



11th AACR-JCA Joint Conference
Breakthroughs in Cancer Research
Feb. 8-12, 2019 | Westin Maui, Maui, HI

AACR American Association
for Cancer Research

JCA 日本癌学会
JAPANESE CANCER ASSOCIATION

Poster Session A

Saturday, February 9, 2019

5:30 p.m.-7:30 p.m.

Haleakala Ballroom

Big data

A01 MCAM abnormal expression and pro-progression/metastasis function are highly cancer dependent as revealed through pan-cancer profiling. Yunxia An¹, Nan Wei¹, Xiangsong Cheng¹, Ying Li¹, Haiyang Liu¹, Jia Wang¹, Xiaojun Zhang¹, Zhifu Sun². ¹People's Hospital of Zhengzhou University, Zhengzhou, China, ²Mayo Clinic, Rochester, MN, USA.

A02 Novel insights into immunotherapy by deep mining of big cancer genomic data. Han Liang. University of Texas MD Anderson Cancer Center, Houston, TX, USA.

A03 Prevalence and factors associated with potentially inappropriate medication use in older Medicare beneficiaries with cancer. Xue Feng¹, Gerald M, Higa¹, Fnu Safarudin¹, Usha Sambamoorthi¹, Jongwha Chang², Xi Tan¹. ¹West Virginia University, Morgantown, WV, USA, ²The University of Texas, El Paso, TX, USA.

A04 The miRNA expression profile of inflammatory tumors reveals a unique immune cell profile and potential companion targets for checkpoint blockade immunotherapy. Bjarne Bartlett, Vedbar Khadka, Mark Menor, Youping Deng. University of Hawaii, Honolulu, HI, USA.

A05 Potential applications of DNA, RNA and protein biomarkers in diagnosis, therapy, and prognosis for colorectal cancer: A study from databases to AI-assisted verification. Xueli Zhang¹, Xiao-Feng Sun², Bairong Shen³, Hong Zhang¹. ¹Örebro University, Örebro, Sweden, ²Linköping University, Linköping, Sweden, ³Soochow University, Soochow, China.

A06 Cause of death other than cancer for 323,791 cancer patients: NANDE study, a record linkage of vital statistics data and population-based cancer registry data. Isao Miyashiro¹, Takafumi Shinagawa¹, Makoto Fujii², Toshitaka Morishima¹, Yuko Ohno², Tomotaka Sobue³, Group NANDE¹. ¹Cancer Control Center, Osaka International Cancer Institute, Osaka, Japan, ²Department of Mathematical Health Science, School of Health Sciences, Graduate School of Medicine, Osaka University, Suita, Osaka, Japan, ³Division of Environmental Medicine and Population Sciences, Department of Social and Environmental Medicine, Graduate School of Medicine, Osaka University, Suita, Osaka, Japan.

A07 Cancer-associated mutations in SF3B1 promote MYC stabilization to drive tumorigenesis. Akihide Yoshimi¹, Zhaoqi Liu², Jiguang Wang³, Hana Cho¹, Stanley Chun-Wei Lee¹, Michelle Ki¹, Lillian Bitner¹, Anthony R. Mato¹, Peter Ruvolo⁴, Giulia Fabbri², Laura Pasqualucci², Raul Rabadan², Omar Abdel-Wahab¹. ¹Memorial Sloan Kettering Cancer Center, New York, NY, USA, ²Columbia University, New York, NY, USA, ³The Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, ⁴The University of Texas MD Anderson Cancer Center, Houston, TX, USA.

A08 A metabolic shift in nitrogen flux from glutamine contributes to malignant progression of cancer. Manabu Kodama¹, Kiyotaka Oshikawa¹, Hideyuki Shimizu¹, Susumu Yoshioka¹, Masatomo Takahashi², Yoshihiro Izumi², Takeshi Bamba², Takeshi Tomonaga³, Masaki Matsumoto¹, Keiichi I Nakayama¹.

¹Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan, ²Division of Metabolomics, Medical Institute of Bioregulation, Kyushu University, Fukuoka, Japan, ³Laboratory of Proteome Research, National Institute of Biomedical Innovation, Health, and Nutrition, Fukuoka, Japan.

Cancer biology

A09 TGF- β -induced cell cycle arrest is associated with increased migration and metastasis of oral squamous carcinoma cells. Kazuki Takahashi¹, Katarzyna Inoue¹, Yasuhiro Yoshimatsu¹, Atsushi Kaida¹, Kei Takahashi², Shimpei Kubota², Akinari Sugauchi³, Toshihiro Uchihashi³, Susumu Tanaka³, Mikihiko Kogo³, Masahiro Miura¹, Kohei Miyazono², Tetsuro Watabe¹. ¹Tokyo Medical and Dental University, Bunkyo-ku, Tokyo, Japan, ²The University of Tokyo, Bunkyo-ku, Tokyo, Japan, ³Osaka University, Suita, Osaka, Japan.

A10 Loss of SMAD4 promotes gastric cancer progression and leads to poor prognosis. Meiyong Song¹, Han Hee Lee¹, Sung Hak Lee², Kyo Young Song³, Jae Myung Park¹, Su Young Kim², Eun Sun Jung², Myung-Gyu Choi¹, Cho Hyun Park⁴. ¹Department of Internal Medicine, The Catholic University of Korea, Seoul St. Mary's Hospital, Seoul, Republic of Korea, ²Department of Hospital Pathology, The Catholic University of Korea, Seoul St. Mary's Hospital, Seoul, Republic of Korea, ³Department of Surgery, The Catholic University of Korea, Uijeongbu St. Mary's Hospital, Uijeongbu, Republic of Korea, ⁴Department of Surgery, The Catholic University of Korea, Seoul St. Mary's Hospital, Seoul, Republic of Korea.

Cancer precision medicine, prevention, interception, and early detection

A11 Estrogen receptor β ligand-mediated actions inhibit mammary tumor growth and restore sensitivity to endocrine therapies by acting through multiple pathways. Kumaraguruparan Ramasamu, Cathy Samayoa, Shaorong Chen, Ratna K. Vadlamudi, Rajeshwar Rao Tekmal. UTHSA, San Antonio, Texas, USA.

A12 Immunoprevention of Lynch syndrome mouse model intestinal cancer with recurrent neoantigen vaccination. Ozkan Gelincik¹, Mattias Kloor², Mine Ozcan², Aysel Ahadova², Yan Yuan², Hamza Ibrahim¹, Shizuko Sei³, Robert Shoemaker³, Johannes Gebert⁴, Magnus von Knebel Doeberitz², Steven Lipkin¹. ¹Weill Cornell, New York, NY, USA, ²DKFZ, Heidelberg, Germany, ³NCI, Rockville, MD, USA, ⁴DKFZ, Heidelberg, Germany.

A13 Development of a novel medical treatment to prevent colorectal carcinogenesis in familial adenomatous polyposis patients. Michihiro Mutoh¹, Gen Fujii¹, Hideki Ishikawa², J-FAPP Study IV Group³. ¹National Cancer Center, Tokyo, Japan, ²Kyoto Prefectural University of Medicine, Kyoto, Japan.

A14 Detection of cancer driver and drug resistance mutations with xenonucleic acid powered target amplification technology. Michael J. Powell. DiaCarta, Inc, Richmond, CA, USA.

A15 Cutaneous nevi and cancer risk among US women. Xin Li¹, Wenting Wu¹, Edward Giovannucci², Meir Stampfer², Xiang Gao³, Jiali Han¹. ¹Indiana University, Indianapolis, IN, USA, ²Harvard University, Boston, MA, USA, ³Penn State University, College Park, PA, USA.

A16 Mathematical prediction for precision medicine of CNS glial tumors. Kosuke Aoki¹, Takashi Yamamoto¹, Hiromichi Suzuki¹, Fumiharu Ohka¹, Melissa Ranjit¹, Kazuya Motomura¹, Hideo Nakamura², Yoshitaka Narita³, Masamichi Takahashi³, Koji Yoshimoto⁴, Yasutomo Momii⁵, Yoshihiro Muragaki⁶, Toshihiko Wakabayashi¹, Masahiro Mizuguchi⁷, Akitake Mukasa⁸, Hiroshi Haeno³, Atsushi Natsume¹. ¹Nagoya University, Nagoya, Japan, ²Kurume University, Fukuoka, Japan, ³National Cancer Center, Tokyo, Japan, ⁴Kagoshima University, Kagoshima, Japan, ⁵Oita University, Oita, Japan, ⁶Tokyo Women's Medical University, Tokyo, Japan, ⁷Kyushu University, Fukuoka, Japan, ⁸Kumamoto University, Kumamoto, Japan.

A17 Modeling precursor lesions of ovarian cancer using organoids. Dawn R. Cochrane¹, Germain C. Ho¹, Kieran Campbell², Forouh Kalantari¹, Joyce Zhang², James Hopkins¹, Evan W. Gibbard², Kendall Greening², Genny Trigo-Gonzalez², Winnie Yang¹, Janine Senz², David Farnell², Basile Tessier-Cloutier², Jessica N. McAlpine², Sohrab Shah³, David G. Huntsman². ¹BC Cancer, Vancouver, BC, Canada, ²University of British Columbia, Vancouver, BC, Canada, ³Memorial Sloan Kettering Cancer Center, New York, NY, USA.

A18 Expression and biologic function of ADAM28 in colorectal adenocarcinoma. Naoya Sakamoto¹, Takuya Hattori¹, Masayuki Shimoda², Daiki Taniyama¹, Ririno Honma¹, Takao Hinoi³, Hiroyuki Egi⁴, Hldeki Ohdan⁴, Wataru Yasui¹. ¹Department of Molecular Pathology, Institute of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan, ²Department of Pathology, Keio University School of Medicine, Tokyo, Japan, ³Department of Surgery, Institute for Clinical Research, National Hospital Organization Kure Medical Center and Chugoku Cancer Center, Kure, Japan, ⁴Department of Gastroenterological and Transplant Surgery, Applied Life Sciences, Institute of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan.

A19 Clinical significance of circular RNA as potential biomarker for hepatocellular carcinoma. Gyeonghwa Kim¹, Se Young Jang², Yu Rim Lee², Won Young Tak², Young-Oh Kweon², Jung Gil Park³, Hye Won Lee⁴, Ji-min Kim⁵, Soo Young Park², Keun Hur¹. ¹Department of Biochemistry and Cell Biology, School of Medicine, Kyungpook National University, Daegu, Korea, ²Department of Internal Medicine, Kyungpook National University Hospital, Daegu, Korea, ³Department of Internal Medicine, Yeungnam University Medical Center, Daegu, Korea, ⁴Department of Pathology, Dongsan Medical Center, School of Medicine, Keimyung University, Daegu, Korea, ⁵Division of Rheumatology, Department of Internal Medicine, Dongsan Medical Center, School of Medicine, Keimyung University, Daegu, Korea.

A20 A next-generation sequencing-based platform for quantitative detection of hepatitis B virus pre-S mutants in plasma of hepatocellular carcinoma patients. Chiao-Fang Teng¹, Hsi-Yuan Huang², Tsai-Chung Li³, Woei-Cherng Shyu¹, Han-Chieh Wu⁴, Chien-Yu Lin⁵, Ih-Jen Su⁶, Long-Bin Jeng⁷. ¹Graduate Institute of Biomedical Sciences, China Medical University, Taichung, Taiwan, ²Department of Laboratory Medicine, China Medical University Hospital, Taichung, Taiwan, ³Department of Public Health, College of Public Health, China Medical University, Taichung, Taiwan, ⁴National Institute of Infectious Diseases and Vaccinology, National Health Research Institutes, Tainan, Taiwan, ⁵Graduate Institute of Clinical Medical Science and School of Medicine, China Medical University, Taichung, Taiwan, ⁶Department of Biotechnology, Southern Taiwan University of Science and Technology, Tainan, Taiwan, ⁷Organ Transplantation Center, China Medical University Hospital, Taichung, Taiwan.

A21 Early diagnostic markers for refractory heterogeneous breast cancers containing squamous-like cancer cells. Yoshimi Arima, Hideyuki Saya. Keio University, Tokyo, Japan.

A22 Regional differences in BRCA testing in unaffected young women. Fangjian Guo, Abbey B. Berenson, Yong-Fang Kuo. University of Texas Medical Branch, Galveston, TX, USA.

A24 Development of a hepatocyte growth factor classifier in the Carolina Breast Cancer Study. Gieira S. Jones¹, Xuezheng Sun¹, Sanah Vohra¹, Pasangi Perera¹, Erin Kirk¹, Linnea Olsson¹, Mary Beth Bell¹, Jodie Fleming², Melissa Troester¹. ¹University of North Carolina at Chapel Hill, Chapel Hill, NC, USA, ²North Carolina Central University, Durham, NC, USA.

A26 Combined aspirin and statin use is associated with lower risk of gallbladder cancer and improved overall survival in patients with gallbladder cancer. Siddhartha Yadav, Kritika Prasai, Mohamed Mady, Lewis Roberts, Mitesh Borad, Amit Mahipal. Mayo Clinic, Rochester, MN, USA.

A27 Potent tumor suppression by irifolven in an ERCC3 mutant cancer model. Sabine Topka¹, Sara Khalil², Zoe Steinsnyder¹, Vignesh Ravichandran¹, Mogens Winkel Madsen³, Elisa De Stanchina¹, Vijai Joseph¹, Kenneth Offit¹. ¹Memorial Sloan Kettering Cancer Center, New York, NY, USA, ²Gerstner Sloan Kettering Graduate School of Biomedical Sciences, New York, NY, USA, ³Oncology Venture ApS, Horsholm, Denmark.

A28 High-throughput functional evaluation of variants of unknown significance in oncogene. Shinji Kohsaka, Masaaki Nagano, Toshihide Ueno, Hiroyuki Mano. National Cancer Center Research Institute, Tokyo, Japan.

A29 Early detection of ovarian cancer by FSHR-targeted contrast enhanced ultrasound imaging. Itzel Lazzcano¹, Aparna Yellapa¹, Jacques S. Abramowicz², Janice Bahr³, Pincas Bitterman¹, Sanjib Basu¹, Animesh Barua¹. ¹Rush University Medical Center, Chicago, IL, USA, ²University of Chicago, Chicago, IL, USA, ³University of Illinois at Urbana-Champaign, Illinois, Urbana-Champaign, IL, USA.

A30 Identification of circular RNAs as novel diagnostic and therapeutic tools in gastric cancer patients. Akiyuki Sasaki¹, Yuriko Saiki¹, Yulan Cheng², John M. Abraham², Zhe Wang², Steffie Pitts², Akihiro Yamamura³, Michiaki Unno³, Akira Horii¹, Stephen J. Meltzer². ¹Department of Molecular Pathology, Tohoku University School of Medicine, Sendai, Japan, ²Division of Gastroenterology/Hepatology Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA, ³Department of Surgery, Tohoku University Graduate School of Medicine, Sendai, Japan.

A31 Combined copy number variation analyses and immunohistochemical protein expression reveal precision medicine for colorectal cancer liver metastases. Akifumi Sawada¹, Futoshi Kawamata¹, Ann-Marie Patch², Katia Nones², Nobuki Ichikawa¹, Tadashi Yoshida¹, Susumu Shibasaki¹, Shigenori Homma¹, Hideki Kawamura¹, Barbara Leggett³, Nicola Waddell², Vicki Whitehall³, Akinobu Taketomi¹. ¹Department of Gastroenterological Surgery I, Hokkaido University Graduate School of Medicine, Sapporo, Japan, ²Medical Genomics Laboratory, QIMR Berghofer Medical Research Institute, Brisbane, Australia, ³Conjoint Gastroenterology Laboratory, QIMR Berghofer Medical Research Institute, Brisbane, Australia.

A32 The selective Polo-like kinase (PLK1) inhibitor onvansertib and abiraterone synergize in both prostate and non-prostate cancer cells. Jesse C. Patterson¹, Peter Croucher², Maya Ridinger², Shohreh

Varmeh¹, Brian A. Joughin¹, Mark Erlander², Michael B. Yaffe¹. ¹Koch Institute for Integrative Cancer Biology, MIT, Cambridge, MA, USA, ²Trovogene Inc., San Diego, CA, USA.

A33 Identification of DNA adducts in cancer patients by mass spectrometry. Yuji Iwashita¹, Ipei Ohnishi¹, Shunsuke Ohtsuka¹, Yoshitaka Matsushima², Yukari Totsuka³, Shioto Suzuki⁴, Hiroki Mori⁵, Keisuke Inaba⁴, Keigo Matsumoto⁴, Shohachi Suzuki⁴, Shinichiro Miyazaki⁵, Toshikazu Kanai⁵, Takachika Ozawa⁵, Fumihiko Tanioka⁴, Haruhiko Sugimura¹. ¹Hamamatsu University School of Medicine, Hamamatsu, Japan, ²Tokyo University of Agriculture, Tokyo, Japan, ³National Cancer Center Research Institute, Tokyo, Japan, ⁴Iwata City Hospital, Iwata, Japan, ⁵Hamamatsu Medical Center, Hamamatsu, Japan.

A34 PROFILE study: A prospective observational study of precision medicine approach in solid tumors in Japan. Kenta Takahashi, Yuichi Kumaki, Takahiro Mitsumura, Junko Yokobori, Eriko Takamine, Noriko Oshima, Kimio Wakana, Akihiro Hoshino, Toshiaki Ishikawa, Takeshi Ishii, Hiroaki Ono, Yuusuke Mitsunori, Daisuke Ban, Atsushi Kudo, Iichiroh Onishi, Koichiro Kimura, Kazunori Kubota, Hiroyuki Sakashita, Tsuyoshi Nakagawa, Hiroyuki Uetake, Minoru Tanabe, Satoshi Miyake, Sadakatsu Ikeda. Tokyo Medical and Dental University, Medical Hospital, Tokyo, Japan.

A35 In vivo forward genetic screen of oncogenic biomarkers determining efficacy of multi-kinase inhibitors in hepatocellular carcinoma. Yuta Myojin, Takahiro Kodama, Tetsuo Takehara. Department of Gastroenterology and Hepatology, Osaka University, Graduate School of Medicine, Suita, Osaka, Japan.

A36 Feasibility and utility of a panel testing for 114 cancer-associated genes in a clinical setting: A hospital-based study. Kuniko Sunami¹, Hitoshi Ichikawa², Takashi Kubo², Mamoru Kato², Yutaka Fujiwara¹, Akihiko Shimomura¹, Hiroki Kakishima¹, Mayuko Kitami¹, Hiromichi Matsushita¹, Takafumi Koyama¹, Eisaku Furukawa², Daichi Narushima², Momoko Nagai², Nobuyoshi Hiraoka¹, Atsushi Ochiai³, Noboru Yamamoto¹, Takashi Kohno². ¹National Cancer Center Hospital, Tokyo, Japan, ²National Cancer Center Research Institute, Tokyo, Japan, ³National Cancer Center Hospital East, Kashiwa, Japan.

A37 Clinical application of multigene panel testing and association between germline mutations in predisposition genes and clinicopathologic factors in patients with high risk for hereditary breast cancer. Eun-Shin Lee¹, Jongjin Kim², Wonshik Han¹, Jisong Won³, Sung Min Jang³. ¹Seoul National University Hospital, Seoul, South Korea, ²SMG - SNU Boramae Medical Center, Seoul, South Korea, ³Seoul National University, Seoul, South Korea.

A38 Implications of clock genes in oral cancer and innovative intraoral device to assess patient-specific circadian disruption for precision oncology. Petros Papagerakis¹, Nikos Chronis², Silvana Papagerakis³. ¹University of Saskatchewan; University of Michigan (Affiliate), Saskatoon, SK, Canada, ²University of Michigan, Ann Arbor, MI, USA, ³University of Saskatchewan, Saskatoon, SK, Canada.

A39 A precision oncology therapeutic approach in head and neck cancer: In vitro, in vivo and clinical findings. Silvana Papagerakis¹, Petros Kechagioglou², Ayman El-Saed³, Raed Saed³, Liubov Lobanova³, Lubomir Hadjiyski⁴, Petros Papagerakis¹. ¹University of Saskatchewan; University of Michigan (Affiliate), Saskatoon, SK, Canada, ²University of Saskatchewan, Saskatoon, SK, Canada, ³University of Saskatchewan, Saskatoon, SK, Canada, ⁴University of Michigan, Ann Arbor, MI, USA.

Heterogeneity and clonal evolution

A40 Intratumoral bidirectional transitions between epithelial and mesenchymal cells in triple-negative breast cancer. Mizuki Yamamoto, Jun-ichiro Inoue. Division of Cellular and Molecular Biology, The Institute of Medical Science, The University of Tokyo, Tokyo, Japan.

A42 A temporal shift of the evolutionary principle shaping intratumor heterogeneity in colorectal cancer. Atsushi Niida¹, Tomoko Saito², Koshi Mimori², Satoru Miyano¹. ¹Institute of Medical Science, The University of Tokyo, Tokyo, Japan, ²Department of Surgery, Kyushu University Beppu Hospital, Oita, Japan.

A43 Genetic progression of gastric adenoma to carcinoma. Seung-Hyun Jung, Shin Young Kim, Chang Hyeok An, Sung Hak Lee, Hyeon-Chun Park, Min Sung Kim, Juyoun Shin, Yeun-Jun Chung, Sug Hyung Lee. The Catholic University of Korea, Seoul, Republic of Korea.

A44 Integrated tumor heterogeneity of genetic and epigenetic alterations and temporal clonal evolution in diffuse intrinsic pontine glioma. Scott Ryall, Robert Siddaway, Arun Ramani, Andrei Turinsky, Michael Brudno, Cynthia Hawkins. Hospital for Sick Children, Toronto, ON, Canada.

A45 In quest of candidate EMT-associated transcription factors for predicting prognosis in pancreatic ductal adenocarcinomas: What is a key indicator? Sho Fujiwara¹, Yuriko Saiki¹, Kota Ishizawa¹, Shinichi Fukushima¹, Mie Yamanaka¹, Masaki Sato², Masaharu Ishida², Fuyuhiko Motoi², Michiaki Unno², Akira Horii¹. ¹Department of Molecular Pathology, Tohoku University School of Medicine, Sendai, Japan, ²Department of Surgery, Tohoku University Hospital, Sendai, Japan.

Other

A47 Decision tree analysis realized the diagnostic performance of 3-D mammography for breast cancer. Tomoko Takamaru¹, Hiroyuki Takamaru², Miwa Yoshida¹, Hiroki Sato¹, Nana Komatsu¹, Katsutoshi Enokido³, Sadako Akashi-Tanaka⁴, Seigo Nakamura⁴. ¹Showa University Koto Toyosu Hospital, Tokyo, Japan, ²National Cancer Center Hospital, Tokyo, Japan, ³Showa University Fujigaoka Hospital, Tokyo, Japan, ⁴Showa University, Tokyo, Japan.

A48 Preclinical studies for prodrug activator gene therapy of CNS metastatic breast cancer using retroviral replicating vector. Akihito Inagaki¹, Angela M. Richardson², Sara A. Collins¹, Kei Hiraoka³, Shuichi Kamijima⁴, Harry E. Gruber⁵, Douglas J. Jolly⁵, Jaime Merchan⁶, Noriyuki Kasahara¹. ¹University of California San Francisco, San Francisco, CA, USA, ²Department of Neurological Surgery, University of Miami, and Neurosurgery Program, Jackson Health System, Miami, FL, USA, ³Department of Cardiovascular & Thoracic Surgery, Hokkaido University, Sapporo, Hokkaido, Japan, ⁴Department of Urology, Toho University Sakura Medical Center, Chiba, Chiba, Japan, ⁵Tocagen Inc., San Diego, CA, USA, ⁶Sylvester Comprehensive Cancer Center, University of Miami, Miami, FL, USA.

A49 Biased geographical distribution of distinct EBV strains within Asian countries. Misako Yajima, Kazufumi Ikuta, Teru Kanda. Tohoku Medical and Pharmaceutical University, Sendai, Japan.

A50 Differences in oncologic outcomes between Lynch(-like) syndrome and sporadic colorectal cancer with microsatellite instability-high: A retrospective multicenter study. Seong-Taek Oh¹, Il Tae Son¹, Duck-Woo Kim², Hye Seung Lee³, Young-Kyoung Shin⁴, Ja-Lok Ku⁴, Seung-Yong Jeong⁵, Kyu Joo Park⁵, Jae Hwan Oh⁶, Sung-Bum Kang². ¹Department of Surgery, Uijeongbu St. Mary's Hospital, Catholic University, Uijeongbu-si, Korea, ²Department of Surgery, Seoul National University Bundang Hospital, Seongnam, Korea, ³Department of Pathology, Seoul National University Bundang Hospital, Seongnam, Korea, ⁴Laboratory of Cell Biology, Cancer Research Institute, Seoul

National University College of Medicine, Seoul, Korea, ⁵Department of Surgery, Seoul National University Hospital, Seoul, Korea, ⁶Center for Colorectal Cancer, National Cancer Center, Goyang, Korea.

A51 The clinicopathologic variables of familial gastric cancer. Sadaaki Nishimura¹, Masakazu Yashiro¹, Shuhei Kushiyama¹, Shingo Togano¹, Kenji Kuroda¹, Tomohisa Okuno¹, Tatsuro Tamura², Takahiro Toyokawa², Hiroaki Tanaka², Kazuya Muguruma², Kosei Hirakawa², Ohira Masaichi². ¹Molecular Oncology and Therapeutics, Osaka City University Graduate School of Medicine, Osaka City, Osaka, Japan, ²Department of Surgery, Osaka City University Graduate School of Medicine, Osaka City, Osaka, Japan.

A52 Metabolomics analysis on EGFR inhibitors-treated human keratinocytes Ha-Cat cells. Mahiro Iizuka-Ohashi, Midori Morita, Chikage Kato, Yoshimi Ouchi, Koichi Sakaguchi, Tetsuya Taguchi. Dept. of Breast Surgery, Kyoto Prefectural University of Medicine, Kyoto, Japan.

A53 Mathematical modeling for cancer recurrence caused by premalignant lesions formed before the first treatment. Mitsuaki Takaki¹, Shingo Iwami¹, Hiroshi Haeno². ¹Kyushu University, Fukuoka, Fukuoka, Japan, ²National Cancer Center, Kashiwa, Chiba, Japan.

A54 Tissueoid cell culture system: A novel 3D culture system using the silicate fiber scaffold Cellbed. Masaharu Noj¹, Ken-ichi Mukaisho¹, Shoko Murakami¹, Takuya Iwasa², Masaaki Kawabe², Gaku Yamamoto³, Hiroyuki Sugihara¹. ¹Division of Molecular and Diagnostic Pathology, Department of Pathology, Shiga University of Medical Science, Otsu, Shiga, Japan, ²Central Research Laboratory, Japan Vilen, Chuo, Tokyo, Japan, ³Department of Oral and Maxillofacial surgery, Shiga University of Medical Science, Otsu, Shiga, Japan.

A55 PRKCI, SOX2 and GLI1 genes co-expression is a prognostic factor in low differentiated gastric cancer. Itaru Hashimoto¹, Yayoi Kimura², Naohide Oue³, Yohei Miyagi⁴, Yukihiro Hiroshima⁵, Kazuki Kano¹, Toru Aoyama¹, Hiroshi Tamagawa¹, Yasushi Rino¹, Munetaka Masuda¹, Wataru Yasui³, Takashi Oshima⁶. ¹Department of Surgery, Yokohama City University, Yokohama, Japan, ²Advanced Medical Research Center, Yokohama City University, Yokohama, Japan, ³Department of Molecular Pathology, Hiroshima University, Hiroshima, Japan, ⁴Kanagawa Cancer Center Research Institute, Yokohama, Japan, ⁵Department of Clinical Oncology, Yokohama City University, Yokohama, Japan, ⁶Department of Gastrointestinal Surgery, Kanagawa Cancer Center, Yokohama, Japan.

A56 Two ways for Barrett's epithelium to develop: Lessons from experiments using rat gastroduodenal reflux models. Ken-ichi Mukaisho, Shunpei Kanai, Masaharu Noi, Takanori Hattori, Hiroyuki Sugihara. Shiga University of Medical Science, Otsu, Japan.

A57 Therapeutic potential of vocimagene amiretorepvec (Toca 511) prodrug activator gene therapy in peritoneal carcinomatosis models of ovarian cancer. Sara A. Collins¹, Priyanka Kamath², Suzanne Matsuura¹, Douglas J. Jolly³, Brian Slomovitz², Noriyuki Kasahara⁴. ¹Sylvester Comprehensive Cancer Center, University of Miami, Miami, FL, USA, ²Sylvester Comprehensive Cancer Center, Department of Gynecologic Oncology, University of Miami, Miami, FL, USA, ³Tocagen Inc., San Diego, CA, USA, ⁴Sylvester Comprehensive Cancer Center, Department of Pathology, University of Miami, Miami, FL, USA.

A58 Caudal arterial injection easily and reliably develops bone metastasis in mice. Takahiro Kuchimaru¹, Misa Minegishi², Tetsuya Kadonosono², Shinae Kizaka-Kondoh². ¹Jichi Medical University, Shimono, Totigi, Japan, ²Tokyo Institute of Technology, Yokohama, Kanagawa, Japan.

Tumor microenvironment

A59 Highly sensitive in vivo imaging using near-infrared bioluminescence. Shinae Kizaka-Kondoh¹, Hitomi Miyabara¹, Tetsuya Kadonosono¹, Takahiro Kuchimaru². ¹Tokyo Institute of Technology, Yokohama, Japan, ²Jichi Medical University, Shimono, Japan.

A60 Diagnostic applications of N-glycan imaging mass spectrometry to cancer tissues, antibody arrays and serum. Richard R. Drake, Alyson Black, Connor West, Harmin Herrera, Fred David, Peggi Angel, Anand S. Mehta. Medical University of South Carolina, Charleston, SC, USA.

A61 CD9-positive exosomes from cancer-associated fibroblasts (CAFs) stimulate the migration ability of diffuse type of gastric cancer cells. Masakazu Yashiro, Yuichiro Miki, Tomohisa Okuno¹, Kenji Kuroda, Shingo Togano, Sadanori Nishimura, Syuhei Kushiya, Kosei Hirakawa, Masaichi Ohira. Osaka City University Graduate School of Medicine, Osaka, Osaka, Japan.

A62 Unexpected contribution of lymphatic vessels to promotion of distant metastatic tumor spread. Qiaoli Ma¹, Lothar C. Dieterich¹, Mitchell P. Levesque², Peter Baluk³, Donald McDonald³, Michael Detmar¹. ¹ETH Zurich, Zurich, Switzerland, ²University of Zurich, Zurich, Switzerland, ³University of California San Francisco, San Francisco, CA, USA.

A63 The lineage-defining transcription factors SOX2 and NKX2-1 determine lung cancer cell fate and shape the tumor immune microenvironment. Gurkan Mollaoglu, Alex Jones, Sarah J. Wait, Kevin Jones, Eric Snyder, Trudy G. Oliver. University of Utah, Salt Lake City, UT, USA.

A64 Inhibiting metastatic outgrowth of dormant tumor cells using soluble mediators of resolution-promoting macrophages. Odelya Gilon¹, Yonatan Feuermann¹, Sagie Schif-Zuck¹, Keren Weidenfeld¹, Palle Von Huth¹, Simaan Assi¹, Edmond Sabo², Amiram Ariel¹, Dalit Barkan¹. ¹University of Haifa, Haifa, Israel, ²Rambam Medical Center, Haifa, Israel.

A65 Critical roles of luminal progenitor cells in creating the cytokine-rich precancerous niche for mammary tumorigenesis. Natsuko Kimura¹, Takahiko Murayama¹, Yukino Machida², Daisuke Iejima¹, Tatsunori Nishimura³, Mizuki Yamamoto¹, Yusuke Inoue⁴, Nobuaki Yoshida¹, Jun-ichiro Inoue¹, Koichi Akashi⁵, Hideyuki Saya⁶, Masahiko Kuroda⁷, Issay Kitabayashi², Arinobu Tojo¹, Noriko Gotoh³. ¹Institute of Medical Science, University of Tokyo, Tokyo, Japan, ²National Cancer Center Research Institute, Tokyo, Japan, ³Cancer Research Institute, Kanazawa University, Kanazawa, Japan, ⁴Kitasato University, Tokyo, Japan, ⁵Kyushu University, Fukuoka, Japan, ⁶Keio University, Tokyo, Japan, ⁷Tokyo Medical University, Tokyo, Japan.

A66 Osteoblasts regulate myeloid-derived suppressor cell (MDSC) mobilization from the bone marrow of tumor hosts via $\alpha 4 \beta 1$ integrin and vascular cell adhesion molecule (VCAM) 1. Kyung Jin Lee¹, Eun Jeong Lee¹, Bo Yeon Seo¹, Young Mi Whang², Sun Wook Cho³, Serk In Park¹. ¹Korea University College of Medicine, Seoul, South Korea, ²Chung-Ang University, Seoul, South Korea, ³Seoul National University, Seoul, South Korea.

A67 Targeting carcinoma-associated fibroblasts (CAFs) for treatment of breast cancer metastasis. Kruthi Suvarna, Kaori Honda, Makoto Muroi, Yasumitsu Kondoh, Hiroyuki Osada, Nobumoto Watanabe. RIKEN CSRS, Wako, Saitama, Japan.

A68 Adrenaline-dependent immunogenic reprogramming in endothelial cells regulate tumor immunity in gastric cancers. Yoku Hayakawa, Mayo Tsuboi, Mitsuru Konishi, Masahiro Hata, Yukiko Oya, Kazuhiko Koike. The University of Tokyo, Tokyo, Japan.

A69 SRGN triggers an aggressive and immunosuppressive phenotype in TTF-1-negative lung adenocarcinomas. Ichidai Tanaka¹, Delphine Dayde¹, Mei Chee Tai¹, Luisa Solis¹, Satyendra Tripathi¹, Johannes Fahrman¹, Nese Unver¹, Edwin Parra Cuentas¹, Hong Wang¹, Hiroyuki Katayama¹, Jennifer Dennison¹, Philip Lorenzi¹, Kim-Anh Do¹, Junya Fujimoto¹, Carmen Behrens¹, Edwin Ostrin¹, Jaime Rodriguez-Canales¹, Yasushi Yatabe², Yoshinori Hasegawa³, Adi Gazdar⁴, Ignacio Wistuba¹, Samir Hanash¹, Ayumu Taguchi¹. ¹University of Texas MD Anderson Cancer Center, Houston, TX, USA, ²Aichi Cancer Center, Nagoya, Japan, ³Nagoya University, Nagoya, Japan, ⁴University of Texas Southwestern, Dallas, TX, USA.

A70 Platelets in the tumor microenvironment contribute to tumor progression in syngeneic murine models. Satoshi Takagi, Sumie Koike, Naoya Fujita, Ryohei Katayama. Japanese Foundation for Cancer Research, Tokyo, Japan.

A71 Extracellular vesicles from cancer-associated fibroblasts induce drug resistance via integrin β 1/FAK signaling in gastric cancer cells. Takatsugu Ishimoto, Tomoyuki Uchihara, Keisuke Miyake, Atsuko Yonemura, Tadahito Yasuda, Rumi Itoyama, Masaaki Iwatsuki, Yoshifumi Baba, Naoya Yoshida, Hideo Baba. Kumamoto university, Kumamoto, Japan.

A72 Senescence-associated noncoding RNA provokes chromosomal instability and tumor formation in microenvironment. Akiko Takahashi, Kenichi Miyata. Project for Cellular Senescence, Cancer Institute, Japanese Foundation for Cancer Research, Tokyo, Japan.

A73 DKK1/CKAP4/PI3K signaling pathway activated PLVAP expression results in worse prognosis of cholangiocarcinoma (CCA) through promoting tumor angiogenic potency. Gang Chen¹, Xiaozai Xie¹, Lijun Wu¹, Jungang Zhao¹, Yifan Tong¹, Mingxun Wang¹, Yi Wang². ¹Department of Hepatobiliary Surgery, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China, ²Division of Preventive Medicine, School of Public Health and Management, Wenzhou Medical University, Wenzhou, Zhejiang, China.

A74 EGFR and EGFRvIII drive macrophage infiltration through activating Toll-like receptor 2. Zhenyi An¹, Christiane B Knobbe-Thomsen², Xiaohua Wan¹, Qi Wen Fan¹, Guido Reifemberger², Danielle Swaney¹, David Jimenez-Morales¹, Nicole Nasholm¹, Nevan Krogan¹, William A. Weiss¹. ¹University of California San Francisco, San Francisco, CA, USA, ²Heinrich Heine University, Düsseldorf, Germany.

A75 Targeting acidity at cell surfaces by pHLIP technology. Yana K. Reshetnyak¹, Oleg A. Andreev¹, Donald M. Engelman². ¹University of Rhode Island; pHLIP, Inc, Kingston, RI, USA, ²Yale University; pHLIP, Inc., New Haven, CT; Kingston, RI, USA.

A76 The role of cancer-associated fibroblasts in immune suppressive microenvironment of lung cancer. Eri Sawai¹, Makiko Yamashita¹, Aya Hirata¹, Yukihiro Mizuguchi¹, Makoto Miyazaki¹, Genichiro Ishii², Kazunori Aoki¹. ¹National Cancer Center Research Institute, Tokyo, Japan, ²National Cancer Center, Exploratory Oncology Research and Clinical Trial Center, Tokyo, Japan.

A77 Fibroblast cadherins control Src kinase induced cell motility and transformed cell morphology.

Stephanie A. Sheehan¹, Edward P. Retzbach¹, Yongquan Shen¹, Glenn L. Radice², Gary S. Goldberg¹.

¹Rowan University, Stratford, NJ, USA, ²Thomas Jefferson University, Philadelphia, PA, USA.

A78 Lysyl oxidase induces epithelial-mesenchymal transition and is associated with early recurrence and poor survival in patients with hepatocellular carcinoma after curative hepatectomy. Naoki Umezaki,

Shigeki Nakagawa, Rumi Itoyama, Toshihiko Yusa, Yousuke Nakao, Takanobu Yamao, Tatsunori Miyata, Hirohisa Okabe, Katsunori Imai, Hiromitsu Hayashi, Yo-ichi Yamashita, Akira Chikamoto, Hideo Baba. Department of Gastroenterological Surgery, Graduate School of Life Sciences, Kumamoto University, Kumamoto, Japan.

A79 Autochthonous cholangiocarcinomas in the targeted hepatic KrasG12D-P53-/- murine model are infiltrated with tumor-associated neutrophils and macrophages, which may drive immunosuppression in the tumor immune microenvironment. Luis I. Ruffolo,

Katherine M. Jackson, Nathania Figueroa, Peter Juviler, Booyeon Han, Shuyang Qin, Mary Georger, Rachel Jewell, Brian A. Belt, David C. Linehan, Peter A. Prieto. University of Rochester Medical Center, Rochester, NY, USA.

A80 Characterizing the tumor stroma in an autochthonous murine model of cholangiocarcinoma: A robust model for testing stromal reengineering therapies. Luis I. Ruffolo,

Katherine M. Jackson, Peter Juviler, Mary Georger, Rachel Jewell, Luis De Las Casas, Brian A. Belt, David C. Linehan, Peter A. Prieto. University of Rochester Medical Center, Rochester, NY, USA.

A81 Significant interactions between cancer cells and cancer-associated fibroblasts in the progression of scirrhous gastric cancer. Syuei Kushiya,

Masakazu Yashiro, Tomohisa Okuno, Kenji Kuroda, Ryota Tanaka, Shingo Togano, Sadaaki Nishimura, Takahiro Toyokawa, Hiroaki Tanaka, Kazuya Muguruma, Kosei Hirakawa, Masaichi Ohira. Molecular Oncology and Therapeutics Osaka City University Graduate School of Medicine, Osaka, Japan.

A82 Mapping the cellular microenvironment in human ovarian cancer using single-cell transcriptomics. Susan Olalekan,

Bingqing Xie, Anindita Basu. University of Chicago, Chicago, IL, USA.

A83 Inhibitory effect of a redox system by auranofin in pancreatic cancer cells under nutrient-deprived conditions. Takefumi Onodera,

Shun-ichi Ohba, Isao Momose, Manabu Kawada. Institute of Microbial Chemistry (BIKAKEN), Numazu, Japan.

A84 The role of leucine-rich alpha-2 glycoprotein 1 in pancreatic ductal adenocarcinoma tumor microenvironment. Seok Ting Lim,

Xiaomeng Wang. Nanyang Technological University, Lee Kong Chian School of Medicine, Singapore, Singapore.

A85 Orosomucoid is indirectly involved in tumor development via macrophages. Yukio Fujiwara,

Koji Ohnishi, Yoshihiro Komohara, Cheng Pan. Kumamoto university, Kumamoto, Japan.

A87 MSI-L tumors exhibited an intermediate tumor immune microenvironment between MSI-H and MSS in esophagogastric junction adenocarcinoma. Yu Imamura¹,

Tasuku Toihata¹, Manabu Takamatsu², Norio Tanaka³, Shinji Mine¹, Seiichi Mori³, Eiji Oki⁴, Masaru Morita⁵, Hideo Baba⁶, Takeshi Sano¹,

Masayuki Watanabe¹. ¹Department of Gastroenterological Surgery, Cancer Institute Hospital of Japanese Foundation of Cancer Research, Tokyo, Japan, ²Department of pathology, Cancer Institute Hospital of Japanese Foundation of Cancer Research, Tokyo, Japan, ³Cancer Precision Medicine Center, Cancer Institute, Tokyo, Japan, ⁴Department of Surgery and Science, Graduate School of Medical Sciences, Fukuoka, Japan, ⁵Department of Gastroenterological Surgery, National Hospital Organization, Kyushu Cancer Center, Fukuoka, Japan, ⁶Department of Gastroenterological Surgery, Graduate School of Medical Sciences, Kumamoto University, Kumamoto, Japan.

A88 Fibrosis in metastatic lymph nodes is clinically correlated to poor prognosis in colorectal cancer.

Daiji Ikuta¹, Toru Miyake¹, Tomoharu Shimizu¹, Hiromichi Sonoda¹, Ken-ichi Mukaisho², Aya Tokuda¹, Tomoyuki Ueki¹, Hiroyuki Sugihara², Masaji Tani¹. ¹Department of Surgery, Shiga University of Medical Science, Otsu, Shiga, Japan, ²Department of Molecular and diagnostic Pathology, Shiga University of Medical Science, Otsu, Shiga, Japan.

A89 Involvement of PERK in LGR5 depletion under endoplasmic reticulum stress conditions. Yuka Okamoto, Masaru Koido, Akihiro Tomida. Genome Research, Cancer Chemotherapy Center, JFCR, Tokyo, Japan.