture and/or subclinical urethral stricture after HIFU paradoxically correlates with disease-free survival in patients with prostate cancer

Teruo Inamoto[1], Hiroshi Masuda[1,4], Kazumasa Komura[1], Yutaka Fujisue[1], Peter Black[2], Toshikazu Watsuji[3], Haruhito Azuma[1]

[1]Dept. of Urology, Osaka Med. Coll., Osaka, Japan, [2]Dept. of Urologic Sci., Univ. of British Columbia, Vancouver, British Columbia, Canada, [3]Dept. of Urology, Hirakata City Hosp., Osaka, Japan, [4]Dept. of Urology, Aino Hosp., Osaka, Japan

Pa-45 The thermal combinational therapy with whole body hyperthermia and thermal coagulation for metastatic tumor

Akira Takeuchi, Hiromi Hasumura, Masakazu Shirahige, Sachiko Kotoyori, Kimiko Kume, Yoko Okawa, Takashi Takeuchi

Dept. of Thermotherapy, Luke Clinic

Pa-46 Enhancement of ultrasound- or hyperthermia-induced cancer cell killing by antibacterial agents

Loreto B. Feril[1], Katsuro Tachibana[1], Takashi Kondo[2], Ryohei Ogawa[2], Zheng-Guo Cui[3]

[1]Dept. of Anatomy, Fukuoka Univ. Sch. of Med., [2]Dept. of Radiological Sci., Fac. of Med., Univ. of Toyama, [3]Dept. of Public Health, Fac. of Med., Univ. of Toyama

Pa-47 Improved intratumoral distribution of temperature sensitive liposomes and doxorubicin after combined hyperthermia and ablation treatment

Nicole Hijnen[1], Mariska de Smet[1], Holger Gruell[1,2]

[1]Eindhoven Univ. of Tech., [2]Philips Res. Eindhoven, the Netherlands

Room P

Poster Viewing & Discussion	**18:00-19:00**

Morning Lecture 1 | 8:40-9:10

Chairperson: Hiroyuki Kato
Dokkyo Med. Univ. First Dept. of Surg.

ML01 Cancer hyperthermia using magnetite nanoparticles

Takeshi Kobayashi

Sch. of Biosci. and Biotech., Chubu Univ.

Morning Lecture 2 | 9:10-9:40

Chairperson: Norio Mitsuhashi
Dept. of Radiat. Oncol., Tokyo Women's Univ. Sch. of Med.

ML02 Influence of thermal therapy on the tumor microenvironment, vascular function and vice-versa

Robert J. Griffin

Univ. of Arkansas for Med. Sci.

Break | 9:40-9:50

Symposium 3 | 9:50-11:50

Hyperthermia and nanotechnology / nanomedicine

Chairpersons: Hiroyuki Honda
Dept. of Biotech., Grad. Sch. of Eng., Nagoya Univ.

Nicholas Borys
Celsion Corp.

S03-1 Magnetic anti-cancer compound in hyperthermic therapy

Yoshihiro Ishikawa[1], Haruki Eguchi[2]

[1]Cardiovascular Res. Inst., Yokohama City Univ., Grad. Sch. of Med., [2]Advanced Applied Sci. Dept., Res. Lab., IHI Co., Yokohama Japan

S03-2 Proteins and cholesterol lipid vesicles are mediators of drug release from thermosensitive liposomes

Martin Hossann[1,2], Zulfiya Syunyaeva[1], Rebecca Schmidt[1], Anja Zengerle[1], Hansjoerg Eibl[3], Rolf D. Issels[1,2], Lars H. Lindner[1,2]

[1]Dept. of Internal Med. III, Univ. Hosp. Grosshadern, Ludwig- Maximilians Univ., Munich, [2]CCG Hyperthermia, Helmholtz Zentrum Muenchen, German Res. Center for Environmental Health, Munich, Germany, [3]Max-Planck-Inst. for Biophysical Chem., Goettingen, Germany

S03-3 Heat sensitive nanomedicine in oncology: A clinical review of lyso-thermosensitive liposomal doxorubicin

Nicholas Borys

Celsion Corp.

S03-4 Combined therapy of magnetite nanoparticles and NPrCAP, melanogenesis substrate, provides melanoma-targeted in situ vaccine by chemo-thermo-immunotherapy

Kowichi Jimbow[1], Akihiro Yoneta[1], Yasuaki Tamura[1], Toshiharu Yamashita[1], Akira Ito[2], Hiroyuki Honda[2], Kazumasa Wakamatsu[3], Shosuke Ito[3], Satoshi Nohara[4], Takeo Hasegawa[5], Itsuo Yamamoto[5]

[1]Sapporo Med. Univ, Sch. of Med., [2]Sch. of Eng., Nagoya Univ., [3]Fujita Health Univ. Sch. of Health Sci., [4]Meito Sangyo Co., Ltd., [5]Yamamoto Vinita Co., Ltd.

S03-5 A novel two-step of local mild hyperthermia approach for advanced liposomal drug delivery to solid tumors

Li Li[1], Timo LM Ten Hagen[1], Astrid Gasselhuber[2], Jeremy Yatvin[2], Michiel Bolkestein[1], Gerard van Rhoon[3], Alexander MM Eggermont[1,4], Martin Hossann[5], Dieter Haemmerich[2], Gerben A Koning[1]

[1]Dept. of Surg., Erasmus Med. Center, [2]Dept. of Pediatrics, Coll. of Med., Med. Univ. of South Carolina, [3]Dept. of Radiotherapy, Erasmus Med. Center - Daniel den Hoed Cancer Center, [4]Inst. of Cancerology Gustave Roussy, [5]Dept. of Internal Med. III, Univ. Hosp. Grosshadern

S03-6 Effects of platinum nanoparticles on LPS-induced inflammatory response and hyperthermia-induced apoptosis

Mati Ur Rehman[1], Yoko Yoshihisa[1], Yusei Miyamoto[2], Tadamichi Shimizu[1]

[1]Dept. of Dermatology, Grad. Sch. of Med. and Pharm. Biosci. Univ. of Toyama, Japan, [2]Dept. of Integrated Biosci., Grad. Sch. of Frontier Sci., Univ. of Tokyo, Chiba, Japan

S03-7 Drug-loaded magnetic nanocomposite devices for cancer thermochemotherapy

Lingyun Zhao[1], Zhu Yao[2], Li Li[3], Jingdingsha Li[2], Jintian Tang[1]

[1]Inst. of Med. Physics and Eng., Dept. of Eng. Physics, Tsinghua Univ., Beijing, [2]Dept. of Biopharmaceutical, Beijing Univ. of Chinese Med., Beijing, 100102, China, [3]Dept. of Oncol., Xiangya Hosp., Central South Univ., Changsha, Hunan Province, PR China, 410008

S03-8 A novel intravesical magnetic nanoparticle hyperthermia system for treatment of bladder cancer

Alireza Mashal, Martin Huisjen, Kate McNerny, Karl Frantz, Mike Susedik, Carolyn Adams, Andrew Updegrave, Marvin Ross, Dan McKenna

Actium Biosystems

Break	**11:50-12:00**

Symposium 4	**13:00-15:00**

JSIR joint symposium: Heat stress and inflammation / regeneration

Chairpersons: Ikuo Morita
Dept. of Cellular Physiological Chem., Tokyo Med. and Dental Univ.

Toshikazu Yoshikawa
Kyoto Pref. Univ. of Med.

S04-1 Heat shock factors negatively regulate the inflammatory response

Akira Nakai, Ryosuke Takii, Naoki Hayashida, Eiich Takaki, Mitsuaki Fujimoto

Dept. of Biochem. and Molecular Biology, Yamaguchi Univ. Sch. of Med.

S04-2 Effects of application of heat stress on the regeneration of injured skeletal muscle

Yoshinobu Ohira

Grad. Sch. Med. & Front. Biosci., Osaka Univ.

S04-3 Identification of genes responsive to mild hyperthermia in normal human fibroblastic cells

Yoshiaki Tabuchi[1], Yukihiro Furusawa[2], Ayako Kariya[2], Shigehito Wada[2], Kenzo Ohtsuka[3], Takashi Kondo[2]

[1]Life Sci. Res. Ctr., Univ. of Toyama, [2]Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [3]Dept. of Environmental Biol., Chubu Univ.

S04-4 Heating in nano-scale: oncothermia

Andras Szasz

St. Istvan Univ., Fac. of Eng., Biotechnics Dept.

S04-5 Effects of a HSP70 inducer, alkannin on apoptosis in UVB-exposed human keratinocytes

Yoko Yoshihisa[1], Mariame Ali Hassan[2], Yukihiro Furusawa[2], Takashi Kondo[2], Tadamichi Shimizu[1]

[1]Dept. of Dermatology, Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [2]Dept. of Radiological Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama

Break	**15:00-15:15**

Poster-Short Oral pr. 01	**15:15-18:00**

Chairperson: Hitoshi Ishikawa
Dept. of Radiat. Oncol., Fac. of Med., Grad. Sch. of Comprehensive Human Sci., Univ.of Tsukuba

Pb-01 Reactivation of heat-inactivated Ku proteins by heat shock protein HSP73

Makoto Ihara[1], Kenzo Ohtsuka[2], Yutaka Okumura[1], Takeo Ohnishi[3]

[1]Dept. of RI Med., Atomic Bomb Disease Inst., Nagasaki Univ., [2]Lab. of Cell and Stress Biol., Coll. of Biosci. and Biotechnol., Chubu Univ., [3]Dept. of Rad. Oncol., Nara Med. Univ.

Pb-02 Heat-inducible gene expression system using hybrid HSP70 promoter for hyperthermia gene therapy

Masaki Yamaguchi, Akira Ito, Noriaki Okamoto, Yoshinori Kawabe, Masamichi Kamihira

Dept. of Chem. Eng., Fac. of Eng., Kyushu Univ.

Pb-03 Heat treatment as well as X-ray-irradiation depresses gastric mucosal damage induced with restraint plus water-immersion stress through HSP-induction in mice

Akihisa Takahashi[1], Xiaoming Su[2], Rikio Yamagata[3], Takeo Ohnishi[4]

[1]ASRLD Unit, Gunma Univ., [2]306th Hosp. of PLA, [3]Himeji Dokkyo Univ., [4]Dept. of Radiat. Oncol., Nara Med. Univ.

Pb-04 **Inactivation of DNA-dependent protein kinase promotes heat-induced apoptosis independently of heat-shock proteins in human cancer cell line**

Seisuke Okazawa[1,2], Yukihiro Furusawa[2,3], Ayako Kariya[2], Mariame Ali Hassan[2], Mie Arai[2], Yoshiaki Tabuchi[4], Ryuji Hayashi[1], Takashi Kondo[2], Kazuyuki Tobe[1]

[1]Dept. of First Internal Med., Univ. of Toyama, [2]Dept. of Radiological Sci., Univ. of Toyama, [3]Lab. for Bioenvironmental Epigenetics, Res. Center for Allergy and Immunology, [4]Div. of Molecular Genetics Res., Life Sci. Res. Center, Univ. of Toyama

Pb-05 **Pifithrin-mu, a new HSP70 inhibitor, sensitizes human prostate cancer cells to hyperthermia**

Kazumasa Sekihara[1,4], Nanae Harashima[1], Hiroyuki Monma[1,2], Nobue Uchida[3], Taisuke Inomata[4], Mamoru Harada[1]

[1]Dept. Immunol. Shimane Univ. Facult. Med., [2]Dept. of General Surg. Shimane Univ. Facult. Med., [3]Dept. Rad. Oncol. Tottori Prefect. Center Hosp., [4]Dept. Rad. Oncol. Shimane Univ. Facult. Med.

Pb-06 **A priming heat treatment can induce the development of heat- and radio-resistance *via* HSPs, regardless of *p53*-gene status**

Akihisa Takahashi[1], Takeo Ohnishi[2]

[1]ASRLD Unit, Gunma Univ., [2]Dept. of Radiat. Oncol., Nara Med. Univ.

Poster-Short Oral pr. 02 | 15:15-18:00

Chairperson: Ichiro Ota
Dept. of Otolaryngology-Head and Neck Surg., Nara Med. Univ.

Pb-07 **Heat induced cell death and HSPs in human leukemia cell lines**

Qing-Li Zhao, Yoshisada Fujiwara, Takashi Kondo

Dept. Radiol. Sci., Univ. of Toyama, Grad. Sch. Med. Pharm

Pb-08 **Gene expression profiling in HSF1-knockdown human oral squamous cell carcinoma HSC-3 cells**

Tatsuya Yunoki[1], Yoshiaki Tabuchi[2], Ayako Kariya[1], Takashi Kondo[1]

[1]Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [2]Life Sci. Res. Ctr., Univ. of Toyama

Pb-09 **Beneficial effects of molecular chaperone inducers**

Kenzo Ohtsuka

Lab. Cell & Stress Biol., Dept. Environmental Biol., Chubu Univ.

Pb-10 **Immunomolecular characteristics of triple-negative breast cancer stem cells**

Punit Kaur[1], Sunil Krishnan[2], Alexzander Asea[1]

[1]Dept. of Pathology, Scott & White Memorial Hosp. and Clinic, and the Texas A&M Health Sci. Center, [2]Dept. of Radiat. Oncol., MD Anderson Cancer Center

Pb-11 **TGF-β-induced Epithelial-Mesenchymal Transition (EMT) is suppressed by heat treatment in human colon adenocarcinoma cell line**

Satoko Adachi, Sotoshi Kokura, Takeshi Ishikawa, Naoyuki Sakamoto, Tetsuya Okayama, Manabu Okajima, Tatuzo Matsuyama, Reiko Tsuchiya, Yuji Naito, Toshikazu Yoshikawa

Dept. of Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med.

Pb-12 **A role for Ctr1 in the synergistic interaction between hyperthermia and cisplatin**

Chelsea D. Landon, Sarah Benjamin, Mark W. Dewhirst

Dept. of Pathology, Duke Univ. Med. Center

Pb-13 **Rad9 and Rad17 are required for heat-induced activation of ATR-Chk1 signaling pathway and heat tolerance**

Munkhbold Tuul[1], Hiroyuki Kitao[2], Kazuaki Matsuoka[2], Makoto Iimori[2], Shinichi Kiyonari[2], Hiroshi Saeki[1], Eiji Oki[1], Masaru Morita[1], Yoshihiko Maehara[1]

[1]Dept. of Surg. and Sci., Kyushu Univ., [2]Dept. of Molecular Oncol., Kyushu Univ.

Poster-Short Oral pr. 03 | 15:15-18:00

Chairperson: Valentina Ostapenko
Dept. of Internal Med., Higashiyamato Hosp.

Pb-14 **Global microRNA expression profiling of human oral squamous cell carcinoma cell lines in response to hyperthermia**

Ayako Kariya[1], Yukihiro Furusawa[1], Ryohei Ogawa[1], Takashi Kondo[1], Yoshiaki Tabuchi[2]

[1]Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [2]Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama

Pb-15 **Enhancement of anti-tumor effect by the combination of ultrasound mediated mild hyperthermia and immunotherapy**

Ryo Suzuki, Yusuke Oda, Daiki Omata, Yoshikazu Sawaguchi, Kazuo Maruyama

Lab. of Drug and Gene Delivery, Fac. of Pharma-Sci., Teikyo Univ.

Pb-16 **Low-intensity ultrasound enhances anti-cancer effect of cetuximab on human head and neck cancer cells**

Ichiro Ota[1], Takashi Masui[1], Masatoshi Kanno[2], Hiroshi Hosoi[1]

[1]Dept. of Otolaryngology-Head and Neck Surg., Nara Med. Univ., [2]Cancer Center, Nara Med. Univ.

Pb-17 **Moderate heat treatment enhances activities of human cytotoxic T lymphocytes**

Akari Takahashi, Toshihiko Torigoe, Yoshihiko Hirohashi, Yasuaki Tamura, Takayuki Kanaseki, Noriyuki Sato

1st Dept. of Pathology., Sapporo Med. Univ., Sch. Med.

Pb-18 **The enhancement of hyperthermia-induced apoptosis by Shikonin and its underlying molecular mechanism**

Jin-Lan Piao[1], Zheng-Guo Cui[2], Takashi Kondo[1]

[1]Dept. of Radiological Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [2]Dept. of Public Health, Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama

Pb-19 **Apoptotic cell death by the novel natural compound, cinobufotalin**

Heba Emam, Qing-Li Zhao, Takashi Kondo

Dept. of Radiological Sci., Univ. of Toyama

Pb-20 **Molecular mechanisms involved in the enhancement of hyperthermia-induced apoptosis by docosahexaenoic acid, -Implication for cancer therapy-**

Zheng-Guo Cui[1], Loreto Jr., Bandoy Feril[2], Hidekuni Inadera[1]

[1]Dept. of Public Health, Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [2]Dept. of Anatomy, Fukuoka Univ. Sch. of Med.

Poster-Short Oral pr. 04 | 15:15-18:00

Chairperson: **Shin-ichiro Masunaga**
Particle Radiat. Oncol. Res. Center, Res. Reactor Inst., Kyoto Univ.

Pb-21 **Treatment enhancement of ultrasound-mediated nanodrug delivery in combination with hyperthermia**

Chi-Feng Chiang[1], Heng-Ruei Shiu[1], Hsiao-Ching Tseng[1], Fu-Hsiung Chang[2], Win-Li Lin[1]

[1]Inst. of Biomed. Eng., Nat'l Taiwan Univ., [2]Inst. of Biochem. and Molecular Biology, Nat'l Taiwan Univ.

Pb-22 **The therapeutic potential of combining OXi4503, radiation and mild temperature hyperthermia**

Michael R. Horsman

Dept. Experimental Clinical Oncol., Aarhus Univ. Hosp.

Pb-23 **Novel cationic thermosensitive liposomes for targeted and controlled drug delivery to tumor vasculature and tumor cells**

Bilyana M. Dicheva[1], Timo LM Ten Hagen[1], Li Li[1], Debby Schipper[1], Ann L.B. Seynhaeve[1], Gerard C van Rhoon[5], Alexander MM Eggermont[1,2], Lars H Lindner[1,3,4], Gerben A Koning[1]

[1]Dept. of Surgical Oncol., Rotterdam, Erasmus MC, [2]Cancer Inst. Gustave Roussy, Paris, [3]Dept. of Internal Med. III,Munich,Ludwig-Maximilians Univ., [4]CCG-Hyperthermia, Munich, German Res. Center for Environmental Health, [5]Dept. Radiotherapy, Rotterdam, Erasmus Med. Center

Pb-24 **Antitumor effects of nano-bubble hydrogen-dissolved water are enhanced by coexistent platinum colloid and the combined hyperthermia concurrently with Apoptosis -like cell death**

Ryoko Asada[1], Katsuhiro Kageyama[2], Hiroshi Tanaka[2], Masanori Takeshita[2], Masatsugu Kimura[3], Yasukazu Saitoh[4], Nobuhiko Miwa[2]

[1]Dept. of Radiological Tech., Osaka Butsuryo Coll., [2]Fac. of Health Sci., Butsuryo Coll. of Osaka, [3]Radioisotope Center, Osaka City Univ., [4]Fac. of Life and Environmental Sciences, Pref. Univ. of Hiroshima

Pb-25 **Cancelation of hyperthermia induced reactive oxygen species in rat plasma**

Megumi Ueno[1], Minako Nyui[1], Ikuo Nakanishi[1], Kazunori Anzai[1,2], Toshihiko Ozawa[1,3], Ken-ichiro Matsumoto[1], Yoshihiro Uto[4]

[1]Res. Center for Charged Particle Therapy, Nat'l Inst. of Radiological Sci., [2]Nihon Pharm. Univ., [3]Yokohama Coll. of Pharm., [4]Inst. of Tech. and Sci., The Univ. of Tokushima

Pb-26 **Screening of phytochemicals sensitizing heat sensitivity of cancer cells**

Shin-ichi Bando[1], Osamu Hatano[2], Hiroshi Takemori[3], Nobuo Kubota[4], Ken Ohnishi[1]

[1]Dept. Biol. Ibaraki Pref. Univ. Health Sci., [2]Dept. Anat., Nara Med. Univ., [3]Natl Inst. Biomed. Innovat., Lab. Cell Signal. Metabo. Disord., [4]Dept. Radiol. Sci., Ibaraki Pref. Univ. Health Sci.

Poster-Short Oral pr. 05 | 15:15-18:00

Chairperson: Yasushi Toh
Nat'l Kyushu Cancer Center, Dept. of Gastroenterological Surg.

Pb-27 A new cancer treatment strategy with magnetic anti-cancer compound with hyperthermia

Xianfeng Feng[1], Hidenobu Fukumura[1], Itaru Sato[1], Haruki Eguchi[2], Yoshihiro Ishikawa[1]

[1]Dept. of Cardiovascular Res. Inst., Yokohama City Univ. of Med., [2]IHI Co.

Pb-28 Hyperthermia using magnetic nanoparticles combined with intratumoral dendritic cells enhance antitumor effect

Noriyuki Yamamoto[1], Koushi Matsumoto[1], Hiroki Furue[1], Sumitaka Hagiwara[1], Masaya Nishikawa[1], Hideharu Hibi[1], Toshio Shigetomi[2], Kenji Mitsudo[3], Iwai Tohnai[3], Takeshi Kobayashi[4], Minoru Ueda[1]

[1]Dept. of Oral and Maxillofacial Surg., Nagoya Univ. Grad. Sch. of Med., [2]Dept. of Oral and Maxillofacial Surg., Nagoya City Univ. Grad. Sch. of Med. Sci., [3]Dept. of Oral and Maxillofacial Surg., Yokohama City Univ. Grad. Sch. of Med., [4]Coll. of Biosci. and Biotech., Chubu Univ.[5]

Pb-29 TAK1 promotes cell survival of HeLa cells exposed to heat stress dependently on TNFAIP3 and IL-8 inductions but independently of NF-κB phosphorylations

Peng Li[1], Yukihiro Furusawa[1], Zheng-Li Wei[1], Hiroaki Sakurai[2], Yoshiaki Tabuchi[3], Qing-Li Zhao[1], Takaharu Nomura[4], Ikuo Saiki[5], Takashi Kondo[1]

[1]Dept. of Radiological Sci. of Toyama Univ., [2]Dept. of Cancer Cell Biology, Toyama Univ., [3]Dept. of Div. of Molecular Genetics Res., Toyama Univ., [4]Dept. of Low Dose Radiat. Res. Center, Komae, [5]Dept. of Div. of Pathogenic Biochem., Toyama Univ.

Pb-30 Thermosensitization and induction of apoptosis or cell-cycle arrest via the MAPK cascade by parthenolide, an NF-κB inhibitor, in human prostate cancer cell lines

Sachiko Hayashi[1], Ken Koshiba[2], Hisaya Shiozaki[2], Masanori Hatashita[3], Takefumi Sato[4], Yutaka Jujo[2], Ryuta Suzuki[2]

[1]Dept. of Expt'l Radiol. and Health Phys., Fac. of Med. Sci., Univ. of Fukui, [2]The Center for Urology and Nephrology, Saitamaken-oh Hosp., [3]Res. and Development, The Wakasa-wan Energy Res. Center, [4]Dept. of Urology, Kitasato Univ. Sch. of Med.

Pb-31 Hyperthermia sensitizes resistant human oral cancer cells to IL-13 cytotoxin

Hideyuki Nakashima[1,2], Mitomu Kioi[1,2], Makiko Sugiura[1], Kei Sugiura[1], Itaru Sato[1], Masaki Iida[1], Kenji Mitsudo[1], Syed R Husain[2], Raj K Puri[2], Iwai Tohnai[1]

[1]Dept. of Oral and Maxillofacial Surg., Yokohama City Univ. Grad. Sch. of Med., [2]Tumor Vaccines and Biotech. Branch, Div. of Cellular and Gene Therapies, CBER, FDA

Pb-32 Controlling gene expression in human prostate cancer cells by ultrasound-responsive promoters

Akihiro Mori[1], Ryohei Ogawa[2], Akihiki Watanabe[1], Takashi Kondo[2], Hideki Fuse[1]

[1]Dept. Urology, Grad Sch. Med. Pharm. Sci., Univ. Toyama, [2]Dept. Radiol. Sci., Grad Sch. Med. Pharmaceut. Sci., Univ. Toyama

Pb-33 Hyperthermia regulates HSP expression in human keratinocytes exposed to ultraviolet B

Paras Jawaid[1], Yoko Yoshihisa[2], Mriame Ali Hassan[1], Mati Ur Rehman[2], Tadamichi Shimizu[2], Takashi Kondo[1]

[1]Dept. of Radiological Sci. Toyama Univ., [2]Dept. of Dermatology Toyama Univ.

Poster-Short Oral pr. 06 | 15:15-18:00

Chairperson: Akira Mogi
Dept. of General Surgical Sci., Gunma Univ. Grad. Sch. of Med.

Pb-34 HIFU-based sonodynamic therapy of melanoma cells with verteporfin

Katsuro Tachibana[1], Seyedeh M. Nejad[1], Reiko Naito[3], Hamid R. Hosseini[2], Hitomi Endo[1], Koichi Ogawa[1], Juichiro Nakayama[3]

[1]Dept. of Anatomy, Fukuoka Univ. Sch. of Med., [2]Bioelectrics Res. Center, Kumamoto Univ., [3]Dept. of Dermatology, Fukuoka Univ. Sch. of Med.

Pb-35 The dual aspects of ATM-Chk2 pathway for the regulation of heat stress induced apoptosis

Takashi Iizumi[1], Li Peng[1], Yukihiro Furusawa[1], Ayako Kariya[1], Qing-Li Zhao[1], Yoshiaki Tabuchi[2], Takashi Kondo[1]

[1]Dept. of Radiological Sci., Toyama Univ., [2]Div. of Molecular Genetics Res., Life Sci. Res. Center, Toyama Univ.

Pb-36 The significance of stress-responsive transcription factors in cancer stem cells

Kazuyo Yasuda, Toshihiko Torigoe, Yoshihiko Hirohashi, Takahumi Kuroda, Akari Takahashi, Noriyuki Sato

First Dept. of Pathology Sapporo Med. Univ. Sch. of Med.

Pb-37 Evaluation of ghost cell survival in the area of radiofrequency ablation

Kuansheng Ma, Qi Wang, Jiansheng Huang, Tingjun Li, Feng Xia, Ming Chen, Shuguang Wang, Ping Bie, Zhenping He

The Inst. of Hepatobiliary Surg., Southwest Hosp., Third Military Med. Univ, Chongqing, P.R.China

Pb-38 Pentoxifylline enhance the efficacy of thermochemotherapy using thermosensitive liposomes

Kotaro Morita[1], Kenichi Kakinuma[2], Friedrich Zywietz[3], Masashi Kato[4]

[1]Dept. of Neurosurgery, Tachikawa General Hosp., [2]Dept. of Neurosurg, Niigata Rosai Hosp., [3]Inst. of Biophysics and Radiobiology Univ. Hosp. Eppendorf, [4]Dept. of Pharm. Niigata Iryo Center

Pb-39 Effects of whole-body heat treatment on the function of T cells in human system

Yasunobu Kobayashi[1], Yusuke Ito[1], Yuri Yoshimoto[1], Ayako Suzuki[1], Valentina V. Ostapenko[1], Norimasa Matsushita[1,3], Kenichiro Imai[1,3], Ryuji Okuyama[1,3], Koichi Shimizu[1,2], Atsushi Aruga[1,4], Keishi Tanigawa[1]

[1]Bio-Thera Clinic, [2]Shin-Itabashi Clinic, [3]Inst. of Gastroenterology, Tokyo Women's Med. Univ., [4]Inst. of Advanced Biomed. Eng. and Sci., Tokyo Women's Med. Univ.

Pb-40 Bystander effect of oncothermia

Gabor Andocs, Yoshiharu Okamoto, Tomohiro Osaki, Takeshi Tsuka, Tomohiro Imagawa, Saburo Minami

Dept. of Veterinary Clinical Med., Fac. of Agric., Tottori Univ.,

Poster-Short Oral pr. 07 | 15:15-18:00

Chairperson: Masashi Kawamura
Kyoto Coll. of Med. Sci. (Kyoto-MSC)

Pb-41 High intensity focused ultrasound therapy for metastatic hepatic cancer

Ihl Bohng Choi, Hyun Ho Choi

Dept. of Radiat. Oncol., Comprehensive Hosp. for Cancer, Coll. of Med., Catholic Univ.

Pb-42 Tumor response and resection margins of rectal cancer after hyperthermochemoradiation therapy

Soichi Tsutsumi[1], Takaaki Fujii[1], Hiroki Morita[1], Toshinaga Suto[1], Jun-ichi Saito[2], Takayuki Asao[1], Takashi Nakano[2], Hiroyuki Kuwano[1]

[1]Dept. of General Surgical Sci., Gunma Univ., Grad. Sch. of Med., [2]Dept. of Radiat. Oncol., Gunma Univ., Grad. Sch. of Med.

Pb-43 Mild electrical stimulation with heat shock (BioMetronome) ameliorates diabetic nephropathy

Yuka Okamoto, Saori Morino-Koga, Tomoaki Koga, Kohei Omachi, Mary Ann Suico, Tsuyoshi Shuto, Hirofumi Kai

Dept. of Molecular Med., Grad. Sch. of Pharm. Sci., Kumamoto Univ.

Pb-44 Cancer Prevention Using SOARA Therapy: A hot bath whole-body hyperthermia treatment

Tomonobu Fukuda, Chiyoko Nukuzuma, Kazuhiko Atsumi

Tokyo SOARA Clinic

Pb-45 A comparison of radiofrequency and microwave hyperthermia on knee osteoarthritis

Kenji Takahashi[1], Sanshiro Hashimoto[2], Hiromasa Kurosaki[3], Kenji Takenouchi[1], Hiroshi Nakamura[1], Shinro Takai[1]

[1]Dept. of Orthop., Nippon Med. Sch., [2]Hashimoto Clinic, [3]Dept. of Radiat. Therapy, Tokyo Kousei Nenkin Hosp.

Pb-46 Biodistribution of temperature-sensitive liposomes for MR-image guided drug delivery

Mariska de Smet[1], Nicole M Hijnen[1], Sander Langereis[2], Edwin Heijman[2], Holger Gruell[1,2]

[1]Eindhoven Univ. of Tech., Dept. of Biomed. Eng., Eindhoven, the Netherlands, [2]Philips Res. Eindhoven, Dept. of Minimally Invasive Healthcare, Eindhoven, the Netherlands

Pb-47 Comparison of Gd-based contrast agents encapsulated in thermosensitive liposomes for MRI guided hyperthermia

Michael Peller[1], Martin Hossann[2,3], Tungte Wang[2,3], Zulfiya Syunyaeva[2], Anja Zengerle[2], Rolf D. Issels[2,3], Maximilian Reiser[1], Lars H. Lindner[2,3]

[1]Inst. for Clinical Radiology, Univ. Hosp. Munich, Ludwig-Maximilians Univ., Munich, [2]Dept. of Med. III, Univ. Hosp. Munich, Ludwig- Maximilians Univ., Munich, Germany, [3]CCG Tumor Therapy through Hyperthermia, Helmholtz Zentrum Muenchen, Germany

Pb-48 Comparison of full bath and half bath in bathing style of Japan on induction of HSP 70, NK cell activity and physical index

Youko Itoh[1], Kazuki Torii[2], Taichi Ishizawa[2], Shingo Yano[2]

[1]Dept. of Nutrition, Shubun Univ. Fac. of Health and Nutrition, [2]Dept. of Products Development, Bathclin Co., Ltd.

Pb-49 The use of bath additive (including inorganic salts and carbon dioxide) enhances the induction of HSP 70, NK cell activity, heat-retaining and improves the physical index

Youko Itoh[1], Kazuki Torii[2], Taichi Ishizawa[2], Shingo Yano[2]

[1]Dept. of Nutrition, Shubun Univ. Fac. of Health and Nutrition, [2]Dept. of Products Development, Bathclin Co., Ltd

Room P

Poster Viewing & Discussion	**18:00-19:00**

Morning Lecture 3 | 8:40-9:10

Chairperson: Hideyuki Sakurai
Dept. of Radiat. Oncol., Univ.of Tsukuba

ML03 Progress in noninvasive MR thermometry

Kagayaki Kuroda[1,2]

[1]Dept. of Human and Information Sci., Sch. of Information Sci. and Tech., Tokai Univ., [2]Int'l Med. Device Alliance, Foundation for Int'l Med. Alliance

Morning Lecture 4 | 9:10-9:40

Chairperson: Takeo Takahashi
Dept. of Radiat. Oncol., Saitama Med. Center, Saitama Med. Univ.

ML04 The combination therapy of hyperthermia, radiotherapy, and/or chemotherapy in the past, present, and future direction for advanced cervical cancer

Yoko Harima

Dept. of Radiology, Kansai Med. Univ.

Break | 9:40-9:50

Symposium 5 | 9:50-11:50

Treatment planning and control of therapy

Chairpersons: Gerard C. van Rhoon
Erasmus MC Daniel den Hoed Cancer Center

Kagayaki Kuroda
Dept. of Human and Information Sci., Sch. of Information Sci. and Tech., Tokai Univ.

S05-1 Towards integration of treatment monitoring with thermal modeling for improved control of heat treatments

Paul R. Stauffer[1], Paolo F. Maccarini[1], Dario B. Rodriques[1], Sara Salahi[1], Oana I. Craciunescu[1], Yu Yuan[2], Shiva K. Das[1]

[1]Radiat. Oncol. Dept., Duke Univ., [2]Radiat. Oncol. Dept., Univ. of Alabama at Birmingham

S05-2 Planning guided hyperthermia treatment of head and neck cancer

Margarethus M. Paulides, Zef Rijnen, Jurriaan F. Bakker, Gerda M. van de Velde, Peter C. Levendag, Gerard C. Van Rhoon

Erasmus MC - Daniel den Hoed Cancer Center

S05-3 Treatment planning specific for interstitial hyperthermia

Yutaka Aoyagi[1], Kazuyuki Saito[2], Hirotoshi Horita[1], Hiroya Ojiri[1], Sinji Yamazoe[1], Tetuya Simizu[1], Chihiro Kanehira[4], Yoshimitu Sunagawa[4], Koichi Ito[3]

[1]Dept. of Radiology Ichikawa, General Hosp., Tokyo Dental Coll., [2]Res. Center for Frontier Med. Eng.,Chiba Univ., [3]Grad. Sch. of Eng.,Chiba Univ., [4]Dept. of Radiology, Jikei Univ. of Med.

S05-4 Theranostic approaches to monitor and control tumor treatment using thermoresponsive nano-liposomes and hyperthermia for triggered drug delivery

Gerben A. Koning

Innovative Targeting Group, Lab. Experimental Surgical Oncol., Dept. of Surg., Erasmus MC

S05-5 Patient-specific treatment planning in hyperthermia, RF and HIFU Ablation

Adamos Kyriakou[1], Esra Neufeld[2], Niels Kuster[1]

[1]IT'IS Foundation/ ETH Zurich, [2]IT'IS Foundation

S05-6 Treatment planning and ultrasound-based temperature monitoring for focused ultrasound thermal therapy

Hao-Li Liu

Dept. of Electrical Eng., Chang-Gung Univ.

Break	**11:50-12:00**

Symposium 6	**13:00-15:00**

Physical medicines with thermal therapy on chronic diseases

Chairpersons: Hirofumi Kai
Dept. of Molecular Med., Kumamoto Univ.

Philp Hooper
Univ. of Colorado Denver, Sch. of Med.

S06-1 Heat shock proteins: Contribution to pathogenesis and treatment of major chronic diseases

Philp Hooper

Univ. of Colorado Denver, Sch. of Med.

S06-2 Mild electrical stimulation and heat shock ameliorates progressive proteinuria and renal inflammation in mouse model of chronic kidney diseases

Hirofumi Kai, Tomoaki Koga, Yukari Kai, Saori M. Koga, Mary Ann Suico, Tsuyoshi Shuto

Dept. of Molecular Med., Kumamoto Univ.

S06-3 Heat treatment with mild electrical stimulation reduces visceral adiposity and improves insulin resistance and inflammatory markers in male subjects with type 2 diabetes

Tatsuya Kondo[1], Rina Matsuyama[1], Katsutoshi Miyagawa[1], Rieko Goto[1], Hirofumi Kai[2], Eiichi Araki[1]

[1]Dept. of Metabolic Med., Fac. of Life Sci., Kumamoto Univ., [2]Dept. of Molecular Med., Fac. of Life Sci., Kumamoto Univ.

S06-4 Withdrawn

S06-5 The enhancement of chemotherapy, immunotherapy and molecular target teherapy by mild-hyperthermia

Takeo Hasegawa[1], Satoshi Kokura[2], Tohru Takahashi[3], Tsutomu Takeda[4], Itsuo Yamamoto[5], Kazuko Uno[1], Kaori Sadamoto[1], Iuko Yasuda[1], Mari Tanigawa[1], Atsuko Kishi[1], Toshikazu Yoshikawa[2]

[1]Dept. of Basic Res., Louis Pasteur Center for Med. Res., [2]Dept. of Molecular Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., [3]Dept. of Radioisotope Center, Kansai Med. Univ., [4]Dept. of Surg., Osaka Center Immuno-Chemotherapy Center, [5]Dept. of Radio-Frequency Res. Center, Yamamoto Vinita Co.

Break	**15:00-15:15**

Poster-Short Oral pr. 01	**15:15-18:00**

Chairperson: Masahiro Kuroda
Radiological Tech., Grad. Sch. of Health Sci., Okayama Univ.

Pc-01 Preparation and characterization of Fe3O4 nano particles for cancer hyperthermia

Makoto Takahashi[1], Yuki Yogo[2], Kaname Tsutsumiuchi[3], Takeshi Kobayashi[4], Noriyasu Kawai[5]

[1]Dept. of Applied Chem., Chubu Univ., [2]Dept. of Applied Chem., Chubu Univ., [3]Dept. of Biological Chem., Chubu Univ., [4]Dept. of Biological Chem., Chubu Univ., [5]Dept. of Nephro-Urology, Nagoya City Univ. Grad. Sch. of Med. Sci.

Pc-02 Compact radiating element for 433 MHz applicator of superficial hyperthermia system

Woo Cheol Choi, Young Joong Yoon, Ki Joon Kim

Dept. of Electrical and Electronic Eng., Yonsei Univ.

Pc-03 Intracavitary applicators for thermotherapy

Jan Vrba[1], Barbora Vrbova[1], Jaroslav Vorlicek[1], David Vrba[2], Jan Vrba Jr.[2]

[1]Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, [2]Dept. of Med. Devices, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague

Pc-04 Heating properties of a new hyperthermia system for non-invasive treatment of deep tumors

Kouhei Yokoyama[1], Yasuhiro Shindo[2], Kazuo Kato[2], Mitsunori Kubo[3], Takeo Uzuka[4], Hideaki Takahashi[4]

[1]Grad. Sch. of Sci. and Tech., Meiji Univ., [2]Dept. of Mechanical Eng. Informatics, Meiji Univ., [3]The Future Creation Lab., Olympus Co., LTD., [4]Niigata Cancer Center, Section of Neurosurgery

Pc-05 Human-tissue-equivalent phantom compatible for hyperthermia and 3.0 T MRI

Hirokazu Kato[1], Kengo Hattori[2], Yusuke Ikemoto[3], Wataru Takao[3], Seiichiro Ohno[1], Takashi Harimoto[1], Masahiro Kuroda[1], Koichi Shibuya[1], Masataka Oita[1], Nobue Uchida[4], Susumu Kanazawa[5]

[1]Grad. Sch. of Health Sci., Okayama Univ., [2]Dept. of Radiology, Nagoya Memorial Hosp., [3]Dept. of Radiology, Okayama Kyokuto Hosp., [4]Dept. of Radiology, Tottori Pref. Central Hosp., [5]Grad. Sch. of Med., Dentistry and Pharm. Sci., Okayama Univ.

Pc-06 Heating properties of coaxial needle applicator made of shape memory alloy

Tatsuya Yamada[1], Yasuhiro Shindo[2], Kazuo Kato[2], Mitsunori Kubo[3], Takeo Uzuka[4], Akira Takeuchi[5]

[1]Grad. Sch. of Sci. and Tech., Meiji Univ., [2]Dept. of Mechanical Eng. Informatics, Meiji Univ., [3]The Future Creation Lab., Olympus Co., LTD, [4]Niigata Cancer Center, Section of Neurosurgery, [5]Dept. of Thermotherapy, Luke Clinic

Pc-07 Heating performances of circular loop antenna in water for external hyperthermic application

Samon Ishikawa, Kazuyuki Saito, Masaharu Takahashi, Koichi Ito

Chiba Univ.

Pc-08 Simulations and experimental verifications of influence of blod-flow on temperature distribution during hyperthermia treatment

Jan Vrba[1], Tomas Vydra[1], Daniel Havelka[1], Jan Vrba Jr.[2], David Vrba[2], Barbora Vrbova[1], Jaroslav Vorlicek[1]

[1]Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, [2]Dept. of Med. Devices Field, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague

Pc-09 Deep local hyperthermia using implantable electrodes and insulation sheets: evaluation of power absorption uniformity in the heating target organ

Hiroshi Hirayama[1], Kenji Shiba[2]

[1]Applied Electronics, Grad. Sch. of Industrial Sci. and Tech., Tokyo Univ. of Sci., [2]Dept. of Applied Electronics, Fac. of Industrial Sci. and Tech., Tokyo Univ. of Sci.

Pc-10 Deep local hyperthermia combined with flexible ribbon-type wireless energy transmission -Analysis of SAR in abdominal region-

Takehiro Shibuya[1], Kenji Shiba[2]

[1]Applied Electronics, Grad. Sch. of Industrial Sci. and Tech., Tokyo Univ. of Sci., [2]Dept. of Applied Electronics, Fac. of Industrial Sci. and Tech., Tokyo Univ. of Sci.

Pc-11 Fast thermal simulations with realistic 3D vessel networks

Petra Kok[1], Nico van den Berg[2], Arjan Bel[1], Hans Crezee[1]

[1]Dept. Radiat. Oncol., Academic Med. Center, Univ. of Amsterdam, [2]Dept. Radiotherapy, Univ. Med. Center Utrecht

Pc-12 A fast adaptive power scheme based on temperature distribution and convergence value for optimal hyperthermia treatment

Huang-Wen Huang[1], Chi-Feng Chiang[2], Win-Li Lin[2]

[1]Dept. of Innovative Information and Tech., Langyang Campus, Tamkang Univ., [2]Inst. of Biomed. Eng., Nat'l Taiwan Univ., Taipei, Taiwan

Poster-Short Oral pr. 02 | 15:15-18:00

Chairperson: Hironobu Nakamura
Saito Yukoukai Hosp.

Pc-13 Effective heating for tumors with thermally significant blood vessels during hyperthermia treatment

Huang-Wen Huang[1], Chi-Feng Chiang[2], Win-Li Lin[2]

[1]Dept. of Innovative Information and Tech., Langyang Campus, Tamkang Univ., [2]Inst. of Biomed. Eng., Nat'l Taiwan Univ., Taipei, Taiwan

Pc-14 Introduction on coaxial-dipole antenna for generation of controllable heating patterns in longitudinal direction

Koichi Ito[1], Kazuyuki Saito[2], Hiroshi Itakura[1], Samon Ishikawa[1], Masaharu Takahashi[2]

[1]Grad. Sch. of Eng., Chiba Univ., [2]Res. Center for Frontier Med. Eng., Chiba Univ.

Pc-15 Design and characterization of dual-curvature 1.5-dimensional focused ultrasound phased-array transducer for tumor thermal therapy

Gin-Shin Chen[1], Che-Yu Lin[2], Jong Seob Jeong[3], Jonathan M. Cannata[4], Hsu Chang[1], K. Kirk Shung[4], Win-Li Lin[2]

[1]Div. of Med. Eng. Res., Nat'l Health Res. Inst., [2]Inst. of Biomedicla Eng., Nat'l Taiwan Univ., Taipei, Taiwan, [3]Dept. of Med. Biotech., Dongguk Univ., Seoul, Korea, [4]Dept. of Biomed. Eng., Univ. of Southern California, Los Angeles, CA.

Pc-16 Conditions of homogeneous SAR distribution in regional thermotherapy

Barbora Vrbova[1], Jan Vrba[1], David Vrba[2], Jan Vrba Jr.[2], Jaroslav Vorlicek[1]

[1]Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, [2]Dept. of Med. Devices Field, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague

Pc-17 Design of slot applicator for local thermotherapy

Jaroslav Vorlicek[1], Jaroslav Kosik[2], Jan Vrba[1]

[1]Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, [2]Dept. of Med. Devices, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague

Pc-18 Microwave applicators with optimized effective aperture

Jan Vrba Jr.[1], David Vrba[1], Barbora Vrbova[2], Jaroslav Vorlicek[2], Jan Vrba[2]

[1]Dept. of Med. Devices, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague, [2]Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague

Pc-19 Evaluation on heating characteristics of the microwave antenna for tissue coagulation device

Mizuki Inoue[1], Kazuyuki Saito[2], Masaharu Takahashi[2], Koichi Ito[1]

[1]Grad. Sch. of Eng., Chiba Univ., [2]Res. Center for Frontier Med. Eng., Chiba Univ.

Pc-20 Adverse effect of radiofrequency capacitive hyperthermia with magnetite on blood vessel walls: An agar phantom study

Noriyasu Kawai, Taku Naiki, Toshiki Etani, Daichi Kobayashi, Yosuke Ikegami, Ryosuke Ando, Yoshihiro Hashimoto, Keiichi Tozawa, Kenjiro Kohri

Dept. of Urology, Nagoya City Univ. of Med.

Pc-21 ***In vitro*** **assessment of change of the apparent diffusion coefficient of Jurkat cells after heating using bio-phantoms and MRI**

Masahiro Kuroda[1], Kazunori Katashima[2], Masakazu Ashida[2], Susumu Kanazawa[3], Shoji Kawasaki[1], Hirokazu Kato[1]

[1]Radiological Tech., Grad. Sch. of Health Sci., Okayama Univ., [2]Dept. of Oral and Maxillofacial Radiology, Grad. Sch. of Med., Dentistry and Pharm. Sci., [3]Dept. of Radiology, Grad. Sch. of Med., Dentistry and Pharm. Sci., Okayama Univ.

Pc-22 **High-sensitive** ***in vivo*** **detection of oxidative stress with OKD48 transgenic mice**

Daisuke Oikawa[1,2], Ryoko Akai[1,2], Mio Tokuda[2], Takao Iwawaki[1,2,3]

[1]Iwawaki lab, ASRLD Unit, Gunma Univ., [2]Iwawaki Initiative Res. Unit, ASI, RIKEN., [3]PRESTO, JST.

Pc-23 **Three-dimensional cell culture array using magnetic force-based cell patterning for analysis of the competitive effect of NPrCAP and heat treatments**

Hiroyuki Honda[1], Syuhei Yamamoto[1], Mina Okochi[1], Kowichi Jimbow[2]

[1]Dept. of BioTech., Grad. Sch. of Eng., Nagoya Univ., [2]Dept. of Dermatology, Sapporo Med. Univ. Sch. of Med.

Pc-24 **Analysis of tumor-infiltrating lymphocytes after hyperthermia using functionalized magnetite nanoparticles**

Masaki Yamaguchi[1], Akira Ito[1], Noriaki Okamoto[1], Yuji Sanematsu[1], Yoshinori Kawabe[1], Kazumasa Wakamatsu[2], Shosuke Ito[2], Hiroyuki Honda[3], Takeshi Kobayashi[4], Eiichi Nakayama[5], Yasuaki Tamura, Masae Okura[7], Toshiharu Yamashita[7], Kowichi Jimbow[7], and Masamichi Kamihira[1]

[1]Dept. of Chem. Eng., Fac. of Eng., Kyushu Univ., [2]Dept. of Chem., Fujita Health Univ. Sch. of Health Sci., [3]Deprt. of Biotech., Sch. of Eng., Nagoya Univ., [4]Sch. of Biosci. and Biotech., Chubu Univ., [5]Fac. of Health and Welfare, Kawasaki Univ. of Med. Welfare, [6]First Dept. of Pathology, Sapporo Med. Univ. Sch. of Med., [7]Dept. of Dermatology, Sapporo Med. Univ. Sch. of Med.

Pc-25 **Synthesis of antibody-conjugating P(VP-MMA-MA)-coated magnetite nanoparticles to target HER2-overexpressing gastric cancer cells**

Kaname Tsutsumiuchi[1], Honami Kamiya[1], Mina Kondo[1], Makoto Takahashi[2], Hayao Nakanishi[3], Takeshi Kobayashi[1]

[1]Coll. of BioSci. and BioTech., Chubu Univ., [2]Coll. of Eng., Chubu Univ., [3]Div. of Oncological Pathology, Aichi Cancer Center Res. Inst.

Poster-Short Oral pr. 03 | 15:15-18:00

Chairperson: Akira Takeuchi
Dept. of Thermotherapy, Luke Clinic

Pc-26 Assessment of normal tissue temperature rise in magnetic nanoparticle hyperthermia

Alireza Mashal, Martin Huisjen, Dan McKenna

Actium Biosystems

Pc-27 Preparation of nano-sized magnetic $Y_3Fe_5O_{12}$ powder by bead milling and its high heat generation ability in ac magnetic field

Hiromichi Aono, Tadahiko Nishimori

Grad. Sch. of Sci. and Eng., Ehime Univ.

Pc-28 Simulation of temperature rise induced by HIFU in tissue mimicking gel considering cavitation bubbles

Ayumu Asai[1], Hiroki Okano[1], Shin Yoshizawa[1], Shin-ichiro Umemura[1,2]

[1]Dept. of Electrical and Communication Eng., Tohoku Univ., [2]Dept. of Biomed. Eng., Tohoku Univ.

Pc-29 Simultaneous generation of multiple cavitation clouds by phased array transducer

Kotaro Nakamura[1], Ayumu Asai[1], Hiroshi Sasaki[1], Hiroki Okano[1], Shin Yoshizawa[1], Shin-ichiro Umemura[1,2]

[1]Dept. of Electrical and Communication Eng., Tohoku Univ., [2]Dept. of Biomed. Eng., Tohoku Univ.

Pc-30 Quantitative 3D-reconstruction of high intensity focused ultrasound pressure field from optical measurement

Soichiro Harigane[1], Ryo Miyasaka[1], Shin Yoshizawa[1], Shin-ichiro Umemura[1,2]

[1]Dept. of Electrical and Communication Eng., Tohoku Univ., [2]Dept. of Biomed. Eng., Tohoku Univ.

Pc-31 Optimization of HIFU treatment by focus steering

Kosuke Matsuki[1], Ryuta Narumi[1], Takashi Azuma[1], Kiyoshi Yoshinaka[2], Akira Sasaki[1], Kohei Okita[3], Shu Takagi[1], Yoichiro Matsumoto[1]

[1]Dept. of Mechanical Eng., The Univ. of Tokyo, [2]Nat'l Inst. of Advanced Industrial Sci. and Tech., [3]Dept. of Mechanical Eng., Coll. of Industrial Tech., Nihon Univ.

Pc-32 Three-Dimensional vessel tracking for liver HIFU using stereoscopic MR imaging

Etsuko Kumamoto[1,2], Shunpei Iwaoka[2], Daisuke Kokuryo[3], Toshiya Kaihara[2], Kagayaki Kuroda[4,5]

[1]Information Tech. and Sci. Center, Kobe Univ., [2]Grad. Sch. of System Informatics, Kobe Univ., [3]Molecular Imaging Center, Nat'l Inst. of Radiological Sci., [4]Grad. Sch. of Eng., Tokai Univ., [5]Int'l Med. Device Alliance, Foundation for Int'l Med. Alliance

Pc-33 Numerical modeling of HIFU ablation of solid malignancies

Adamos Kyriakou[1], Esra Neufeld[2], Niels Kuster[1]

[1]IT'IS Foundation/ ETH Zurich, [2]IT'IS Foundation

Pc-34 Development of disposable perfusion system for chemo hyperthermic peritoneal perfusion and our use experiences

Mitsuhiro Morikawa, Kanji Katayama, Makoto Murakami, Daisuke Fujimoto, Katsuji Sawai, Kenji Koneri, Yasuo Hirono, Takanori Goi, Atsushi Iida, Akio Yamaguchi

First Dept. of Surg., Univ. of Fukui

Pc-35 MRI-compatible ring-typed ultrasound phased-array transducer for breast tumor thermal therapy

Bo-Sian Lin[1], Pi-Hsien Lien[1], Gin-Shin Chen[2], San-Chao Hwang[2], Sheng-Fu Chen[2], Yung-Yaw Chen[3], Win-Li Lin[1,2]

[1]Inst. of Biomed. Eng., Nat'l Taiwan Univ., Taipei, Taiwan, [2]Div. of Med. Eng. Res., Nat'l Health Res. Inst.s, Zhunan, Taiwan, [3]Dept. of Electrical Eng., Nat'l Taiwan Univ., Taipei, Taiwan

Poster-Short Oral pr. 04 | 15:15-18:00

Chairperson: Keishi Tanigawa
Bio-thera Clinic

Pc-36 Wideband conformal metamaterial antennas for phased array heating of adult bladder

Tiago R. Oliveira[1,4], Sara Salahi[2], Gerard Aknine[3], M. Teresa Lamy[1], Paolo F. Maccarini[4], Paul R. Stauffer[4]

[1]Instituto de Fisica, Universidade de Sao Paulo, [2]Biomed. Eng., Duke Univ., Durham, NC, [3]BioThermatics, Inc, Franklin, TN, [4]Dept. of Radiat. Oncol., Duke Univ., Durham, NC

Pc-37 Heating characteristics of metallic stent fed by endoscopic coaxial probe for microwave thermal therapy for bile duct carcinoma

Hiroshi Itakura[1], Kazuyuki Saito[2], Masaharu Takahashi[2], Koichi Ito[1]

[1]Grad. Sch. of Eng., Chiba Univ., [2]Res. Center for Frontier Med. Eng., Chiba Univ.

Pc-38 Reduction of heat sensation of a patient using the silicone gel

Daisuke Kobayashi[1], Tomonori Isobe[2], Kenta Takada[2], Keiji Suzuki[1], Koichi Shida[1], Masashi Seki[1], Hiroshi Yokota[1], Takeji Sakae[2], Hideyuki Sakurai[2]

[1]Dept. of Radiology, Tsukuba Univ. Hosp., [2]Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba

Pc-39 Hybrid head and neck hyperthermia and 7T MR imaging: a pilot study

Rene Verhaart[1], J.J Bluemink[2], J.F. Bakker[1], P. Togni[1], A.J.E. Raaijmakers[2], G.C. van Rhoon[1], C.A.T. van den Berg[2], M.M. Paulides[1]

[1]Dept. of Radiotherapy, Hyperthermia Unit, Erasmus MC Rotterdam, the Netherlands, [2]Dept. of Radiotherapy, Univ. Med. Center Utrecht, the Netherlands

Pc-40 Foresight of hyperthermia

Kimiko Yoshimizu[1], Itsuo Yamamoto[2], Emi Takayama[3], Tohru Takahashi[4], Takeo Hasegawa[5]

[1]Garden Clinic Nakamachi, [2]Yamamoto Vinita Co., Ltd, [3]Aman Co., Ltd., [4]Kansai Med. Univ., [5]Louis Pasteur Center for Med. Res.

Pc-41 The optimal heating method for superficial tumors

Kenta Takada[1], Tomonori Isobe[1], Daisuke Kobayashi[2], Yutaro Mori[1], Keiji Suzuki[2], Koichi Shida[2], Yousuke Yoshimura[1], Masashi Seki[2], Hiroshi Yokota[2], Hideyuki Sakurai[1], Takeji Sakae[1]

[1]Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, [2]Dept. of Radiology, Tsukuba Univ. Hosp.

Pc-42 Numerical analysis of coupled effects of pulsatile blood flow and thermal relaxation time during thermal therapy

Tzyy-Leng Horng

Dept. of Applied Math., Feng Chia Univ.

Pc-43 Clinical benefit of replacing the sigma 60 by the sigma eye applicator: A Monte Carlo based uncertainty analysis

Richard A M Canters, Maarten M Paulides, Gerard C Van Rhoon

Erasmus MC - Daniel den Hoed, Dept. of Radiat. Oncol., Rotterdam, the Netherlands

Pc-44 Towards improved hyperthermia treatment planning (HTP) based on MRI data acquisition

Edmond Balidemaj[1], Cornelis A.T. van den Berg[2], Aart Nederveen[3], Astrid van Lier[2], Petra Kok[1], Hans Crezee[1]

[1]Radiotherapy, Academic Med. Center, Amsterdam, Netherlands, [2]Radiotherapy, Univ. Med. Center Utrecht, Utrecht, Netherlands, [3]Radiology, Academic Med. Center, Amsterdam, Netherlands

Pc-45 Optimization of the electromagnetic performance of the HyperCollar redesign

Paolo Togni, Zef Rijnen, Roel Roskam, Gerard C. Van Rhoon, Margarethus M. Paulides

Dept. Radiotherapy -Hyperthermia unit, Erasmus MC, Rotterdam

Pc-46 Frequency dependent focusing with UWB hyperthermia applicator for H&N cancer treatment

Hana Dobsicek Trefna, Johanna Gellermann, Mikael Persson

Dept. Signals and systems, Chalmers Univ. of Tech.

Pc-47 Double 434MHz hyperthermia unit designed for single and multiple large superficial and semi-deep tumor lesions

Pier F. Pavoni[1], Paolo Pacetti[1], Luigi Dicarlo[1], Francesca Cappelli[1], Federica Fedeli[1], Hans Crezee[2], Paul j Z.V. Sive Vording[2], Amalia Di Dia[3], Rocco Panaia[3], Pietro Gabriele[3]

[1]RESTEK Rome, Italy, [2]AMC Amsterdam, Nederland, [3]IRCC Candiolo (TO), Italy

Room P

Poster Viewing & Discussion	**18:00-19:00**

Morning Lecture 5 | 8:40-9:10

Chairperson: Hiroshi Maezawa
The Univ.of Tokushima Grad. Sch., Dept. of Radiological Sci.

ML05 Detection and clinical application of novel stress biomarkers in peripheral blood

Kazuhito Rokutan

Dept. of Stress Sci., Inst. of Health Biosci., Tokushima Univ. Grad. Sch.

Morning Lecture 6 | 9:10-9:40

Chairperson: Koji Ono
Kyoto Univ.Res. Reactor Inst., Director of Radiat. Oncol. Res. Center

ML06 Thermochemistry: A multifaceted energy source for ablation

Erik Cressman

Dept. of Radiol Univ. of Minnesota Med. Center

Break | 9:40-9:50

Symposium 7 | 9:50-11:50

State of the art in clinical heating and prospective heating technologies

Chairpersons: Paul R. Stauffer
Radiat. Oncol. Dept., Duke Univ.

Youji Kotsuka
Tokai Univ.

S07-1 Microwave heating by thin coaxial antennas
-Application to interstitial and intracavitary hyperthermia-

Kazuyuki Saito[1], Masaharu Takahashi[1], Koichi Ito[2]

[1]Res. Center for Frontier Med. Eng., Chiba Univ., [2]Grad. Sch. of Eng., Chiba Univ.

S07-2 Catheter-based ultrasound thermal therapy integrated with Image-Guided HDR brachytherapy for treatment of locally advanced or recurrent pelvic disease

Chris J. Diederich, Jeff H Wootton, Vasant Salgaonkar, Punit Prakash, Titania Juang, Serena Scott, Richard Cam, Xin Chen, I.C. Joe Hsu

Radiat. Oncol., Univ. of California-San Francisco

S07-3 **Conformal microwave applicator using patch antennas for chestwall recurrence of breast cancer**

Kavitha Arunachalam[1], Paolo F Maccarini[2], Oana I Craciunescu[2], Titania Juang[2], Daniel Neuman[3], Francesca Rossetto[3], Vinicio Manfrini[3], Chris Diederich[3], Jaime L Schlorff[4], Paul R Stauffer[2]

[1]Dept. of Eng. Design, Indian Inst. of Tech. Madras, India, [2]Dept. of Radiat. Oncol., Duke Univ. Med. Center, USA, [3]Dept. of Radiat. Oncol., Univ. of San Francisco, USA, [4]Bionix Development Co., Paoli, Pennsylvania USA

S07-4

S07-5 **Locoregional heat delivery using capacitively coupled heating method: Usefulness of an insulator sheet for optimization of deep heating area**

Takayuki Ohguri[1], Motohiro Murakami[2], Katsuya Yahara[1], Hajime Imada[2,3], Yukunori Korogi[1]

[1]Dept. of Radiology, Univ. of Occupational and Environmental Health, [2]Dept. of Med. Electronics, Univ. of Occupational and Environmental Health, [3]Dept. of Cancer Therapy Center, Tobata Kyoritsu Hosp.

S07-6 **Locoregional heat delivery using phased array hyperthermia systems**

Hans Crezee, Petra Kok, Gerard van Stam, Paul Zum Vorde Sive Vording, Arjan Bel, Jan Sijbrands, Edmond Balidemaj, Maarten Hulshof

Dept. of Radiat. Oncol., Academic Med. Center/ Univ. of Amsterdam

Break	**11:50-12:00**

Luncheon Seminar 2	**12:00-13:00**

Chairperson: Tohru Tani
Dept. of Surg., Shiga Univ. of Med. Sci.

LS2 **Perioperative chemotherapy for curative treatment of colon cancer : XELOX/FOLFOX therapy as a second scalpel**

Hideto Fujita, Takashi Fujimura, Tetsuo Ohta

Dept. of Gastroenterological Surg., Kanazawa Univ. Hosp.

Sponsored by Yakult Honsha Co., Ltd.

Symposium 8 | 13:00-15:00

Hyperthermia and immunotherapy

Chairpersons: Milton B. Yatvin
Biology Dept., Reed Coll.

Sharon S. Evans
Dept. of Immunology, Roswell Park Cancer Inst.

S08-1 Activation and inhibition of gamma delta T cell mediated anti tumor immunity by heat shock proteins

Shubhada V Chiplunkar

Chiplunkar Lab, ACTREC, Tata Memorial Center, Kharghar, Navi Mumbai

S08-2 The scientific rationale for treating immunologically competent patients with high level whole body hyperthermia

Milton B. Yatvin[1,3], George Ivanov[2], Alexei Suvernev[2,3]

[1]Biology Dept., Reed Coll., [2]Inst. Siberian Sci. Res. Institution of Hyperthermia, [3]Institution Heatheal

S08-3 Hyperthermia enhances immunotherapy in cancer patients: 1466 clinical cases

Tsutomu Takeda[1], Tohru Takahashi[2], Takashi Takeda[1], Hiroko Takeda[1]

[1]Osaka Cancer Immuno-chemotherapy Center, Kyohrinkai, [2]RI Center, Kansai Med. Univ.

S08-4 Effects of hyperthermia in combination with NK cell based-immune cell therapy on cancer patients

Hiroshi Terunuma[1,2,3], Noriyuki Nishino[2], Xuewen Deng[3], Akiko Yoshimura[1], Yoshinao Takano[2], Atsushi Toki[1], Tatsuaki Ishiguro[1], Mie Nieda[3], Jin-ichi Sasanuma[1], Yasushi Teranishi[2], Kazuo Watanabe[1,2]

[1]Tokyo Clinic, [2]Southern Tohoku General Hosp., [3]Biotherapy Inst. of Japan

S08-5 Hyperthermic targeting of the immune microenvironment for improved cancer immunotherapy

Sharon S. Evans

Dept. of Immunology, Roswell Park Cancer Inst.

Banquet | 18:40-21:00

Morning Lecture 7 | 8:40-9:10

Chairperson: **Chung K. Lee**
Dept. of Radiat. Oncol., Univ.of Minnesota Med. Sch.

ML07 **New paradigms for targeted drug delivery using thermolabile drug delivery systems: A bench to bedside journey**

Mark Dewhirst

Dept. of Radiat. Oncol., Duke Univ. Med. Center, Durham, NC

Morning Lecture 8 | 9:10-9:40

Chairperson: **Tsutomu Takeda**
Osaka Cancer Immuno-Chemotherapy Center, Kyohrinkai

ML08 **Role of thermal therapy in regulation of bone marrow homeostasis and immune function following radiation: New clinical opportunities?**

Elizabeth A. Repasky

Dept. of Immunology, Roswell Park Cancer Inst.

Break | 9:40-9:50

Symposium 9 | 9:50-11:50

Cell signaling and damage response

Chairpersons: **Masahiko Miura**
Oral Radiat. Oncol., Grad. Sch. of Med. and Dental Sci., Tokyo Med. and Dental Univ.

Hiroyuki Kitao
Dept. of Molecular Oncol., Grad. Sch. Med. Sci., Kyushu Univ.

S09-1 **Hyperthermia activates both ATM and ATR signaling pathways for cell tolerance against heat**

Hiroyuki Kitao[1], Tuul Munkhbold[1,2], Makoto Iimori[1], Kazuaki Matsuoka[1], Shinichi Kiyonari[1], Hiroshi Saeki[2], Eiji Oki[2], Masaru Morita[2], Yoshihiko Maehara[2]

[1]Dep. of Molecular Oncol., Grad. Sch. Med. Sci., Kyushu Univ., [2]Dep. of Surg. and Sci., Grad. Sch. Med. Sci., Kyushu Univ.

S09-2 **ATM is the predominant kinase involved in the phosphorylation of histone H2AX after heating**

Akihisa Takahashi[1], Eichiro Mori[2,3], David J. Chen[3], Takeo Ohnishi[2]

[1]ASRLD Unit, Gunma Univ., [2]Dept. of Radiat. Oncol., Nara Med. Univ., [3]Div. of Mol. Radiat. Biol., Dept. of Radiat. Oncol., UT Southwestern Med. Center

S09-3 Stress-Induced, NO-mediated bystander responses for protecting cells themselves

Hideki Matsumoto

Div. of Oncol., Biomed. Imaging Res. Center, Univ. of Fukui

S09-4 Global expression profiling of genes induced by heat stress

Yoshiaki Tabuchi[1], Yukihiro Furusawa[2], Kenzo Ohtsuka[3], Takashi Kondo[2]

[1]Life Sci. Res. Ctr., Univ. of Toyama, [2]Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, [3]Dept. of Environmental Biol., Chubu Univ.

S09-5 Role of AMPK/mTOR signaling pathway in the response of cancer cells and cancer stem cells to hyperthermia

Chang W. Song[1], Troy A. Dos Santos[1], Hyemi Lee[2], Eun J. Kim[2], Heon J. Park[1,2]

[1]Dept. of Radiat. Oncol., Univ. of Minnesota, [2]Dept. of Microbiology, Coll. of Med., Inha Univ., Inchon, Korea

S09-6 The protective effect of mild heat preconditioning at 40C involves the ER stress response

Diana A. Averill-Bates, Pragathi Pallepati

Dept. des Sci. biologiques, Universite du Quebec a Montreal

S09-7 NADPH oxidase-mediated reactive oxygen species production activates hypoxia-inducible factor-1 (HIF-1) via the ERK pathway after hyperthermia treatment

Mark W. Dewhirst[1], Ejung Moon[2]

[1]Radiat. Oncol. Dept., Duke Univ., [2]Radiat. Oncol. Dept., Stanford Univ.

Break	**11:50-12:00**

Symposium 10 (ICHO-BSSR* joint symposium)	**13:00-15:00**

ICHO-BSSR joint symposium: Heat shock factors, heat shock proteins and cancer

Chairpersons: Len Neckers
Urologic Oncol. Branch, Center for Cancer Res., Nat'l Cancer Inst.

Toshihiko Torigoe
Dept. of Pathology, Sapporo Med. Univ. Sch. of Med.

S10-1 Heat shock factors and cancer

Akira Nakai

Dept. of Biochem. and Molecular Biology, Yamaguchi Univ. Sch. of Med.

S10-2 Stress response genes are molecular targets of cancer stem cells

Toshihiko Torigoe[1], Kazuyo Yasuda[1], Yoshihiko Hirohashi[1], Satoshi Nishizawa[2], Akari Takahashi[1], Yasuaki Tamura[1], Isao Hara[2], Noriyuki Sato[1]

[1]Dept. of Pathology, Sapporo Med. Univ. Sch. of Med., [2]Dept. of Urology, Wakayama Med. Univ.

S10-3 Control of Cdc37/Hsp90 and kinase signaling in prostate cancer by scan domain proteins

Takanori Eguchi, Thomas L Prince, Ayesha Murshid, Stuart K Calderwood

Dept. of Radiat. Oncol., BIDMC, Harvard Med. Sch.

S10-4 Phosphorylation of a conserved tyrosine residue in the Hsp90 N-domain determines cancer sensitivity to Hsp90 inhibition *in vitro* and *in vivo*

Len Neckers

Urologic Oncol. Branch, Center for Cancer Res., Nat'l Cancer Inst.

S10-5 Hsp90 and the tumor microenvironment

Jane B. Trepel, Sylvia V. Alarcon, Min-Jung Lee, Tomohiro Kajiguch, Sunmi Lee, Wanping Xu, Fumitaka Koga, Shinji Tsutsumi, Mehdi Mollapour, Akihiro Yano, Len Neckers

Med. Oncol. Branch, Center for Cancer Res., NCI

Break	**15:00-15:15**

Poster-Short Oral pr. 01:Japanese	**15:15-16:45**

Chairperson: Yoshio Tamaki

Dept. of Radiat. Oncol., Gunma Pref. Cancer Center

Pj-01 Mild electrical stimulation with heat shock ameliorates proteinuria and nephritis in mouse model of X-linked alport syndrome

Yukari Kai[1], Tomoaki Koga[2], Ryosuke Fukuda[1], Saori Morino-Koga[3], Mary A. Suico[1], Kosuke Koyama[1], Tsuyoshi Shuto[1], Hirofumi Kai[1]

[1]Dept. of Molecular Med., Grad. Sch. of Pharm. Sci., Kumamoto Univ., [2]Dept. of Med. Biochem., Grad. Sch. of Med. Sci., Kyushu Univ., [3]Dept. of Dermatology, Grad. Sch. of Med. Sci., Kyushu Univ.

Pj-02 Mild electrical stimulation suppresses fat accumulation and increases stress resistance via activation of LKB1-AMPK signaling in C. elegans

Shingo Matsuyama, Shuichiro Yano, Saori Morino-Koga, Yuka Okamoto, Ihori Shitanda, Kohei Omachi, Masataka Moriuchi, Mary Ann Suico, Tsuyoshi Shuto, Hirofumi Kai

Dept. of Molecular Med., Grad. Sch. of Pharm. Sci., Kumamoto Univ.

Pj-03 Mild electrical stimulation suppresses pro-inflammatory cytokines expression via inhibition of multiple signaling pathways

Ihori Shitanda, Yuichiro Shimauchi, Saori Morino-Koga, Shuichiro Yano, Tomoaki Koga, Shingo Matsuyama, Mary A Suico, Tsuyoshi Shuto, Hirofumi Kai

Dept. of Molecular Med., Grad. Sch. of Pharm. Sci., Kumamoto Univ.

Pj-04 Specified pulse-width mild electrical stimulation induces p53 phosphorylation and transcriptional activation

Ryosuke Fukuda, Kosuke Koyama, Kohei Omachi, Yukari Kai, Shingo Matsuyama, Yuka Okamoto, Mary A Suico, Tsuyoshi Shuto, Hirofumi Kai

Dept. of Molecular Med., Grad. Sch. of Pharm. Sci., Kumamoto Univ.

Pj-05 Effects of hyperthermia combined with siRNA targeted for HSF1 and/or low dose chemotherapy in HSC3 cells

Shigehito Wada[1], Yoshiaki Tabuchi[2], Ayako Kariya[3], Takashi Kondo[3]

[1]Dept. of Oral Surg., Univ. of Toyama, [2]Div. of Molecular Genetics Res., Life Sci. Res. Center, Univ. of Toyama, [3]Deprt of Radiological Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama

Pj-06 Involvement of Hsp90 in epstein-barr virus lytic replication

Daisuke Kawashima, Tatsuya Tsurumi

Div. of Virology, Aichi Cancer Center Res. Inst.

Pj-07 Development of heat ablation area measuring system based on amplitude modulated acoustic radiation force

Hirofumi Nakamura[1], Ryosuke Aoyagi[1], Wataru Baba[1], Takashi Azuma[1], Keisuke Fujiwara[3], Hideki Takeuchi[3], Kazunori Itani[3], Kiyoshi Yoshinaka[2], Akira Sasaki[1], Shu Takagi[1], Yoichiro Matsumoto[1]

[1]Dept. of Mechanical Eng., The Univ. of Tokyo, [2]Dept. of Human Life Tech., Advanced Industrial Sci. and Tech., [3]Hitachi-Aloka Med.

Pj-08 HIFU oral squamous cell carcinoma killing with TiO2

Hiromasa Takahashi[1], Seyedeh Moosavi Nejad[2], S. Hamid R. Hosseini[3], Taishi Otani[1], Eiko Higashi[2], Hitomi Endo[2], Loreto B. Feril Jr.[2], Katsuyuki Nakano[4], Toshihiro Kikuta[1], Katsuro Tachibana[2]

[1]Dept. of Oral and Maxillofacial Surg., Fac. of Med, Fukuoka Univ., [2]Dept. of Anatomy, Fukuoka Univ. Sch. of Med., [3]Bioelectrics Res. Center, Kumamoto Univ., [4]Dept. of Chem. Eng., Fac. of Tech., Fukuoka Univ.

Pj-09 Hyperthermia using implant of resonant circuit delivered through 18G-needle

Kazuya Kumagai[1], Kazuhiko Watabe[1], Ryo Matsumura[1], Tsutomu Yamada[1], Kyohei Kezuka[1,2], Reiko Kurotani[3], Iwai Tohnai[2], Yoshihiro Ishikawa[2], Yasushi Takemura[1]

[1]Dept. of Erectronics and Information Tech., Yokohama Nat'l Univ., [2]Dept. of Med., Yokohama City Univ., [3]Dept. of Sci. and Eng.,Yamagata Univ.

Poster-Short Oral pr. 02:Japanese | 15:15-16:45

Chairperson: Koh Tsuji
Nat'l Hosp. Org. Minami Wakayama Med. Center, Dept. of Radiology

Pj-10 The efficacy of a catheter filled with a xylocaine jelly to eliminate the disturbance in the measurement of temperature by thermocouples in the presence of radiofrequency current

Motohiro Murakami[1], Takayuki Ohguri[2], Katsuya Yahara[2], Miyuki Hanada[3], Sanae Matsuoka[3]

[1]Dept. of Med. Electronics, Univ. of Occupational and and Environmental Health, [2]Dept. of Radiology, Univ. of Occupational and and Environmental Health, [3]Nursing Dept., Univ. of Occupational and and Environmental Health

Pj-11 For making the hyperthermia treatment widely known in a hospital

Yumiko Kawasaki[1], Hideyuki Morosasa[1], Yoshiki Miya[1], Akihiro Endoh[1], Yoshihiko Furuta[1], Takayuki Shishido[2], Eiri Ezoe[2], Yoshiyuki Yanai[2], Rika Fukui[2], Takahiro Yasoshima[2]

[1]Section of clinical Eng., Shinsapporo Keiaikai Hosp., [2]Dept. of Surg., Shinsapporo Keiaikai Hosp.

Pj-12 Three cases of avascular osteonecrosis after hyperthermia

Satoshi Yamada[1], Atsunori Murase[1], Katuhiro Hayasi[2], Hiroyuki Inatani[2], Hideki Okamoto[1], Takanobu Otsuka[1]

[1]Dept. of Orthop. Surg., Nagoya City Univ., [2]Dept. of Orthop. Surg., Kanazawa Univ.

Pj-13 Postoperative intraperitoneal hyperthermochemotherapy by radiofrequency capacitive heating system for advanced gastric cancer with peritoneal seeding

Atsushi Ogawa, Erito Mochiki, Mitsuhiro Yanai, Kyoichi Ogata, Tetsuro Ohno, Takayuki Asao, Hiroyuki Kuwano

Dept. of General Surgical Sci., Gunma Univ. Grad. Sch. of Med.

Pj-14 Regional collaborative clinical pathway of hyperthermo-chemoradiotherapy for locally advanced rectal cancer

Satoshi Suda[1], Kouji Sugawara[1], Atsushi Okazaki[1], Kazuki Jinbo[1], Noriyuki Okonogi[1], Masahiko Motegi[1], Takayuki Asao[3], Takeo Takahashi[4], Takashi Nakano[2], Hiroyuki Kuwano[3], Yoshitaka Ando[1]

[1]Hidaka Hosp., Oncol. Center, [2]Dept. of Radiat. Oncol., Gunma Univ. Grad. Sch. of Med., [3]Dept. of General Surgical Sci., Gunma Univ. Grad. Sch. of Med., [4]Dept. of Radiat. Oncol., Saitama Med. Center, Saitama Med. Univ.

Pj-15 Preliminary report of preoperative hyperthermo-chemoradiotherapy (HCR) using IMRT for locally advanced rectal cancer in the regional collaborative HCR treatment and care

Kazuki Jinbo[1], Koji Sugawara[1], Atsushi Okazaki[1], Satoshi Suda[1], Noriyuki Okonogi[1], Masahiko Motegi[1], Takayuki Asao[3], Takeo Takahashi[4], Takashi Nakano[2], Hiroyuki Kuwano[3], Yoshitaka Ando[1]

[1]Hidaka Hosp., Oncol. Center, [2]Dept. of Radiat. Oncol., Gunma Univ. Grad. Sch. of Med., [3]Dept. of General Surgical Sci., Gunma Univ. Grad. Sch. of Med., [4]Dept. of Radiat. Oncol., Saitama Med. Center, Saitama Med. Univ.

Pj-16 The effect and benefit of the hyperthermia therapy combined with low dose chemotherapy and/or hormonal therapy on liver metastasis of breast cancer patients

Rika Fukui[1], Yoshiyuki Yanai[1], Takahiro Yasoshima[1], Eiri Ezoe[1], Takayuki Shishido[1], Hideyuki Morosawa[2], Yoshiki Miya[2], Yoshihiko Furuta[2], Yasuaki Tamura[3]

[1]Dept. of Surg., Shinsapporo Keiaikai Hosp., [2]Section of Clinical Eng., Shinsapporo Keiaikai Hosp., [3]First Dept. of Pathology, Sapporo Med. Univ. Sch. of Med.

Pj-17 Usefulness of upright sitting position with thermotron-RF8;How to

Koji Oki, Atsushi Hori, Masahiko Maeda, Masako Uehara

Rinku-Dejima-Clinic

Pj-18 Usefulness of up-right sitting position with thermotron-RF8; case reports

Atsushi Hori, Masahiko Maeda, Kouji Ooki

Rinku-Dejima-Clinic

Poster-Short Oral pr. 03:Japanese | 15:15-16:45

Chairperson: Atsushi Toki
Tamananbu Chi-iki Hosp. Internalmedicine, Respiratory

Pj-19 Change of QOL for patients getting long-term hyperthermia treatment

Hideyuki Morosasa[1], Yoshiki Miya[1], Akihiro Endoh[1], Yumiko Kawasaki[1], Yoshihiko Furuta[1], Takayuki Shishido[2], Eiri Ezoe[2], Yoshiyuki Yanai[2], Rika Fukui[2], Takahiro Yasoshima[2]

[1]Section of Clinical Eng., Shinsapporo Keiaikai Hosp., [2]Dept. of Surg., Shinsapporo Keiaikai Hosp.

Pj-20 Effect of thermosensitization with parthenolide in thermotherapy of localized prostate cancer combined with androgen deprivation

Ryuta Suzuki[1], Ken Koshiba[1], Yutaka Jujo[1], Kazue Kitahiro[1], Hisaya Shiozaki[1], Yusuke Sasai[1], Masahiro Aihara[2], Sachiko Hayashi[3], Nasanori Hatashita[4]

[1]Center for Urology and Nephrology, Saitama Ken-oh Hosp., [2]Kurihama Urology Clinic, [3]Dept. of Experimental Radiology and Health Physics, Fac. of Med., Univ. of Fukui, [4]Res. and Development, The Wakasa-wan Energy Res. Center, Tsuruga, Fukui

Pj-21 The relation between the power range of hyperthermia and clinical outcome: Retrospective study in patients who received regional hyperthermia

Tomokuni Kuwata[1], Satoshi Kokura[2], Naoyuki Sakamoto[1], Takeshi Ishikawa[2], Tetsuya Okayama[2], Mari Tanigawa[1], Naomi Fujinaka[1], Masato Hori[1], Toshiro Kimura[1], Toshikazu Yoshikawa[3]

[1]Iseikai Hyakumanben Clinic, [2]Molecular Gastroenterology and Hepatology, Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., [3]Kyoto Pref. Univ. of Med.

Pj-22 Assessments of quality of life contribute to risk management of patients who received weekly hyperthermia

Naoko Kitada[1], Satoshi Kokura[2], Naoyuki Sakamoto[1], Takeshi Ishikawa[2], Keiko Yamanaka[1], Mio Iefuji[1], Masayo Kogiso[1], Rumiko Okuno[1], Yoko Hoshi[1], Yasuko Nabekura[1], Toshikazu Yoshikawa[3]

[1]Iseikai Hyakumanben Clinic, [2]Molecular Gastroenterology and Hepatology, Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., [3]Kyoto Pref. Univ. of Med.

Pj-23 Immunological examination of synovial fluid in osteoarthritis: Comparison between before and after hyperthermia treatment

Hiromasa Kurosaki[1], Teruaki Sekine[2], Kenji Takahashi[3]

[1]Dept. of Radiat. Oncol., Tokyo Kousei Nenkin Hosp., [2]Lymhotec, Inc, [3]Deprt. of Orthop. and Rheumatology, Nippon Med. Sch.

Pj-24 Retrospective analysis of hyperthermia therapy for unresectable pancreatic cancer

Yoshiyuki Yanai, Takahiro Yasoshima, Rika Fukui, Takayuki Shishido, Eiri Ezoe, Yoshihiro Nakakubo, Katsuyuki Aketa, Kenji Kiriyama, Hideyuki Morosawa, Yoshiki Miya, Yoshihiko Furuta

Shinsapporo Keiaikai Hosp.

Pj-25 **Adoption of low-temperature ablation (high temperature-hyperthermia) treatment to the clinical veterinary medicine**

Shinichi Nakazumi, Yasuaki Munekata

ADMETECH Co.Ltd

Pj-26 **Treatment of advanced bladder cancer by regional hyperthermia combined with parthenolide and chemotherapy. A case report**

Hisaya Shiozaki[1], Yusuke Sasai[1], Kazue Kitahiro[1], Ryuta Suzuki[1], Yutaka Jujo[1], Ken Koshiba[1], Sachiko Hayashi[2], Masanori Hatashita[3]

[1]Saitamaken-oh Hosp., [2]Dept. of Experimental Radiology and Health Physics, Fac. of Med., Univ. of Fukui, [3]Res. and Development, The Wakasa-wan Energy Res. Center, Tsuruga, Fukui, Japan

Room P

Poster Viewing & Discussion	**17:30-18:30**

Morning Lecture 9 | 9:10-9:40

Chairperson: Yoshihiko Maehara
Dept. of Surg. and Sci., Kyushu Univ.

ML09 An effective new thermal therapy treatment for pancreas cancer

Joan M.C. Bull, Robert A. Brown, Young Su, Theresa Dancsak

The Univ. of Texas Med. Sch. at Houston, Houston, TX

Break | 9:40-9:50

Symposium 11 | 9:50-11:50

HIFU and non-invasive heating

Chairpersons: Charles Cain
Dept. of Biomed. Eng., the Univ.of Michigan

Shin-ichiro Umemura
Grad. Sch. of Biomed. Eng., Tohoku Univ.

S11-1 Transrectal high-intensity focused ultrasound (HIFU) for the treatment of localized prostate cancer: 13-year experience

Toyoaki Uchida, Tetsuro Tomonaga, Hakushi Kim, Sunao Shoji, Masanori Shima, Yohishiro Nagata

Dept. of Urology, Tokai Univ. Hachioji Hosp.

S11-2 The current development of HIFU ablation for hepatocellular carcinoma

Feng Wu

HIFU Unit, the Churchill Hosp., Oxford Univ. Hosp.

S11-3 MR guided focused ultrasound surgery(MRgFUS) for small breast cancer: The excisionless clinical study

Hidemi Furusawa[1], Junnichi Shidooka[2], Masuko Inomata[1], Emiko Hiravara[1], Hiroshi Nakahara[2], Yukiko Yasuda[1], Yorio Maeda[1], Kansei Komaki[1], Takashi Yamamoto[1], Tomokazu Saito[1]

[1]Dept. of Breast Surgical Oncol., Breastopia Namba Hosp., [2]Dept. of Diagnostic Radiology, Breastopia Namba Hosp.

S11-4 Progress in focused ultrasound heating technology

Kullervo Hynynen, Nicolas Ellens, Daniel Pajek

Dept. of Med. Biophysics, Univ. of Toronto

S11-5 High intensity focused ultrasound: Irradiation set-up and its biological response

Takashi Mochizuki[1], Shin-ichiro Umemura[2], Shin Yoshizawa[3], Toshio Chiba[4], Taizo Kihara[5], Kohji Masuda[1]

[1]Grad. Sch. of Bio-Application & Systems Eng., Tokyo Univ. of Agric. & Tech., [2]Grad. Sch. of Biomedical Eng., Tohoku Univ., [3]Grad. Sch. of Eng., Tohoku Univ., [4]Clinical Res. Center for Child Health and Developoment, [5]Hitachi-Aloka Med., Ltd.

S11-6 Histotripsy: Controlled mechanical sub-division of soft tissues by high intensity pulsed ultrasound

Charles Cain

Dept. of Biomed. Eng., The Univ. of Michigan

Break 11:50-12:00

Luncheon Seminar 3 12:00-13:00

Chairperson: Satoshi Kokura
Kyoto Pref. Med. Univ.

LS3 Treatment of bone metastases from breast cancer

Tetsuya Taguchi

Dept. of Endocrine and Breast Surg., Kyoto Pref. Univ. of Med.

Sponsored by DAIICHI SANKYO Co., LTD./ AstraZeneca K. K.

Summary 1 13:00-15:00

Medicine (Med, Clinical Results)

Chairperson: Yoshiaki Tanaka
Kawasaki Saiwai Hosp.

SU1-1 Current status of clinical hyperthermia in United States

Zeljko Vujaskovic

Dept. of Radiat. Oncol., Duke Univ. Med. Center

SU1-2 Appraisal of hyperthermia as clinical modality in Indian subcontinent

Nagraj G. Huilgol

Div. of Radiat. Oncol., Nanavati Hosp., Mumbai

SU1-3

Jacoba van der Zee

Hyperthermia Unit, Dept. Radiat. Oncol., Erasmus MC - Daniel den Hoed Cancer Center

SU1-4 Current status of clinical hyperthermia in China

Zhang, Shan-wen

Peking University Cancer Hosp.

SU1-5 Current situation of clinical hyperthermia in Japan

Hiromi Terashima
Dept. of Radiat. Oncol., Harasanshin General Hosp.

Break	**15:00-15:15**

Award Ceremony of ICHO2012 and Closing Remarks	**15:15-16:00**

Young Investigator Award Ceremony

Poster Presentation Award Ceremony: Physics & Engineering/ Biology Medicine

Chairperson: Koichi Ito
JSTM Scientific Committee

Informa/Yamamoto Editor's Award Ceremony: Physics & Engineering/ Biology/ Medicine

Chairperson: Mark W Dewhirst
Editor of Int J Hyperthermia

Message from the next President of ICHO

not yet decided

Message from the next President of JCTM

Iwai Tohnai

Closing Remarks

Toshikazu Yoshikawa, President of ICHO2012
Takeo Ohnishi, Honorary President of ICHO&JCTM 2012, President of JSTM

Morning Lecture 10 | 9:10-9:40

Chairperson: Kosuke Ueda
Nagoya Prostatic Center, Hachiya Orthop. Hosp.

ML10 Role of hyperthermia in treatment of bladder cancer: Current status and future directions

Zeljko Vujaskovic

Dept. of Radiat. Oncol., Duke Univ. Med. Center

Break | 9:40-9:50

Symposium 12 | 9:50-11:50

Hyperthermia enhancement and molecular mechanisms

Chairpersons: Tetsuo Akimoto
Dept. of Radiat. Oncol. and Particle Therapy, Nat'l Cancer Center Hosp. East (NCCE)

Tetsuro Tamamoto
Dept. of Radiat. Oncol., Nara Med. Univ.

S12-1 DNA-PK activity is involved in the fast repair of DNA double strand breaks during thermal radiosensitization

Makoto Ihara[1], Yutaka Okumura[1], Takeo Ohnishi[2]

[1]Dept. of RI Med., Atomic Bomb Disease Inst., Nagasaki Univ., [2]Dept. of Radiat. Oncol., Sch. of Med., Nara Med. Univ.

S12-2 Enhancement of heat sensitivity by depression of DSB repair

Atsuhisa Kajihara[1,2], Noritomo Okamoto[3], Yousuke Nakagawa[1,2], Akihisa Takahashi[4], Takaaki Kirita[2], Takeo Ohnishi[5]

[1]Dept. of Dentist. and Oral Surg. Heisei Memor. Hosp., [2]Dept. of Oral Maxillofac. Surg. Nara Med. Univ., [3]Dept. of Otorhinolaryngol. Nara Med. Univ., [4]Adv. Sci. Res. Lead. Develop. Unit, Gunma Univ., [5]Dept. of Radiat. Oncol. Nara Med. Univ.

S12-3 Hyperthermia-induced homologous recombination deficiency provides novel anti-cancer treatment opportunities

Berina Eppink[1], Przemek M. Krawczyk[2], Jeroen Essers[1,3,4], Jan Stap[2], Hanny Odijk[1], Alex Zelensky[1], Thomas Soullie[5], Joost Rens[5], Timo L.M. ten Hagen[5], Jacob Aten[2], Roland Kanaar[1,3]

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S12-4 Enhancement of hyperthermia-induced tumor cell death by 5-aminolevulinic acid

Taku Chibazakura[1], Yui Toriyabe[1], Kiwamu Takahashi[2], Mariko Kawakami[1], Shun-ichiro Ogura[3], Fuminori Abe[2], Motowo Nakajima[2], Tohru Tanaka[2]

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S12-5 Therapeutic effects of 5-aminolevulinic acid (ALA) on the growth of 3LL in combination with hyperthermia in mice

Kiwamu Takahashi[1], Takeo Hasegawa[2,3], Kazuko Uno[2], Iuko Yasuda[2], Atsuko Kishi[2], Kaori Sadamoto[2], Fuminori Abe[1], Takuya Ishii[1], Motowo Nakajima[1], Tohru Tanaka[1]

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S12-6 Recombinant adenovirus-p53 (rAd-p53) transfer in combination with hyperthermia for advanced cancer(a report of 44 cases)

Shanwen Zhang

Dept. of Radiotherapy, Peiking Univ. Cancer Hosp.

S12-7 Oncothermia – modulated electro-hyperthermia

Oliver Szasz

Oncotherm GmbH, Germany

Break	**11:50-12:00**

Summary 2	**13:00-14:00**

Basic (Physics)

Chairperson: Koichi Ito
Grad. Sch. of Eng., Chiba Univ.

SU2-1 Gerard C. van Rhoon

Erasmus MC Daniel den Hoed Cancer Center

SU2-2 Paul R. Stauffer

Radiat. Oncol. Dept., Duke Univ.

SU2-3 Kagayaki Kuroda

Dept. of Human and Information Sci., Sch. of Information Sci. and Tech., Tokai Univ.

Summary 3 | 14:00-15:00

Basic (Biology)

Chairperson: Takeo Ohnishi
Dept. of Radiat. Oncol., Nara Med. Univ.

SU3-1 The enhancement of the hyperthermic effects using aureobasidiumu pullulans (ACFAgMax)

Kaori Sadamoto[1], Kazuko Uno[1], Iuko Yasuda[1], Atsuko Kishi[1,3], Takashi Hasegawa[3], Takenori Yamashita[4], Naomi Fujita[5], Taku Harada[5], Yasushi Harada[5], Takeo Hasegawa[1,2]

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SU3-2 Development of oral cancer treatment using a new magnetic anticancer drug

Itaru Sato[1], Kenji Mitsudo[1], Masaki Iida[1], Hideyuki Nakashima[1], Haruki Eguchi[4], Toshiyuki Koizumi[3], Mitomu Kioi[1], Yoshihiro Ishikawa[2], Iwai Tohnai[1]

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SU3-3 Clinical effectiveness of recombinant adenovirus-p53 combined with hyperthermia in advanced soft tissue sarcoma (a report of 30 cases)

Shaowen Xiao

Dept. of Radiotherapy, Peiking Univ. Cancer Hosp.

SU3-4 Peritoneal perfusion of rAd-p53 combined with thermo-chemotherapy for peritoneal carcinomatosis model of advanced cancer (a report of forty-one cases)

Yongheng Li

Dept. of Radiotherapy, Peiking Univ. Cancer Hosp.