PROGRAM

August 28 (Tue.)  Room A

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

General Chairperson: Satoshi Kokura, Secretary General

<table>
<thead>
<tr>
<th>Event</th>
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<tbody>
<tr>
<td>Opening Remarks</td>
<td>16:00-16:05</td>
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<tr>
<td>Toshikazu Yoshikawa, Kyoto Pref. Univ. of Med.</td>
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<tr>
<td>Keynote Lecture</td>
<td>16:05-16:30</td>
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<tr>
<td>Chairperson: Toshikazu Yoshikawa, President of ICHO2012</td>
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<tr>
<td>KL Hyperthermia &amp; chemotherapy; from sarcoma to pancreatic cancer - a path for mainline of tumor treatment?</td>
<td>16:05-16:30</td>
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<td>Rolf D. Issels</td>
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<td>Med. Clinic III, Univ. of Munich - Campus Grosshadern</td>
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<tr>
<td>Sugahara Award Ceremony of IAHO</td>
<td>16:30-16:35</td>
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<td>Chairperson: Rolf D. Issels, Univ. of Munich</td>
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<td>Sugahara Award Lecture</td>
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<td>Chairperson: Rolf D. Issels, Univ. of Munich</td>
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<tr>
<td>Hyperthermia anno 2012: quality must be controlled and accurately documented</td>
<td>16:35-17:00</td>
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<tr>
<td>Gerard C. van Rhoon</td>
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<tr>
<td>Erasmus MC Daniel den Hoed, Dept. Radiat. Oncol., Unit Hyperthermia</td>
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<tr>
<td>Award Ceremony of ASHO</td>
<td>17:00-17:05</td>
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<td>Chairperson: Hiroyuki Kuwano, President of ASHO</td>
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<td>ASHO Award Lecture</td>
<td>17:05-17:20</td>
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<td>Chairperson: Hiroyuki Kuwano, President of ASHO</td>
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<td>Roles of intracellular oxidative stress in the enhancement of hyperthermia-induced apoptosis</td>
<td>17:05-17:20</td>
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<td>Takashi Kondo</td>
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<tr>
<td>Dept. of Radiol. Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama</td>
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<tr>
<td>Welcome Remarks</td>
<td>17:20-17:25</td>
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<td>Takeo Ohnishi, Honorary President of ICHO&amp;JCTM 2012, President of JSTM</td>
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-- 14 --
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\textsuperscript{1}, Makoto Murakami\textsuperscript{2}, Mitsuhiro Morikawa\textsuperscript{2}, Katsuji Sawai\textsuperscript{2}, Kenji Koneri\textsuperscript{2}, Yasuo Hirono\textsuperscript{2}, Takanori Goi\textsuperscript{2}, Atsushi Iida\textsuperscript{2}, Akio Yamaguchi\textsuperscript{2}
\textsuperscript{1}Cancer Care Promotion Center, Univ. of Fukui, \textsuperscript{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\textsuperscript{1}, Hajime Imada\textsuperscript{2}, Katsuya Yahara\textsuperscript{1}, Yukunori Korogi\textsuperscript{1}
\textsuperscript{1}Dept. of Radiology, Univ. of Occupational and Environmental Health, \textsuperscript{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
Makoto Murakami, Kanji Katayama, Kenji Koneri, Yasuo Hirono, Takanori Goi, Atsushi Iida, Akio Yamaguchi
First Dept. of Surg., Univ. of Fukui, Sch. of Med.
Hyperthermia enhances the effect of β-lapachone to cause γH2AX formations and cell death in human osteosarcoma cells

Takeshi Hori¹, Takashi Kondo², Chang W Song³

August 29 (Wed.)

Room A

**ESHO BSD Award Session**  
**Chairperson:** Michael R. Horsman  

Ceremony & Lecture

**Break**  
**Chairperson:** Michael R. Horsman  

**Symposium 1**  
**Chairperson:** Yutaka Yonemura  
Org. to Support Peritoneal Dissemination Treatment

**Chairperson:** 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**

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 Ichinose¹, Yutaka Yonemura², Nobuyuki Takao¹, Akiyoshi Mizumoto¹, Masamitsu Hirano¹  
¹Dept. of General Surg., Kusatsu General Hosp., ²NPO 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 Lee¹, Hyun Choon Shin², Yoon Hee Park², Jeong Ho Lee³, Jin Ho Choi³, Jeong Ho Seo², Seh Jong Park², Dae Hee Lee²
¹Dept. of Oncologic Surg., Anyang Sam Hosp. Integrative Cancer Center, ²Dept. of Hematology and Oncol., Anyang Sam Hosp. Integrative Cancer Center, ³Dept. of Family Med., Anyang Sam Hosp. Integrative Cancer Center

S01-6  Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for peritoneal metastases 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
Chairperson: Kazuhide Higuchi

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
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
Jacob 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 Saitoh1, Hiroki Kiyohara1, Mariko Shiyo1, Yoshiyuki Suzuki1, Takashi Nakano1, Hideyuki Sakurai2, Takeo Takahashi3, Souichi Tsutsumi4, Takayuki Asao5, Hiroyuki Kuwano6


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 Gabbanì, 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. Lechner1,2, Christiane Bruns1, Nelli Dieterle1, Lars Lindner1,2, Sultan Abdel-Rahman1, Christoph Salat1, Volker Heinemann1, Ulrich Mansmann1, Wolfgang Hiddemann1, Rolf D. Issels1,2

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

Break 15:00-15:15

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

Chairperson:  Hiromasa Kurosaki


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

Shin Ohta1, Hajime Imada1, Hiroyuki Narisada1, Yoshinori Tomoda1, Katsuya Yahara2, Takayuki Ohguri2, Takeshi Kobayashi3

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

Pa-02  Hyperthermia for protruded tumor from the skin

Shin Ohta1, Hajime Imada1, Hiroyuki Narisada1, Yoshinori Tomoda1, Katsuya Yahara2, Takayuki Ohguri2

1Cancer Therapy Center, Tobata Kyoritsu Hosp., 2Dept. 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

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

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 Lee¹, Heon Yoo¹, Yung Ho Jo², Ho Shin Gwak¹, E Suk Yang¹, Sang Hoon Shin¹
¹Neurooncology Clinic, Nat’l Cancer Center, ²Branch 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 Kukielska1,2, Piotr Brandys2, Tomasz Dabrowski1,2, Tomasz Walasek1,2
   1Dept. of Brachytherapy, Centrum Onkologii - Instytut im. M. Sklodowskiej-Curie, Oddzial Krakow,
   2Dept. 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

Pa-13  Castration-resistant prostate cancer treated with combining low dose chemotherapy and regional hyperthermia for obtaining long survival
   Kosuke Ueda1, Fumiko Maeda1, Yasuhiro Ito2

Pa-14  Immunological enhancement and long term remissions achieved in HIV patients receiving HL-WBH ‘heateal’ hyperthermia treatment
   Alexei Suvernev1,2, George Ivanov1, Milton Yatvin2,3
   1Siberian Sci. Res. Inst. of Hyperthermia, 2Heatheal, Washington DC, USA, 3Biology 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 Mistudo1, Toshiyuki Koizumi1, Masaki Iida1, Toshinori Iwai1, Senri Oguri1, Noriuki Yamamoto2, Minoru Ueda2, Mitomu Kioi1, Makoto Hirota1, Iwai Tohnai1

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 Imada1, Hiroyuki Narisada1, Yoshinori Tomoda1, Shin Ohta1, Katsuya Yahara2, Takayuki Ohguri2
   1Cancer Therapy Center, Tobata Kyoritsu Hosp., 2Dept. 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’Oglio¹, Mario Palazzi¹, Andrea Fior², Mario Romano¹, Nadia Marciai¹, Sergio Maluta¹

Pa-19  Results of chemothermoradiation therapy for locally advanced laryngeal cancer
Orazakhmet Kurpeshev¹, Vyacheslav Andreyev², Vladimir Pankratov², Igor Gulidov³, Kamila Strelkova¹

Pa-20  Clinical evaluation of thermochemoradiotherapy for advanced head and neck cancer
Masaki Iida¹, Kenji Mitsudo¹, Toshiyuki Koizumi¹², Toshinori Iwai¹, Senri Oguri¹, Mitomu Kioi¹, Makoto Hirota¹, Hideyuki Nakashima¹, Iwai Tohnai¹

Pa-21  Thermochemoradiotherapy using superselective intra-arterial infusion via superficial temporal and occipital arteries for advanced oral cancer with cervical lymph node metastases
Toshiyuki Koizumi¹, Kenji Mitsudo², Masaki Iida², Toshinori Iwai², Senri Oguri², Mitomu Kioi², Makoto Hirota², Iwai Tohnai²

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 Narisada¹, Hajime Imada¹, Yoshinori Tomoda¹, Shin Ohta¹, Katsuya Yahara², Takayuki Ohguri²
¹Cancer Therapy Center, Tobata Kyoritsu Hosp., ²Dept. of Radiology, Univ. of Occupational and Environmental Health, Kitakyushu, Japan

Pa-24  Efficacy of neoadjuvant thermochemotherapy 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 Linthorst¹, Albert N van Geel², Margreet Baaijens³, Wendim Ghidey⁴, Gerard C van Rhoon¹, Jacoba van der Zee¹
¹Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC-Daniel den Hoed Cancer Center, ²Dept. of Surgical Oncol., Erasmus MC-Daniel den Hoed Cancer Center, ³Dept. of Radiat. Oncol., Erasmus MC-Daniel den Hoed Cancer Center, ⁴Dept. 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 Imada¹, Hiroyuki Narisada¹, Yoshinori Tomoda¹, Shin Ohta¹, Katsuya Yahara², Takayuki Ohguri²
¹Cancer Therapy Center, Tobata Kyoritsu Hosp., ²Dept. 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 Masunaga¹, Yoshinori Sakurai², Hiroki Tanaka², Minoru Suzuki¹, Natsuko Kondo¹, Masaru Narabayashi¹, Akira Maruhashi², Koji Ono¹

Pa-30 Re-irradiation plus hyperthermia for recurrent breast cancer in previously irradiated area; size matters!
Sabine Oldenborg¹, Vanessa Griesdoorn¹, Yoka Kusumanto¹, Rob van Os¹, Bing Oei², Jack Venselaar², Hans Crezee¹, Paul Zum Vorde¹, Coen Rasch¹, Geertjan van Tienhoven¹
Pa-31 Comparison of 4 to 8 hyperthermia treatments combined with re-irradiation for breast cancer
Marianne Linthorst¹, Gerard C van Rhoon¹, Margreet Baaijens², Wendim Ghidey³, Jacoba van der Zee¹
¹Dept. of Radiat. Oncol., Hyperthermia Unit, Erasmus MC-Daniel den Hoed Cancer Center, ²Dept. of Radiat. Oncol., Erasmus MC-Daniel den Hoed Cancer Center, ³Dept. 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

Pa-33 Efficacy of sequential combination of hyperthermia and gemcitabine in the treatment of advanced pancreatic cancer: Phase II study
Takeshi Ishikawa¹,², Satoshi Kokura¹,², Naoyuki Sakamoto¹, Reiko Tsuchiya², Manabu Okajima², Tatsuo Matsuyama², Satoko Adachi¹, Tetsuya Okayama¹,², Nobuaki Yagi², Yuji Naito², Toshikazu Yoshikawa¹
¹Dept. of Cancer Immunocell Regulation, Kyoto Pref. Univ. of Med., ²Dept. of Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., ³Iseikai Hyakumanben Clinic

Pa-34 Clinical research of hyperthermic intraperitoneal perfusion chemotherapy combined with vein chemotherapy in treating advanced colon cancer
Shenglin Ma, Zhiming Wu, Xiaodong 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 RADHOC study
Ludy C Lutgens¹, Jan J Jobsen², Elzbieta M van der Steen³, Helena C van Doorn⁴, Gerard C van Rhoon⁴, Jacoba van der Zee⁴
¹Maastro Clinic, Maastricht, ²Dept. of Radiat. Oncol., Medisch Spectrum Twente, Enschede, the Netherlands, ³ARTI, Arnhem, the Netherlands, ⁴Dept. of Gynaecologic Oncol., Erasmus MC, Rotterdam, the Netherlands, ⁵Dept. 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 Kimura¹, Masaru Morita², Koji Ando¹, Satoshi Ida¹, Hiroshi Saeki¹, Eiji Oki¹, Tetsuya Kusumoto¹, Yoshiyuki Shiyoyama², Yoshihiko Maehara¹
Pa-37 Early response to neo-adjuvant chemotherapy (NAC) in combination with regional hyperthermia (RHT) predicts long-term survival
Lars H. Lindner1, Eric Kampmann1, Nelli Dieterle1, Ulrich Mansmann2, Thomas Kirchner3, Rolf D. Issels1
1Univ. Hosp. Med. Center - Medizinische Klinik III, 2Inst. of Med. Informatics, Biostatistics, and Epidemiology, Univ. of Munich, 3Inst. 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 Linthorst1, Albert N van Geel2, Cees Verhoef2, Elizabeth Baartman1, Bing Oei4, Wendim Ghidey5, Gerard C van Rhoon1, Jacoba van der Zee1

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

Pa-42 Hyperthermic intraperitoneal chemotherapy (HIPEC) following a curative resection of advanced gastric cancer
Satoshi Murata1, Hiroshi Yamamoto1, Tsuyoshi Yamaguchi1, Hiroyuki Naitoh2, Tomoharu Shimizu1, Hisanori Shiomii1, Shigeyuki Naka1, Hiromichi Sonoda1, Eiji Mekata1, Hajime Abe1, Tohru Tani1
1Dept. of Surg., Shiga Univ. of Med. Sci., 2Dept. of Surg., Hino Memorial Hosp.
Pa-43  Temperature dependence of magnetic resonance signals of lipid proton components and its application to fat thermometry

Kagayaki Kuroda¹², Shuhei Morita¹, Khalid Albarodi², Makoto Obara³, Paul Baron⁴, Mie Kee Lam⁵, Wilbert Bartels⁴, Masatoshi Honda³, Tomohiko Horie⁷, Yutaka Imai⁹


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 Inamoto¹, Hiroshi Masuda¹², Kazumasa Komura¹, Yutaka Fujisue¹, Peter Black⁵, Toshikazu Watsuji⁷, Haruhito Azuma⁴

¹Dept. of Urology, Osaka Med. Coll., Osaka, Japan, ²Dept. of Urologic Sci., Univ. of British Columbia, Vancouver, British Columbia, Canada, ³Dept. of Urology, Hirakata City Hosp., Osaka, Japan, ⁴Dept. 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. Feril¹, Katsuro Tachibana¹, Takashi Kondo², Ryohei Ogawa², Zheng-Guo Cui³

¹Dept. of Anatomy, Fukuoka Univ. Sch. of Med., ²Dept. of Radiological Sci., Fac. of Med., Univ. of Toyama, ³Dept. 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 Hijnen¹, Mariska de Smet¹, Holger Gruell¹²

¹Eindhoven Univ. of Tech., ²Philips Res. Eindhoven, the Netherlands
August 29 (Wed.)

<table>
<thead>
<tr>
<th>Morning Lecture 1</th>
<th>8:40-9:10</th>
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| **Chairperson:**  | Hiroyuki Kato  
| **ML01** Cancer hyperthermia using magnetite nanoparticles |  
| Takeshi Kobayashi |  
| Sch. of Biosci. and Biotech., Chubu Univ. |  

<table>
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<th>Morning Lecture 2</th>
<th>9:10-9:40</th>
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| **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 |

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<th>Symposium 3</th>
<th>9:50-11:50</th>
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<tr>
<td><strong>Hyperthermia and nanotechnology / nanomedicine</strong></td>
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| **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 Ishikawa¹, Haruki Eguchi² |  
| **S03-2 Proteins and cholesterol lipid vesicles are mediators of drug release from thermosensitive liposomes** |  
| Martin Hossann¹², Zulfiya Syunyaeva¹, Rebecca Schmidt¹, Anja Zengerle¹, Hansjoerg Eibl¹, Rolf D. Issels¹², Lars H. Lindner¹² |  
| ¹Dept. of Internal Med. III, Univ. Hosp. Grosshadern, Ludwig- Maximilians Univ., Munich, ²CCG Hyperthermia, Helmholtz Zentrum Muenchen, German Res. Center for Environmental Health, Munich, Germany, ³Max-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 Jimbow1, Akihiro Yoneta1, Yasuaki Tamura1, Toshiharu Yamashita1, Akira Ito2, Hiroyuki Honda2, Kazumasa Wakamatsu1, Shosuke Ito3, Satoshi Nohara4, Takeo Hasegawa5, Itsuo Yamamoto5


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

Li Li1, Timo LM Ten Hagen1, Astrid Gasselhuber2, Jeremy Yatvin2, Michiel Bolkestein1, Gerard van Rhoon1, Alexander MM Eggermont1,4, Martin Hossann1, Dieter Haemmerich1, Gerben A Koning1


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

Mati Ur Rehman1, Yoko Yoshihisa1, Yusei Miyamoto2, Tadamichi Shimizu1

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

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

Lingyun Zhao1, Zhu Yao2, Li Li3, Jingdingsha Li2, Jintian Tang1

1Inst. of Med. Physics and Eng., Dept. of Eng. Physics, Tsinghua Univ., Beijing, 2Dept. of Biopharmaceutical, Beijing Univ. of Chinese Med., Beijing, 100102, China, 3Dept. 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

S04-3  Identification of genes responsive to mild hyperthermia in normal human fibroblastic cells
Yoshiaki Tabuchi¹, Yukihiro Furusawa², Ayako Kariya², Shigehito Wada², Kenzo Ohtsuka³, Takashi Kondo²

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 Yoshihisa¹, Mariame Ali Hassan², Yukihiro Furusawa², Takashi Kondo², Tadamichi Shimizu¹
¹Dept. of Dermatology, Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, ²Dept. 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 Ihara¹, Kenzo Ohtsuka², Yutaka Okumura¹, Takeo Ohnishi³

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 Takahashi¹, Xiaoming Su², Rikio Yamagata³, Takeo Ohnishi⁴
Pb-04  Inactivation of DNA-dependent protein kinase promotes heat-induced apoptosis independently of heat-shock proteins in human cancer cell line

Seisuke Okazawa1,2, Yukihiro Furusawa1,3, Ayako Kariya1, Mariame Ali Hassan2, Mie Arai2, Yoshiaki Tabuchi2, Ryuji Hayashi1, Takashi Kondo2, Kazuyuki Tobe1

1Dept. of First Internal Med., Univ. of Toyama, 2Dept. of Radiological Sci., Univ. of Toyama, 3Lab. for Bioenvironmental Epigenetics, Res. Center for Allergy and Immunology, 4Div. 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 Sekihara1,4, Nanae Harashima1, Hiroyuki Monma1,2, Nobue Uchida3, Taisuke Inomata4, Mamoru Harada1


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

Akihisa Takahashi1, Takeo Ohnishi2


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

Chairperson: Ichiro Ota


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

Qing-Li Zhao, Yoshisada Fujiwara, Takashi Kondo


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

Tatsuya Yunoki1, Yoshiaki Tabuchi2, Ayako Kariya1, Takashi Kondo1

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

Pb-09  Beneficial effects of molecular chaperone inducers

Kenzo Ohtsuka


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

Punit Kaur1, Sunil Krishnan2, Alexzander Asea1

1Dept. of Pathology, Scott & White Memorial Hosp. and Clinic, and the Texas A&M Health Sci. Center, 2Dept. 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 Tuul1, Hiroyuki Kitao2, Kazuaki Matsuoka2, Makoto Iimori2, Shinichi Kiyonari2, Hiroshi Saeki1, Eiji Oki1, Masaru Morita1, Yoshihiko Maehara1
1Dept. of Surg. and Sci., Kyushu Univ., 2Dept. of Molecular Oncol., Kyushu Univ.

Poster-Short Oral pr. 03

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 Kariya1, Yukihiro Furusawa1, Ryohei Ogawa1, Takashi Kondo1, Yoshiaki Tabuchi2
1Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, 2Grad. 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 Ota1, Takashi Masui2, Masatoshi Kanno1, Hiroshi Hosoi1

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 Piao1, Zheng-Guo Cui2, Takashi Kondo1
1Dept. of Radiological Sci., Grad. Sch. of Med. and Pharm. Sci., Univ. of Toyama, 2Dept. 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
Molecular mechanisms involved in the enhancement of hyperthermia-induced apoptosis by docosahexaenoic acid, -Implication for cancer therapy-
Zheng-Guo Cui1, Loreto Jr., Bandoy Feril2, Hidekuni Inadera1

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

Treatment enhancement of ultrasound-mediated nanodrug delivery in combination with hyperthermia
Chi-Feng Chiang1, Heng-Ruei Shiu1, Hsiao-Ching Tseng1, Fu-Hsiung Chang2, Win-Li Lin1

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

The therapeutic potential of combining OXi4503, radiation and mild temperature hyperthermia
Michael R. Horsman

Novel cationic thermosensitive liposomes for targeted and controlled drug delivery to tumor vasculature and tumor cells
Bilyana M. Dicheva1, Timo LM Ten Hagen1, Li Li2, Debby Schipper1, Ann L.B. Seynhaeve1, Gerard C van Rhoon3, Alexander MM Eggermont1,2, Lars H Lindner1,2,4, Gerben A Koning1


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 Asada1, Katsuhiro Kageyama2, Hiroshi Tanaka2, Masanori Takeshita2, Masatsugu Kimura3, Yasukazu Saitoh4, Nobuhiko Miwa2

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

Cancelation of hyperthermia induced reactive oxygen species in rat plasma
Megumi Ueno1, Minako Nyui1, Ikuo Nakanishi1, Kazunori Anzai1,2, Toshihiko Ozawa1,2, Ken-ichiro Matsumoto1, Yoshihiro Uto4

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

Screening of phytochemicals sensitizing heat sensitivity of cancer cells
Shin-ichi Bando1, Osamu Hatano2, Hiroshi Takemori1, Nobuo Kubota3, Ken Ohnishi1

Pb-27  A new cancer treatment strategy with magnetic anti-cancer compound with hyperthermia
Xianfeng Feng¹, Hidenobu Fukumura¹, Itaru Sato¹, Haruki Eguchi², Yoshihiro Ishikawa¹
¹Dept. of Cardiovascular Res. Inst., Yokohama City Univ. of Med., ²IHI Co.

Pb-28  Hyperthermia using magnetic nanoparticles combined with intratumoral dendritic cells enhance antitumor effect
Noriyuki Yamamoto¹, Koushi Matsumoto¹, Hiroki Furue¹, Sumitaka Hagiwara¹, Masaya Nishikawa¹, Hideharu Hibi¹, Toshio Shigetomi², Kenji Mitsudo³, Iwai Tohnai³, Takeshi Kobayashi³, Minoru Ueda¹

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 Li¹, Yukihiro Furusawa¹, Zheng-Li Wei¹, Hiroaki Sakurai², Yoshiaki Tabuchi², Qing-Li Zhao¹, Takaharu Nomura³, Ikuo Saiki³, Takashi Kondo¹
¹Dept. of Radiological Sci. of Toyama Univ., ²Dept. of Cancer Cell Biology, Toyama Univ., ³Dept. of Div. of Molecular Genetics Res., Toyama Univ., ⁴Dept. of Low Dose Radiat. Res. Center, Komae, ⁵Dept. 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 Hayashi¹, Ken Koshiba², Hisayoshi Shiozaki², Masanori Hatashita³, Takefumi Sato⁴, Yutaka Jujo², Ryuta Suzuki²

Pb-31  Hyperthermia sensitizes resistant human oral cancer cells to IL-13 cytotoxin
Hideyuki Nakaschima¹,², Mitomu Kioi¹,², Makiko Sugiuura¹, Kei Sugiuura¹, Itaru Sato¹, Masaki Iida¹, Kenji Mitsudo¹, Syed R Husain², Raj K Puri², Iwai Tohnai¹

Pb-32  Controlling gene expression in human prostate cancer cells by ultrasound-responsive promoters
Akihiro Mori¹, Ryohei Ogawa², Akihiko Watanabe¹, Takashi Kondo², Hideki Fuse¹

Pb-33  Hyperthermia regulates HSP expression in human keratinocytes exposed to ultraviolet B
Paras Jawaid¹, Yoko Yoshihisa², Mriame Ali Hassan¹, Mati Ur Rehman², Tadamichi Shimizu², Takashi Kondo¹
¹Dept. of Radiological Sci. Toyama Univ., ²Dept. of Dermatology Toyama Univ.
Pb-34  HIFU-based sonodynamic therapy of melanoma cells with verteporfin

Katsuro Tachibana¹, Seyedeh M. Nejad¹, Reiko Naito³, Hamid R. Hosseini², Hitomi Endo¹, Koichi Ogawa¹, Juichiro Nakayama⁴

¹Dept. of Anatomy, Fukuoka Univ. Sch. of Med., ²Bioelectrics Res. Center, Kumamoto Univ., ³Dept. 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 Iizumi¹, Li Peng¹, Yukihiro Furusawa¹, Ayako Kariya¹, Qing-Li Zhao¹, Yoshiaki Tabuchi², Takashi Kondo¹


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 Morita¹, Kenichi Kakinuma², Friedrich Zywietz³, Masashi Kato⁴

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

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

Yasunobu Kobayashi¹, Yusuke Ito¹, Yuri Yoshimoto¹, Ayako Suzuki¹, Valentina V. Ostapenko¹, Norimasa Matsushita¹,³, Kenichiro Imai¹,³, Ryuji Okuyama¹,³, Koichi Shimizu¹,³, Atsushi Aruga¹,⁴, Keishi Tanigawa¹


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.,
Pb-41 High intensity focused ultrasound therapy for metastatic hepatic cancer
Ihl Bohng Choi, Hyun Ho Choi

Pb-42 Tumor response and resection margins of rectal cancer after hyperthermochemoradiation therapy
Soichi Tsutsumi¹, Takaaki Fujii¹, Hiroki Morita¹, Toshinaga Suto¹, Jun-ichi Saito², Takayuki Asao¹, Takashi Nakano², Hiroyuki Kuwano¹

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 Takahashi¹, Sanshiro Hashimoto², Hiromasa Kurosaki¹, Kenji Takenouchi¹, Hiroshi Nakamura¹, Shinro Takai¹

Pb-46 Biodistribution of temperature-sensitive liposomes for MR-image guided drug delivery
Mariska de Smet¹, Nicole M Hijnen¹, Sander Langereis², Edwin Heijman², Holger Gruell¹²
¹Eindhoven Univ. of Tech., Dept. of Biomed. Eng., Eindhoven, the Netherlands, ²Philips 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 Peller¹, Martin Hossann²³, Tungte Wang²³, Zuliya Syunyaeva², Anja Zengerle², Rolf D. Issels²³, Maximilian Reiser¹, Lars H. Lindner²³

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 Itoh¹, Kazuki Torii², Taichi Ishizawa², Shingo Yano³
¹Dept. of Nutrition, Shubun Univ. Fac. of Health and Nutrition, ²Dept. 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 Itoh¹, Kazuki Torii², Taichi Ishizawa², Shingo Yano²

¹Dept. of Nutrition, Shubun Univ. Fac. of Health and Nutrition, ²Dept. of Products Development, Bathclin Co., Ltd
August 29 (Wed.)

Morning Lecture 3 8:40-9:10

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

ML03 Progress in noninvasive MR thermometry
Kagayaki Kuroda¹,²

Morning Lecture 4 9:10-9:40

Chairperson: Takeo Takahashi

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. Stauffer¹, Paolo F. Maccarini¹, Dario B. Rodrigues¹, Sara Salahi¹, Oana I. Craciunescu¹, Yu Yuan², Shiva K. Das¹

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 Aoyagi1, Kazuyuki Saito2, Hirotoshi Horita1, Hiroya Ojiri1, Sinji Yamazoe1, Tetuya Simizu1, Chihiro Kamehira4, Yoshimitu Sunagawa4, Koichi Ito3

S05-4  Theranostic approaches to monitor and control tumor treatment using thermoresponsive nanoliposomes 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 Kyriakou1, Esra Neufeld2, Niels Kuster3
1IT’IS Foundation/ ETH Zurich, 2IT’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 Kondo1, Rina Matsuyama1, Katsutoshi Miyagawa1, Rieko Goto1, Hirofumi Kai2, Eiichi Araki1
1Dept. of Metabolic Med., Fac. of Life Sci., Kumamoto Univ., 2Dept. of Molecular Med., Fac. of Life Sci., Kumamoto Univ.
S06-4  Withdrawn

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

Takeo Hasegawa¹, Satoska Kokura², Tohru Takahashi³, Tsutomu Takeda³, Itsuo Yamamoto³, Kazuko Uno³, Kaori Sadamoto¹, Iuko Yasuda², Mari Tanigawa³, Atsuko Kishi¹, Toshikazu Yoshikawa²


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 Takahashi¹, Yuki Yogo², Kaname Tsutsumiuchi³, Takashi Kobayashi¹, Noriyasu Kawai³


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 Vrba¹, Barbora Vrbova¹, Jaroslav Vorlicek¹, David Vrba¹, Jan Vrba Jr.²

¹Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, ²Dept. 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 Yokoyama¹, Yasuhiro Shindo³, Kazuo Kato², Mitsunori Kubo³, Takeo Uzuka¹, Hideaki Takahashi¹

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

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

Hirokazu Kato¹, Kengo Hattori², Yusuke Ikemoto², Wataru Takao³, Seiichiro Ohn¹, Takashi Harimoto¹, Masahiro Kuroda¹, Koichi Shibuya¹, Masataka Oita¹, Nobue Uchida¹, Susumu Kanazawa²

Pc-06 Heating properties of coaxial needle applicator made of shape memory alloy
Tatsuya Yamada¹, Yasuhiro Shindo², Kazuo Kato², Mitsunori Kubo³, Takeo Uzuka⁴, Akira Takeuchi⁵
¹Grad. Sch. of Sci. and Tech., Meiji Univ., ²Dept. of Mechanical Eng. Informatics, Meiji Univ.,
³The Future Creation Lab., Olympus Co., LTD, ⁴Niigata Cancer Center, Section of Neurosurgery,
⁵Dept. 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 Vrba¹, Tomas Vydra¹, Daniel Havelka¹, Jan Vrba Jr.², David Vrba², Barbora Vrbova¹, Jaroslav
Vorlick¹
¹Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, ²Dept. 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 Hirayama¹, Kenji Shiba²
¹Applied Electronics, Grad. Sch. of Industrial Sci. and Tech., Tokyo Univ. of Sci., ²Dept. ofApplied
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 Shibuya¹, Kenji Shiba²
¹Applied Electronics, Grad. Sch. of Industrial Sci. and Tech., Tokyo Univ. of Sci., ²Dept. ofApplied
Electronics, Fac. of Industrial Sci. and Tech., Tokyo Univ. of Sci.

Pc-11 Fast thermal simulations with realistic 3D vessel networks
Petra Kok¹, Nico van den Berg², Arjan Bel¹, Hans Crezee¹
¹Dept. Radiat. Oncol., Academic Med. Center, Univ. of Amsterdam, ²Dept. 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 Huang¹, Chi-Feng Chiang², Win-Li Lin²
¹Dept. of Innovative Information and Tech., Langyang Campus, Tamkang Univ., ²Inst. of Biomed.
Eng., Nat’l Taiwan Univ., Taipei, Taiwan
Pc-13 Effective heating for tumors with thermally significant blood vessels during hyperthermia treatment
Huang-Wen Huang¹, Chi-Feng Chiang², Win-Li Lin²
¹Dept. of Innovative Information and Tech., Langyang Campus, Tamkang Univ., ²Inst. 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 Ito¹, Kazuyuki Saito², Hiroshi Itakura¹, Samon Ishikawa¹, Masaharu Takahashi²

Pc-15 Design and characterization of dual-curvature 1.5-dimensional focused ultrasound phased-array transducer for tumor thermal therapy
Gin-Shin Chen¹, Che-Yu Lin², Jong Seob Jeong¹, Jonathan M. Cannata¹, Hsu Chang¹, K. Kirk Shung³, Win-Li Lin²

Pc-16 Conditions of homogeneous SAR distribution in regional thermotherapy
Barbora Vrbova¹, Jan Vrba¹, David Vrba², Jan Vrba Jr.², Jaroslav Vorlicek¹
¹Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, ²Dept. of Med. Devices Field, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague

Pc-17 Design of slot applicator for local thermotherapy
Jaroslav Vorlicek¹, Jaroslav Kosik², Jan Vrba¹
¹Dept. of EM Field, Fac. of Electrical Eng., Czech Tech. Univ. in Prague, ²Dept. 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 Vrba¹, Barbora Vrbova², Jaroslav Vorlicek², Jan Vrba²
¹Dept. of Med. Devices, Fac. of Biomed. Eng., Czech Tech. Univ. in Prague, ²Dept. 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 Inoue¹, Kazuyuki Saito², Masaharu Takahashi², Koichi Ito¹

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 Kuroda¹, Kazunori Katashima², Masakazu Ashida³, Susumu Kanazawa¹, Shoji Kawasaki¹, Hirokazu Kato¹


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

Daisuke Oikawa¹,², Ryoko Akai¹,², Mio Tokuda², Takao Iwawaki¹,²,³

¹Iwawaki lab, ASRLD Unit, Gunma Univ., ²Iwawaki Initiative Res. Unit, ASI, RIKEN., ³PRESTO, 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 Honda¹, Syuhei Yamamoto¹, Mina Okochi¹, Kowichi Jimbow²


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

Masaki Yamaguchi¹, Akira Ito¹, Noriaki Okamoto¹, Yuji Sanematsu¹, Yoshinori Kawabe¹, Kazumasa Wakamatsu², Shosuke Ito², Hiroyuki Honda³, Takeshi Kobayashi⁴, Eiichi Nakayama⁵, Yasuaki Tamura, Masae Okura⁶, Toshiharu Yamashita⁷, Kowichi Jimbow⁸, and Masamichi Kamihira¹


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

Kaname Tsutsumiuchi¹, Honami Kamiya¹, Mina Kondo¹, Makoto Takahashi², Hayao Nakanishi³, Takeshi Kobayashi¹

**Poster-Short Oral pr. 03**

**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 $\text{Y}_3\text{Fe}_5\text{O}_{12}$ 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 Asai¹, Hiroki Okano¹, Shin Yoshizawa¹, Shin-ichiro Umemura¹,²  
¹Dept. of Electrical and Communication Eng., Tohoku Univ., ²Dept. of Biomed. Eng., Tohoku Univ.

**Pc-29**  
Simultaneous generation of multiple cavitation clouds by phased array transducer  
Kotaro Nakamura¹, Ayumu Asai¹, Hiroshi Sasaki¹, Hiroki Okano¹, Shin Yoshizawa¹, Shin-ichiro Umemura¹,²  
¹Dept. of Electrical and Communication Eng., Tohoku Univ., ²Dept. of Biomed. Eng., Tohoku Univ.

**Pc-30**  
Quantitative 3D-reconstruction of high intensity focused ultrasound pressure field from optical measurement  
Soichiro Harigane¹, Ryo Miyasaka¹, Shin Yoshizawa¹, Shin-ichiro Umemura¹,²  
¹Dept. of Electrical and Communication Eng., Tohoku Univ., ²Dept. of Biomed. Eng., Tohoku Univ.

**Pc-31**  
Optimization of HIFU treatment by focus steering  
Kosuke Matsuki¹, Ryuta Narumi¹, Takashi Azuma¹, Kiyoshi Yoshinaka², Akira Sasaki¹, Kohei Okita³, Shu Takagi¹, Yoichiro Matsumoto¹  
¹Dept. of Mechanical Eng., The Univ. of Tokyo, ²Nat’l Inst. of Advanced Industrial Sci. and Tech., ³Dept. of Mechanical Eng., Coll. of Industrial Tech., Nihon Univ.

**Pc-32**  
Three-Dimensional vessel tracking for liver HIFU using stereoscopic MR imaging  
Etsuko Kumamoto¹,², Shunpei Iwaoka³, Daisuke Kokuryo³, Toshiya Kaihara², Kagayaki Kuroda⁴  

**Pc-33**  
Numerical modeling of HIFU ablation of solid malignancies  
Adamos Kyriakou¹, Esra Neufeld², Niels Kuster³  
¹IT’IS Foundation/ ETH Zurich, ²IT’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 Lin1, Pi-Hsien Lien1, Gin-Shin Chen2, San-Chao Hwang2, Sheng-Fu Chen2, Yung-Yaw Chen1, Win-Li Lin1,2

Poster-Short Oral pr. 04

Chairperson: Keishi Tanigawa
Bio-thera Clinic

Pc-36 Wideband conformal metamaterial antennas for phased array heating of adult bladder
Tiago R. Oliveira1,4, Sara Salahi2, Gerard Aknine3, M. Teresa Lamy1, Paolo F. Maccarini2, Paul R. Stauffer4

Pc-37 Heating characteristics of metallic stent fed by endoscopic coaxial probe for microwave thermal therapy for bile duct carcinoma
Hiroshi Itakura1, Kazuyuki Saito2, Masaharu Takahashi2, Koichi Ito1

Pc-38 Reduction of heat sensation of a patient using the silicone gel
Daisuke Kobayashi1, Tomonori Isebe2, Kenta Takada2, Keiji Suzuki1, Koichi Shida1, Masashi Seki1, Hiroshi Yokota1, Takeji Sakae2, Hideyuki Sakurai2
1Dept. of Radiology, Tsukuba Univ. Hosp., 2Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba

Pc-39 Hybrid head and neck hyperthermia and 7T MR imaging: a pilot study
Rene Verhaart1, J.J Bluemink2, J.F. Bakker1, P. Togni1, A.J.E. Raaijmakers2, G.C. van Rhoon1, C.A.T. van den Berg2, M.M. Paulides1
1Dept. of Radiotherapy, Hyperthermia Unit, Erasmus MC Rotterdam, the Netherlands, 2Dept. of Radiotherapy, Univ. Med. Center Utrecht, the Netherlands

Pc-40 Foresight of hyperthermia
Kimiko Yoshimizu1, Itsuo Yamamoto2, Emi Takayama1, Tohru Takahashi2, Takeo Hasegawa3
Pc-41 The optimal heating method for superficial tumors
   Kenta Takada¹, Tomonori Isobe¹, Daisuke Kobayashi², Yutaro Mori¹, Keiji Suzuki², Koichi Shida², Yousuke Yoshimura¹, Masashi Seki², Hiroshi Yokota², Hideyuki Sakurai¹, Takeshi Sakae¹
   ¹Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, ²Dept. 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 Balidemaj¹, Cornelis A.T. van den Berg², Aart Nederveen³, Astrid van Lier³, Petra Kok¹, Hans Crezee¹
   ¹Radiotherapy, Academic Med. Center, Amsterdam, Netherlands, ²Radiotherapy, Univ. Med. Center Utrecht, Utrecht, Netherlands, ³Radiology, 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. Pavoni¹, Paolo Pacetti¹, Luigi DiCarlo¹, Francesca Cappelli¹, Federica Fedeli¹, Hans Crezee², Paul J Z.V. Sive Vording², Amalia Di Dia³, Rocco Panaia³, Pietro Gabriele³
   ¹RESTEK Rome, Italy, ²AMC Amsterdam, Nederland, ³IRCC Candidolo (TO), Italy

Poster Viewing & Discussion 18:00-19:00
August 30 (Thu.)
Room A

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

Morning Lecture 6 9:10-9:40

Chairperson: Koji Ono

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
Youji Kotsuka
Tokai Univ.

S07-1 Microwave heating by thin coaxial antennas
-Application to interstitial and intracavitary hyperthermia-
Kazuyuki Saito¹, Masaharu Takahashi¹, Koichi Ito²

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 Arunachalam¹, Paolo F Maccarini², Oana I Craciunescu², Titania Juang², Daniel Neuman³, Francesca Rossetto³, Vinicio Manfrini³, Chris Diederich¹, Jaime L Schlorff³, Paul R Stauffer²

S07-4

S07-5 Locoregional heat delivery using capacitively coupled heating method: Usefulness of an insulator sheet for optimization of deep heating area
Takayuki Ohguri¹, Motohiro Murakami², Katsuya Yahara¹, Hajime Imada²,³, Yukunori Korogi¹
¹Dept. of Radiology, Univ. of Occupational and Environmental Health, ²Dept. of Med. Electronics, Univ. of Occupational and Environmental Health, ³Dept. 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
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. Yatvin1,3, George Ivanov2, Alexei Suvernev2,3

S08-3  Hyperthermia enhances immunotherapy in cancer patients: 1466 clinical cases
Tsutomu Takeda1, Tohru Takahashi2, Takashi Takeda1, Hiroko Takeda1
1Osaka Cancer Immuno-chemotherapy Center, Kyohrinkai, 2RI Center, Kansai Med. Univ.

S08-4  Effects of hyperthermia in combination with NK cell based-immune cell therapy on cancer patients
Hiroshi Terunuma1,2,3, Noriyuki Nishino2, Xuewen Deng3, Akiko Yoshimura1, Yoshinao Takano2, Atsushi Toki1, Tatsuaki Ishiguro1, Mic Nieda3, Jin-ichi Sasanuma1, Yasushi Teranishi2, Kazuo Watanabe1,2
1Tokyo Clinic, 2Southern Tohoku General Hosp., 3Biotherapy Inst. of Japan

S08-5  Hyperthermic targeting of the immune microenvironment for improved cancer immuno-therapy
Sharon S. Evans
Dept. of Immunology, Roswell Park Cancer Inst.

Banquet  18:40-21:00
August 30 (Thu.)
Room B

Morning Lecture 7 8:40-9:10

Chairperson: Chung K. Lee  

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

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  
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 Kitao¹, Tuul Munkhbold¹², Makoto Iimori¹, Kazuaki Matsuoka¹, Shinichi Kiyonari¹, Hiroshi Saeki², Eiji Oki², Masaru Morita², Yoshihiko Machara²  

S09-2  ATM is the predominant kinase involved in the phosphorylation of histone H2AX after heating  
Akihisa Takahashi¹, Eichiro Mori²³, David J. Chen¹, Takeo Ohnishi²  
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 Tabuchi¹, Yukihiro Furusawa², Kenzo Ohtsuka³, Takashi Kondo²

S09-5 Role of AMPK/mTOR signaling pathway in the response of cancer cells and cancer stem cells to hyperthermia
Chang W. Song¹, Troy A. Dos Santos¹, Hyemi Lee², Eun J. Kim², Heon J. Park¹,²
¹Dept. of Radiat. Oncol., Univ. of Minnesota, ²Dept. of Microbiology, Coll. of Med., Inha Univ., Inchon, Korea

S09-6 The protective effect of mild heat preconditioning at 40°C 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. Dewhirst¹, Eun Chung Moon²

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
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 Torigoe¹, Kazuyo Yasuda¹, Yoshiko Hirohashi¹, Satoshi Nishizawa², Akari Takahashi¹, Yasuaki Tamura¹, Isao Harata², Noriyuki Sato¹
¹Dept. of Pathology, Sapporo Med. Univ. Sch. of Med., ²Dept. 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

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

S10-5  Hsp90 and the tumor microenvironment
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 Kai1, Tomoaki Koga2, Ryosuke Fukuda1, Saori Morino-Koga1, Mary A. Suico1, Kosuke Koyama1, Tsuyoshi Shuto1, Hirofumi Kai1

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, Masatake 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 Wada¹, Yoshiaki Tabuchi², Ayako Kariya³, Takashi Kondo³
¹Dept. of Oral Surg., Univ. of Toyama, ²Div. of Molecular Genetics Res., Life Sci. Res. Center, Univ. of Toyama, ³Dept 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 Nakamura¹, Ryosuke Aoyagi¹, Wataru Baba¹, Takashi Azuma¹, Keisuke Fujiwara³, Hideki Takeuchi³, Kazunori Itani³, Kiyoshi Yoshinaka², Akira Sasaki¹, Shu Takagi¹, Yoichiro Matsumoto¹
¹Dept. of Mechanical Eng., The Univ. of Tokyo, ²Dept. of Human Life Tech., Advanced Industrial Sci. and Tech., ³Hitachi-Aloka Med.

Pj-08 HIFU oral squamous cell carcinoma killing with TiO2
Hiromasa Takahashi¹, Seyedeh Moosavi Nejad², S. Hamid R. Hosseini³, Taishi Otani¹, Eiko Higashi², Hitomi Endo², Loreto B. Feril Jr.², Katsuyuki Nakano⁴, Toshihiro Kikut¹, Katsuro Tachibana²

Pj-09 Hyperthermia using implant of resonant circuit delivered through 18G-needle
Kazuya Kumagai¹, Kazuhiko Watabe¹, Ryo Matsumura¹, Tsutomu Yamada¹, Kyohei Kezuka¹,², Reiko Kurotani¹, Iwai Tohnai², Yoshihiro Ishikawa², Yasushi Takemura¹
¹Dept. of Electronics and Information Tech., Yokohama Nat’l Univ., ²Dept. of Med., Yokohama City Univ., ³Dept. of Sci. and Eng., Yamagata Univ.

Poster-Short Oral pr. 02:Japanese

Chairperson: Koh Tsuji

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 Murakami¹, Takayuki Ohguri², Katsuya Yahara², Miyuki Hanada¹, Sanae Matsuoka³
¹Dept. of Med. Electronics, Univ. of Occupational and and Environmental Health, ²Dept. of Radiology, Univ. of Occupational and and Environmental Health, ³Nursing Dept., Univ. of Occupational and and Environmental Health

Pj-11 For making the hyperthermia treatment widely known in a hospital
Yumiko Kawasaki¹, Hideyuki Morosasa¹, Yoshiki Miya¹, Akihiro Endoh¹, Yoshihiko Furuta¹, Takayuki Shishido², Eiri Ezoë³, Yoshiyuki Yana³, Rika Fukui³, Takahiro Yasoshima²
Pj-12 Three cases of avascular osteonecrosis after hyperthermia
Satoshi Yamada¹, Atsunori Murase¹, Katuhiro Hayasi², Hiroyuki Inatani², Hideki Okamoto¹, Takanobu Otsuka¹

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

Pj-14 Regional collaborative clinical pathway of hyperthermo-chemoradiotherapy for locally advanced rectal cancer
Satoshi Suda¹, Kouji Sugawara¹, Atsushi Okazaki¹, Kazuki Jinbo¹, Noriyuki Okonogi¹, Masahiko Motegi¹, Takayuki Asao³, Takeo Takahashi⁴, Takashi Nakano², Hiroyuki Kuwano³, Yoshitaka Ando¹

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 Jinbo¹, Koji Sugawara¹, Atsushi Okazaki¹, Satoshi Suda¹, Noriyuki Okonogi¹, Masahiko Motegi¹, Takayuki Asao³, Takeo Takahashi⁴, Takashi Nakano², Hiroyuki Kuwano³, Yoshitaka Ando¹

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 Fukui¹, Yoshiyuki Yanai¹, Takahiro Yasoshima¹, Eiri Ezoe¹, Takayuki Shishido¹, Hideyuki Morosawa², Yoshiki Miya², Yoshihiko Furuta², Yasuaki Tamura³

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

Pj-19 Change of QOL for patients getting long-term hyperthermia treatment  
Hideyuki Morosasa¹, Yoshiki Miya¹, Akihiro Endoh¹, Yumiko Kawasaki¹, Yoshihiko Furuta¹, Takayuki Shishido², Eiri Ezoe², Yoshiyuki Yanai², Rika Fukui², Takahiro Yasoshima²  

Pj-20 Effect of thermosensitization with parthenolide in thermotherapy of localized prostate cancer combined with androgen deprivation  
Ryuta Suzuki¹, Ken Koshiba¹, Yutaka Jujo¹, Kazue Kitahiro¹, Hisaya Shiozaki¹, Yusuke Sasai¹, Masahiro Aihara², Sachiko Hayashi³, Nasanori Hatashita⁴  
¹Center for Urology and Nephrology, Saitama Ken-oh Hosp., ²Kurihama Urology Clinic, ³Dept. of Experimental Radiology and Health Physics, Fac. of Med., Univ. of Fukui, ⁴Res. 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 Kuwata¹, Satoshi Kokura², Naoyuki Sakamoto¹, Takeshi Ishikawa², Tetsuya Okayama², Mari Tanigawa¹, Naomi Fujinaka¹, Masato Hori¹, Toshiro Kimura¹, Toshikazu Yoshikawa³  
¹Iseikai Hyakumanben Clinic, ²Molecular Gastroenterology and Hepatology, Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., ³Kyoto Pref. Univ. of Med.

Pj-22 Assessments of quality of life contribute to risk management of patients who received weekly hyperthermia  
Naoko Kitada¹, Satoshi Kokura², Naoyuki Sakamoto¹, Takeshi Ishikawa², Keiko Yamanaka¹, Mio Iefuji¹, Masayo Kogiso¹, Rumiko Okuno¹, Yoko Hoshi¹, Yasuko Nabekura¹, Toshikazu Yoshikawa³  
¹Iseikai Hyakumanben Clinic, ²Molecular Gastroenterology and Hepatology, Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., ³Kyoto Pref. Univ. of Med.

Pj-23 Immunological examination of synovial fluid in osteoarthritis: Comparison between before and after hyperthermia treatment  
Hiromasa Kurosaki¹, Teruaki Sekine², Kenji Takahashi³  

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 Shiozaki¹, Yusuke Sasai¹, Kazue Kitahiro¹, Ryuta Suzuki¹, Yutaka Jujo¹, Ken Koshiba¹, Sachiko Hayashi², Masanori Hatashita¹
   ¹Saitamaken-oh Hosp., ²Dept. of Experimental Radiology and Health Physics, Fac. of Med., Univ. of Fukui, ³Res. and Development, The Wakasa-wan Energy Res. Center, Tsuruga, Fukui, Japan
August 31 (Fri.)

**Morning Lecture 9**

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**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 Furusawa¹, Junnichi Shidooka², Masuko Inomata¹, Emiko Hiravara¹, Hiroshi Nakahara², Yukiko Yasuda¹, Yorio Maeda¹, Kansei Komaki¹, Takashi Yamamoto¹, Tomokazu Saito¹  
¹Dept. of Breast Surgical Oncol., Breastopia Namba Hosp., ²Dept. 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 Mochizuki¹, Shin-ichiro Umemura², Shin Yoshizawa³, Toshio Chiba⁴, Taizo Kihara⁵, Kohji Masuda¹

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

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
Shan-wen Zhang
Peking Univ. Cancer Hosp.
SU1-5  Current situation of clinical hyperthermia in Japan
    Hiromi Terashima

Break  15:00-15:15

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

    General Chairperson: Satoshi Kokura, Secretary General

    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
August 31 (Fri.) Room B

**Morning Lecture 10**

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<tr>
<th>Time</th>
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<th>Speaker</th>
<th>Institution</th>
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**Symposium 12**

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<th>Time</th>
<th>Title</th>
<th>Chairpersons</th>
<th>Speakers</th>
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<tbody>
<tr>
<td></td>
<td><strong>Hyperthermia-induced homologous recombination deficiency provides novel anti-cancer treatment opportunities</strong></td>
<td></td>
<td>Berina Eppink¹, Przemek M. Krawczyk², Jeroen Essers¹,³,⁴, Jan Stap², Hanny Odijk¹, Alex Zelensky¹, Thomas Soullic³, Joost Rens³, Timo L.M. ten Hagen³, Jacob Aten², Roland Kanaar¹ ¹Dept. of Cell Biology &amp; Genetics, Cancer Genomics Center, Erasmus Med. Center, ²Dept. of Cell Biology &amp; Histology, Univ. of Amsterdam, ³Dept. of Radiat. Oncol., Erasmus Med. Center, ⁴Dept. of Vascular Surg., Erasmus Med. Center, ⁵Dept. of Surg. Oncol., Erasmus Med. Center</td>
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</table>
S12-4  Enhancement of hyperthermia-induced tumor cell death by 5-aminolevulinic acid
Taku Chibazakura¹, Yui Toriyabe¹, Kiwamu Takahashi², Mariko Kawakami¹, Shun-ichiro Ogura¹, Fuminori Abe², Motowo Nakajima², Tohru Tanaka²
¹Dept. of Bioscience, Tokyo Univ. of Agric., ²SBI Pharmaceuticals Co., Ltd., ³Frontier Res. Center, Tokyo Inst. of Tech.

S12-5  Therapeutic effects of 5-aminolevulinic acid (ALA) on the growth of 3LL in combination with hyperthermia in mice
Kiwamu Takahashi¹, Takeo Hasegawa²³, Kazuko Uno², Iuko Yasuda², Atsuko Kishi², Kaori Sadamoto², Fuminori Abe¹, Takuya Ishii¹, Motowo Nakajima¹, Tohru Tanaka¹

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

SU2-3  Kagayaki Kuroda
Dept. of Human and Information Sci., Sch. of Information Sci. and Tech., Tokai Univ.
### Summary 3

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**Chairperson:** Takeo Ohnishi  

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<tr>
<th><strong>SU3-1</strong></th>
<th><strong>The enhancement of the hyperthermic effects using aureobasidium pullulans (ACFAgMax)</strong></th>
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<td>Kaori Sadamoto¹, Kazuko Uno¹, Iuko Yasuda¹, Atsuko Kishi¹-³, Takashi Hasegawa¹, Takenori Yamashita¹, Naomi Fujita¹, Taku Harada¹, Yasushi Harada¹, Takeo Hasegawa¹-²</td>
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<th><strong>SU3-2</strong></th>
<th><strong>Development of oral cancer treatment using a new magnetic anticancer drug</strong></th>
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<td>Itaru Sato¹, Kenji Mitsudo¹, Masaki Iida¹, Hideyuki Nakashima¹, Haruki Eguchi⁴, Toshiyuki Koizumi³, Mitomu Kioi¹, Yoshihiro Ishikawa⁴, Iwai Tohnai¹</td>
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<th><strong>SU3-3</strong></th>
<th><strong>Clinical effectiveness of recombinant adenovirus-p53 combined with hyperthermia in advanced soft tissue sarcoma (a report of 30 cases)</strong></th>
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<tr>
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<td>Shaowen Xiao</td>
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<td>Dept. of Radiotherapy, Peiking Univ. Cancer Hosp.</td>
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<th><strong>SU3-4</strong></th>
<th><strong>Peritoneal perfusion of rAd-p53 combined with thermo-chemotherapy for peritoneal carcinomatosis model of advanced cancer (a report of forty-one cases)</strong></th>
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<td>Yongheng Li</td>
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