



POSTER SESSION A

Monday, November 18

12:30 p.m.–3:00 p.m.

Back Bay

A1 Clinical outcomes in patients with chronic hepatitis C and metastatic renal cell carcinoma (mRCC) after treatment with nivolumab. Ilya Tsimafeyeu, Kidney Cancer Research Bureau, Moscow, Russia.

A2 Identify biomarkers associated with immunotoxicities using single-cell RNAseq. Jiamin Chen, Stanford University, Stanford, CA.

3 Disrupting enhancers within the core epigenetic program of exhaustion improves T-cell responses and enhances tumor control. Debattama R. Sen, Dana-Farber Cancer Institute, Boston, MA.

4 DNA methylation profiles associated with response to anti-PD-1 immunotherapy in non-small cell lung cancer. Jae-Won Cho, Yonsei University, Seoul, South Korea.

A5 Genome-wide methylation pattern predicts clinical benefit of immune checkpoint blockade therapy in NSCLC patients. Jeongyeon Kim, KAIST, Daejeon, Republic of Korea.

A6 A randomized phase II study of epigenetic priming with azacitidine and entinostat followed by nivolumab versus nivolumab monotherapy in previously treated metastatic non-small cell lung cancer. Kristen A. Marrone, SKCCC at Johns Hopkins University, Baltimore, MD.

A7 CAMPFIRE: An informatics platform for assessing neurocognitive symptoms of cancer treatment. Aaron Winder, Charles River Analytics, Cambridge, MA.

A8 Immuno-phenotyping of tumor-specific CD8 T cells using high-dimensional mass cytometry. Brian Abel, immunoSCAPE, Cambridge, MA.

A9 Systemic immune response profiling with SYLARAS implicates a role for CD45R/B220⁺ CD8⁺ T cells in glioblastoma immunology. Gregory J. Baker, Harvard Medical School, Boston, MA.

A10 The MACSima™ platform enables high-content imaging for characterization and classification of glioblastoma multiforme. Heike Leyendeckers, Miltenyi Biotec GmbH, Bergisch Gladbach, Germany.

A11 Irreversible electroporation is an effective tumor-ablation strategy that induces immunologic cell death and promotes systemic antitumor immunity. Irving C. Allen, Virginia Tech, Blacksburg, VA.

A12 Inhibition of protease-activated receptor 4 (PAR4) suppresses C4a-induced invasion of lung cancer cells in vitro. Hongbin Wang, California Northstate University, Elk Grove, CA.

A13 Leveraging Zika virus and the immune system to treat glioblastoma. Milan G. Chheda, Washington University School of Medicine, St. Louis, MO.

A14 Neoepitope-specific CD8⁺ T cells in adoptive T-cell transfer. Nikolaj Pagh Kristensen, Experimental and Translational Immunology, Department of Health Technology, Technical University of Denmark (DTU), Kgs. Lyngby, Denmark.



A15 Targeting of carbohydrate-associated tumor antigens reveals novel effector cell pathways for tumor clearance. Polina Weitzenfeld, The Rockefeller University, New York, NY.

A16 A GUCY2c-CD3 bispecific engages T cells to induce cytotoxicity in gastrointestinal tumors. Divya PUja Sapra. Pfizer Inc., Pearl River, NY.

A17 Enhanced immune infiltration and antitumor immune reactivity in response to optical priming in pancreatic cancer. Pushpamali De Silva, Harvard Medical School and Massachusetts General Hospital, Boston, MA.

A18 Investigating CDK4/6 inhibition in triple-negative breast cancer. Qiuchen Guo, Brigham and Women's Hospital, Harvard Medical School, Boston, MA.

A19 HLA allele-specific loss of heterozygosity detection using augmented exome capture approach. Rachel Marty Pyke, Personalis, Inc., Menlo Park, CA.

A20 Cancer cell-intrinsic expression of MHCII regulates the immune microenvironment and response to immune therapy in lung adenocarcinoma. Amber M. Johnson, University of Colorado Anschutz Medical Campus, Aurora, CO.

A21 Tumor-derived RNA nanoparticle vaccines modulate the effector immune response against resistant head and neck squamous cell carcinoma. Rekha R. Garg, University of Florida, Gainesville, FL.

A22 Intracellular delivery of STING-activating nanoshells in tumors enhances successive chemotherapeutic efficiency. Saborni Chattopadhyay, Academia Sinica - IBMS, Taipei, Nankang, Taiwan.

A23 Proteogenomic discovery of novel tumor proteins as neoantigens for personalized T-cell immunotherapy in pediatric medulloblastoma. Samuel Rivero-Hinojosa, Center for Cancer and Immunology Research, Children's Research Institute, Children's National Medical Center, Washington, DC.

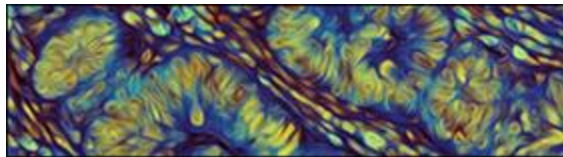
A24 Mature dendritic cells correlate with favorable immune infiltrate and improved prognosis in ovarian carcinoma patients. Sarka Vosahlikova, SOTIO, a.s., Prague, Czech Republic.

A25 Differentiation of human naive T cells to various effector memory cell subtypes correlates with increased binding of the B subunit of Type-IIb heat-labile enterotoxin (LT-IIb-B5) to its cognate ganglioside receptors. Taylor A. Johnson, University of South Carolina School of Medicine Greenville, Greenville, SC.

A26 Towards the identification of novel tumor antigens in human lung cancer. Shin-Heng Chiou, Diane Tseng, Stanford University, Stanford, CA.

A27 Training an immuno-army: Exploiting immunoengineering for the treatment of glioblastoma. Shiran Ferber, BWH/HMS/MIT, Cambridge, MA.

A28 A comparison of a DNA-sourced neoantigen vaccine to an RNA-sourced frameshift vaccine in the mouse ovarian cancer model. Milene Tavares Batista, Arizona State University, Tempe, AZ.



A29 The genomic architecture of serous carcinomas shapes the tumor microenvironment and modulates responses to targeted and immunotherapies. Sonia Iyer, Whitehead Institute for Biomedical Research, Cambridge, MA.

A30 Combined IDO inhibitor and OX40L-armed-oncolytic-adenovirus therapy improves survival in murine glioblastoma. Teresa T. Nguyen, The Graduate School of Biomedical Sciences and the Department of Neuro-Oncology at The University of Texas Health MD Anderson Cancer Center, Houston, TX.

A31 High aneuploidy levels are linked to a reduced immune-cell abundance in metastatic castrate-resistant prostate cancer. Thiago Vidotto, Department of Pathology, School of Medicine, Johns Hopkins Hospital, Baltimore, MD.

A32 Characterizing patterns of cytokine coexpression with immune checkpoint markers in CD4 and CD8 tumor-infiltrating lymphocytes. Luigi Marchionni, Johns Hopkins University School of Medicine, Baltimore, MD.

A33 High-throughput prediction of MHC Class I and Class II neoantigens with MHCnuggets. Xiaoshan M. Shao, Johns Hopkins University, Baltimore, MD.

A34 Cancer immunotherapy clinical trials in K-MASTER project. Yeul Hong Kim. Korea University Anam Hospital, Seoul, Korea.

A35 Polymorphisms in SIRPA impact macrophage phagocytosis in response to therapeutic antibody blockade. Ying Y. Yiu, Stanford School of Medicine, Stanford, CA.

A36 Single-cell characterization of tumor-infiltrating T cells from renal cell carcinoma. Yuexin Xu, Fred Hutchinson Cancer Research Center, Seattle, WA.

A37 Blockading PD1 on tumor-primed CD4 T cells instigates antitumor immunity. Zhaoyang You. University of Pittsburgh, Pittsburgh, PA.

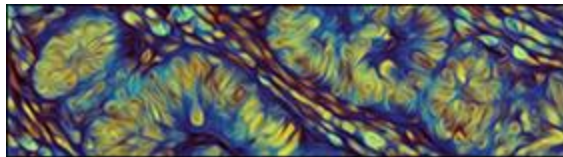
A38 Targeting the androgen receptor to increase sensitivity to checkpoint immunotherapy, Amy Moran. Oregon Health & Science University, Portland, OR.

A39 A therapeutic strategy to inhibit Wnt signaling also reprograms breast tumor-immune cell interactions: Perspectives for conferring immune checkpoint inhibitor susceptibility. Amy S. Yee. Tufts University School of Medicine, Boston, MA.

A41 Absence of central tolerance as a sculpting mechanism of immune-checkpoint therapy. Asiel A. Benitez, Regeneron Pharmaceuticals, Inc., Tarrytown, NY.

A42 Development of new immune therapy combinations for ovarian cancer using genetically defined organoid platform. Benjamin G. Neel. Laura and Isaac Perlmutter Cancer Center, NYU Langone Health, New York, NY.

A43 Exploiting off-target effects of estrogen receptor-targeting drugs to sensitize breast cancer to immune killing. Benjamin Wolfson, National Cancer Institute, Bethesda, MD.



A44 Pharmacologic targeting of estrogen receptor in melanoma to enhance antitumor immunity.

Binita Chakraborty, Duke University, Durham, NC.

A45 Overexpression of MAVS stimulates antitumor immunity and significantly reduces tumor growth of immune-insensitive colorectal cancer in vivo.

Bin-Jin Hwang, Duke University, Durham, NC.

A46 CD73 inhibition enhances the effect of anti-PD-1 therapy on KRAS-mutated pancreatic cancer model.

Caius G. Radu, UCLA, Los Angeles, CA, ²Arcus Biosciences, Hayward, CA.

A47 scRNA-seq reveals functionally distinct gd T cells in human colorectal tumors.

Cathal Harmon, Brigham and Women's Hospital, Boston, MA.

A48 Inactivation of *Fbxw7* impairs dsRNA sensing and confers resistance to PD-1 blockade.

Cécile Gstalder, Dana-Farber Cancer Institute, Boston, MA.

A49 Acquired resistance of non-small cell lung cancer to EGFR-TKI: Role of AKT3.

Ching-Chow Chen, Department of Pharmacology, College of Medicine, National Taiwan University, Taipei, Taiwan.

A50 Reprogramming of tumor-associated M2 macrophages with antisense oligonucleotide-loaded exosomes results in potent single-agent antitumor activity.

Dalia Burzyn, Codiak Biosciences, Cambridge, MA.

A51 Impact of CaMKK2 inhibition in tumor-associated myeloid cells on CD8+ cytotoxic T-cell recruitment into mammary tumors.

Debarati Mukherjee, Duke University, Durham, NC.

A52 Systemic anti-PD-1 immunotherapy results in PD-1 blockade on T cells in the cerebrospinal fluid.

Dongrui Wang, City of Hope, Duarte, CA.

A53 Phosphorylation of eIF4E promotes phenotype switching and MDSC-mediated immunosuppression in melanoma.

Fan Huang, Division of Experimental Medicine, McGill University, Montreal, QC, Canada.

A54 Transient depletion of MDSCs and Tregs as an effective immunotherapy against triple-negative breast cancer (TNBC).

Sadiya Parveen, Division of Infectious Diseases, Department of Medicine, Johns Hopkins School of Medicine, Baltimore, MD.

A55 Uncovering the mechanism of Trib1 in cancer immunotherapy.

Franklin Iheanacho, University of Pennsylvania, Philadelphia, PA.

A56 Releasing the brake on T-cell activation through inhibition of HPK1.

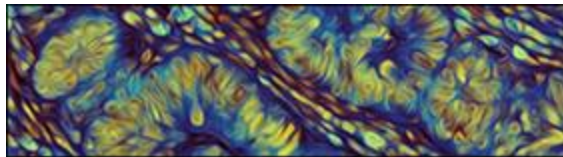
Gayathri Bommakanti, AstraZeneca, Waltham, MA.

A57 β hCG regulates immune cell population in BRCA1 mutated breast cancers.

Geetu Rose Varghese, Centre for Biotechnology, Thiruvananthapuram, Kerala, India.

A58 TGF-beta inhibition and checkpoint blockade in mouse models for gastrointestinal cancer.

Hark K. Kim, National Cancer Center, Goyang, Korea.



A59 Inhibition of Glycogen Synthase Kinase 3 (GSK-3) synergizes with anti-PD-1 by potentiating tumor-infiltrated CD8+ T-cells. Janna Krueger, Division of Immunology-Oncology, Hospital Maisonneuve-Rosemont Research Center, Montreal, QC, Canada.

A60 GM-CSF modulation restricts the secretion of main cytokines associated with CAR T-cell induced cytokine release syndrome. Beatriz Aranda-Orgilles, Cellectis, Inc., New York, NY.

A61 Human leukocyte antigen G as a novel target for switch-based chimeric antigen receptor natural killer cell therapy of solid cancers. Chia-Ing Jan, China Medical University Hospital, Taichung, Taiwan.

A62 Inhibition of tumor growth by novel CART redirected against cells expressing high levels of fibroblast activation protein. Estela Noguera-Ortega, University of Pennsylvania, Philadelphia, PA.

iA64 In vitro induction of human tissue resident memory phenotype T-cells for use in adoptive cellular therapy. Farah Hasan, University of Texas MD Anderson Cancer Center, Houston, TX.

A65 Development of a transcriptomic T-cell atlas highlights the differential role of T-cell subpopulations in CAR T-cell therapy resistance. Gregory M. Chen, University of Pennsylvania, Philadelphia, PA.

A66 Intracavity infusions of autologous cellular immunotherapy in the treatment of refractory malignant pleural and ascites: A Chinese population-based cohort study. Guoliang Qiao. Capital Medical University, Beijing, China.

A67 Augmented antitumor activity of NK-92 MI cells expressing a chimeric antigen receptor targeting human mesothelin. Jing Sun, University of Pennsylvania, Philadelphia, PA.

A68 Combining Deep IL-12 PrimedTM and Deep IL-15 PrimedTM T cells induces potent antigen-dependent in vitro cytotoxicity and in vivo antitumor activity. Elena Geretti, Torque, Cambridge, MA.

A69 Identification of HLA-A0201 restricted epitope of cancer/testis antigen (CTA) Hormad1 and generation of antigen-specific T-cell receptor-engineered T cells (TCR-T) for treatment of solid tumor malignancies. Ke Pan, University of Texas MD Anderson Cancer Center, Houston, TX.

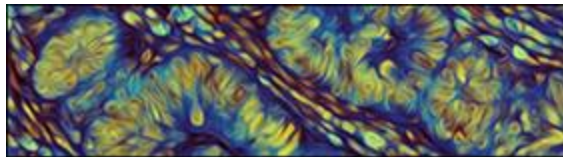
A70 Bridging nonclinical studies to clinical design using quantitative systems pharmacology model of T cell-engaging bispecifics. Jennifer Park, Applied BioMath, Concord, MA.

A71 Chitinase-3-like-1: A new immunomodulatory target in lung cancer. Bedia Akosman, Brown University, Providence, RI.

A72 Novel approach for upregulation of endogenous immunostimulatory targets for cancer therapy. Choon Ping Tan, MiNA Therapeutics, London, United Kingdom.

A73 Fucosylation in CD4+ T cell-mediated melanoma suppression. Daniel K. Lester, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.

A74 Loss of L-selectin distinguishes activated B cells destined to differentiate to plasma cells. Dillon G. Patterson, Emory University, Atlanta, GA.



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A75 Efficacy of novel immunogene combinations for Kras and LKB1 mutant NSCLC in a humanized mouse model. Ismail M. Meraz, Thoracic and Cardiovascular Surgery, University of Texas MD Anderson Cancer Center, Houston, TX.

A76 Efficacy of immunotherapy agents in patients with metastatic breast cancer treated in phase I clinical trials. Jodi A. Kagihara, University of Colorado Anschutz Medical Campus, Aurora, CO.

A77 Antibody targeting tumor-derived soluble NKG2D ligand sMIC provides dual costimulation of CD8 T cells and enables sMIC+ tumors to respond to PD1/PD-L1 blockade therapy. Jennifer Wu, Medical University of South Carolina, Charleston, SC.

A78 Preclinical evaluation of 3D185, a novel potent inhibitor of FGFR1/2/3 and CSF-1R, in FGFR-dependent and macrophage-dominant cancer models. Jing Ai, Shanghai Institute of Materia Medica, Shanghai, China.

A79 Inhibition of p53-MDM2 protein interaction reduces tumor growth in a mouse melanoma model. Katrine Ingelshed, Dept. of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden.

A80 Mapping immune landscape in clear cell renal carcinoma by single-cell genomics. Ajaykumar Vishwakarma, MGH Cancer Center/Harvard Medical School/Broad Institute of MIT and Harvard/University of Iowa, Boston, MA.

A81 Identifying cellular immune components that correlate with response to immunotherapy in breast cancer using murine models. Anita K. Mehta, Dana-Farber Cancer Institute, Boston, MA.

A82 Direct and indirect regulators of epithelial-to-mesenchymal transition mediated immunosuppression in breast carcinomas. Anushka Dongre, Whitehead Institute for Biomedical Research, Cambridge, MA.

A83 Subsets of exhausted CD8+ T cells differentially mediate tumor control and respond to checkpoint blockade. Brian C. Miller, Dana-Farber Cancer Institute, Boston, MA.

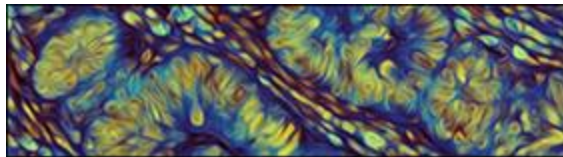
A84 Clinical correlates and rationale for PEGylated adenosine deaminase 2 as a novel cancer immunotherapy. Caglar Cekic, Halozyme Inc., San Diego, CA.

A85 Prediagnostic 25-hydroxyvitamin D concentrations in relation to tumor molecular alterations and risk of breast cancer recurrence. Cheng Peng, Brigham and Women's Hospital, Boston, MA.

A86 Comparative immunophenotypic analysis of immunogenically warm and cold syngeneic tumor models at baseline and after anti-mCTLA-4 treatment. David Draper, MI BioResearch, Ann Arbor, MI.

A87 The A2AR antagonist AZD4635 prevents adenosine-mediated immunosuppression in tumor microenvironment and enhances antitumor immunity partly by enhancing CD103+ dendritic cells. Dinesh Chandra, AstraZeneca, Boston, MA.

A88 RUNX1-deficiency in luminal mammary epithelial cells leads to development of a unique type of immune "hot" ER+ mammary tumor. Dongxi Xiang, Brigham & Women's Hospital and Harvard Medical School, Boston, MA.



A89 Microglial galectin-3 enhances the metastatic phenotype of breast cancer cells in brain metastases. DreeAnna F. Morris, Oregon Health & Science University, Portland, OR.

A90 Blocking proinvasive signaling and inflammatory activation in triple-negative breast cancer with nucleic-acid scavengers (NAS). Elias O.U. Eteshola, Duke University Medical Center, Durham, NC.

A91 T-cell regulation in pancreatic ductal adenocarcinoma. Enas Abu-Shah, University of Oxford, Oxford, United Kingdom.

A92 Analysis of lung-resident macrophages as potential regulators of disseminated tumor cell fate. Erica Dalla, Icahn School of Medicine at Mount Sinai, New York, NY.

A93 Macrophage-expressed small heterodimer partner impairs expansion of regulatory T cells and enhances immune checkpoint inhibition. Erik R. Nelson. University of Illinois, Urbana, IL.

A94 Metabolically reprogram MDSCs by targeting Pim kinases to overcome resistance to PD-1 blockade immunotherapy. Gang Xin, Blood Research Institute, Blood Center of Wisconsin, Milwaukee, WI.

A95 Neoantigen sequence similarity to pathogens and commensals determines immune phenotype of cancer samples and patient survival. Gergo Mihaly Balogh, University of Szeged, Szeged, Hungary.

A96 Correlation of estrogen receptor beta with immune cells in colon cancer patients. Geriolda Topi, Lund University, Skane University Hospital, Malmo, Sweden.

A97 Neutrophil extracellular traps (NETs) promote immune escape and metastatic growth after surgical stress. Hamza O. Yazdani, University of Pittsburgh, Pittsburgh, PA.

A98 Cancer-associated fibroblasts promote immunosuppression by inducing NOX2-expressing monocytic MDSCs in lung squamous cell carcinoma. Handan Xiang, Merck & Co., Inc., Boston, MA.

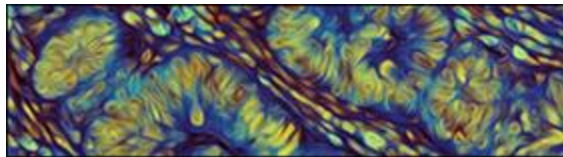
A99 Endothelial cell activation in the conditional Vhlh knockout kidney through oncostatin M pathway. Hieu-Huy Nguyen-Tran, Department of Biomedical Sciences and Engineering, Taoyuan, Taoyuan, Taiwan.

A100 Downregulation of type 1 interferon receptor (IFNAR1) regulates the balance of regulatory T cells (Tregs) and cytotoxic T lymphocytes (CTLs) in tumor microenvironment. Hongru Zhang, University of Pennsylvania, Philadelphia, PA.

A101 Single-cell analysis reveals the pivotal role of the innate immune compartment in aCTLA-4 antitumor response. Ido Yofe, Weizmann Institute of Science, Rehovot, Israel.

A102 The prognostic impact of different immune landscapes in patients with stage I-III colorectal cancer. Jitwadee Inthagard, University of Glasgow, Glasgow, United Kingdom.

A103 Transcriptional profiles of CD14+ cells in situ in melanoma reveal plasticity, localization-dependent function, and specific T-cell interactions. Jan Martinek, The Jackson Laboratory for Genomic Medicine, Farmington, CT.



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A104 A stochastic model of tumor-immune evasion predicts sustained coevolution and tumor antigen downregulation. Jason T. George, Rice University, Houston, TX.

A105 PARP inhibition modulates the infiltration, phenotype, and function of tumor-associated macrophages (TAMs) in BRCA-associated breast cancer and can be augmented by harnessing the antitumor potential of TAMs. Jennifer L. Guerriero, Dana-Farber Cancer Institute, Boston, MA.

A106 The long noncoding RNA HOTAIRM1 promotes sorafenib resistance via regulating autophagy in hepatocellular carcinoma. Jiang Chen, Department of General Surgery, Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, Hangzhou, Zhejiang, China; Department of Radiation Oncology, Massachusetts General Hospital, Harvard Medical School, Boston, MA.

A107 Microfluidics and oncoimmunology: New in vitro models to study solid tumor immunotherapy. Jose M. Ayuso, University of Wisconsin, Madison, WI.

A108 Identification of distinct fibroblast populations with unique roles in PDAC progression and tumor immunity. J. Kebbeh Darpolor, University of Texas MD Anderson Cancer Center, Houston, TX.

A109 Cabozantinib sensitizes microsatellite stable colorectal cancer to immune checkpoint inhibition by immune modulation in humanized mouse models. Julie Lang, University of Colorado Anschutz Medical Campus, Aurora, CO.



POSTER SESSION B

Tuesday, November 19

4:30 p.m.–7:00 p.m.

Back Bay

B1 Investigating the mechanisms of immune-related adverse events using engineered animal models.

Nikhil S. Joshi. Yale University, New Haven, CT.

B2 Coexpression of effector T cell-associated chemokine receptors defines T-cell subsets with different roles in antitumor response and toxicity of dual checkpoint blockade.

Rodney J.M. Macedo Gonzales, Columbia Center for Translational Immunology, New York, NY.

B3 Hijacking antibody-induced CTLA-4 lysosomal degradation for safer and more effective cancer immunotherapy.

Yan Zhang, University of Maryland School of Medicine, Baltimore, MD.

B4 High-dose ascorbic acid synergizes with anti-PD1 in a lymphoma mouse model.

Niraj Shenoy. Albert Einstein College of Medicine, Bronx, NY.

B5 Reversing epigenetic gene silencing to overcome immune evasion in CNS malignancies.

Nivedita M. Ratnam, National Cancer Institute, Bethesda, MD.

B6 Epigenetic deregulation in LSD1-deficient luminal mammary tumor cells leads to their increased metastasis via reprogramming of the immune microenvironment.

Zhe Li, Brigham and Women's Hospital and Harvard Medical School, Boston, MA.

B7 Changing the field: Magnetic particle imaging and localized RF hyperthermia in cancer immunology.

James R. Mansfield, Magnetic Insight, Alameda, CA.

B8 Multiplex quantification of immunomodulatory proteins in tissue and plasma using next-gen targeted MRM mass spectrometry.

Jeffrey R. Whiteaker, Fred Hutchinson Cancer Research Center, Seattle, WA.

B9 Screening the membrane proteome to determine antibody specificity and discover new immunomodulatory targets.

Tabb Sullivan, Integral Molecular, Philadelphia, PA.

B10 Novel CRISPR/Cas9 vectors for in vivo tumor functional genomics.

Juan Dubrot, Broad Institute, Cambridge, MA.

B11 Imaging of PD-L1 modulation by gemcitabine using 89Zr labeled anti-PD-L1 antibody PET.

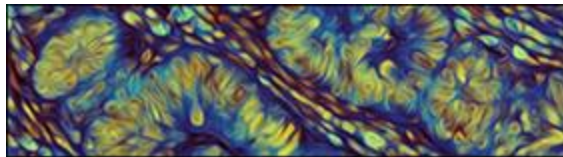
Kyung-Ho Jung, ¹Sungkyunkwan University, Samsung Medical Center, Seoul, Republic of Korea.

B12 Exploiting the zebrafish to study lymphocyte infiltration in MYCN-driven neuroblastoma.

Xiaodan Qin, Departments of Pharmacology and Medicine, Section of Hematology and Medical Oncology, Cancer Research Center, Boston University School of Medicine, Boston, MA.

B13 Immunogenic chemotherapy alters microbiome-induced T-cell activation.

Peter L. Smith, St. Georges University of London, London, United Kingdom.



B14 Natural killer immune response is promoted by the treatment of B-cell lymphoma cancer cells with membrane ionophores. Abdessamad Zerrouqi, Medical University of Warsaw, Warsaw, Poland.

B15 Tumor genotype dependency of checkpoint blockade therapy in EGFR-driven glioblastoma. Alan T. Yeo, Tufts University, Boston, MA.

B16 Identification of tumor-specific antigens shared by induced pluripotent stem cells. Anca Apavaloaei, Institute for Research in Immunology and Cancer, University of Montreal, Montreal, QC, Canada.

B17 Identification of drugs that synergize with immunotherapies. Avinash D. Sahu, Dana-Farber Cancer Institute, Boston, MA.

B18 Exome scale liquid biopsy monitoring of putative neoantigens and genomic biomarkers in patients on anti-PD-1 therapy in squamous cell carcinoma of the head and neck. Charles W. Abbott, Personalis, Inc., Menlo Park, CA.

B19 Cowpea mosaic virus stimulates antitumor immunity through recognition by MYD88-dependent signaling of multiple Toll-like receptors. Chenkai Mao, Dartmouth College, Hanover, NH.

B20 Repurposing of fenofibrate to prevent and treat PM-induced pulmonary fibroblast-mediated inflammation: Mechanism involved in SIRT1-SREBP1-PIR/NLRP3 inflammasome axis. Chia-Ping Tien, Genomics Research Center, Academia Sinica, Taipei, Taiwan.

B21 Dual immunotherapy targeting macrophages and PD-1 immune checkpoint for treatment of melanoma. Claire E. Shudde, Department of Immunotherapeutics and Biotechnology, Texas Tech Health Science Center School of Pharmacy, Abilene, TX.

B22 Genomic landscape of immunotherapy resistance in lung cancer. Denise Lau, Tempus, Chicago, IL.

B23 Enhanced HLA-II epitope prediction for immunotherapy with novel proteomics and genomics approaches. Dewi Harjanto, Neon Therapeutics, Cambridge, MA.

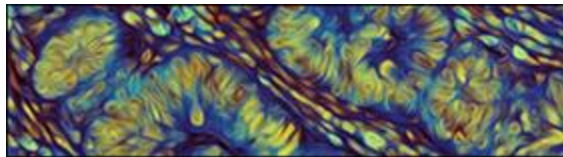
B24 Using L-fucose to render melanomas immune hot: Roles of melanoma HLA-DRB1 and CD4+T cell-mediated antitumor immunity. Eric Lau¹, H. Lee Moffitt Cancer Center, Tampa, FL.

B25 The effect of peritumoral gene electrotransfer of interleukin-12 as an adjuvant immunotherapy to electrochemotherapy varies according to immune status of treated tumors. Gregor Sersa, Institute of Oncology Ljubljana, Ljubljana, Slovenia.

B26 Prorapeutic vaccination against shared antigens induced in future tumors. Greta Garrido, University of Miami, Miami, FL.

B27 Adjuvant TLR-3 administration enhances proinflammatory immune responses and is associated with extended survival in glioblastoma patients treated with dendritic cell vaccination. Joseph P. Antonios, Yale School of Medicine, Department of Neurosurgery, New Haven, CT.

B28 ERAP2 overexpression is a marker for reduced anti-PD-1 response in nasopharyngeal carcinoma. Joshua K. Tay, Stanford University School of Medicine, Stanford, CA.



B29 The importance of epitope spreading in the generation of effective antitumor immunity in mice treated with combination immunotherapy. Karin L. Lee, Laboratory of Tumor Immunology and Biology, CCR, NCI, NIH, Bethesda, MD.

B30 Emergence of quality metrics for neoantigens: Dissimilarity to the self-proteome as a novel determinant of immunogenicity. Lee P. Richman, Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA.

B31 Viagenpumatucel-L (HS-110) plus nivolumab in previously treated patients with advanced non-small cell lung cancer (NSCLC). Roger B. Cohen, University of Pennsylvania, Perelman School of Medicine, Philadelphia, PA.

B32 Metformin reduces PD-L1 expression in the tumor and enhances the efficacy of vaccine-generated CD8 T cells in a murine model of triple-negative breast cancer. Luis E. Munoz, Emory University, Atlanta, GA.

B33 Immuno gene therapy with IL-12 combined with electrochemotherapy for the treatment of skin and oral tumors in client-owned dogs. Maja Cemazar, Institute of Oncology Ljubljana, Ljubljana, Slovenia.

B34 Immune response after combining radiotherapy and gene electrotransfer of plasmid DNA encoding shRNA against melanoma cell adhesion molecule in B16F10 melanoma and TS/A carcinoma. Masa Bosnjak, Institute of Oncology Ljubljana, Ljubljana, Slovenia.

B35 Epitope-binding promiscuity of HLA class I molecules shapes the efficacy of checkpoint blockade immunotherapy. Máté Manczinger, Biological Research Centre of the Hungarian Academy of Sciences, Szeged, Hungary.

B36 Antigen dominance hierarchies shape tumor T-cell phenotypes and immunotherapy responses. Megan L. Burger, Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA.

B37 Development of a monoclonal antibody targeting xCT/SLC7A11 expressed in metastatic cancer cells. Ahmad Salameh, AgilVax, Albuquerque, NM.

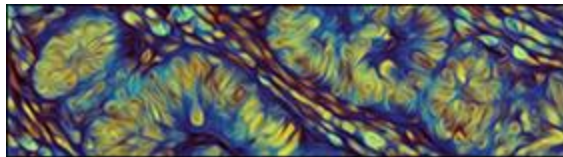
B38 Immunologic monitoring markers of clinical responses to anti-PD-1 therapy for non-small cell lung cancer. Mikio Oka, Immuno-Oncology, Kawasaki Medical School, Kurashiki, Japan.

B39 The T-cell repertoire as a biomarker for response to anti PD-1 immunotherapy. Alona Zilberberg, Bar-Ilan University, Ramat-Gan, Israel.

B40 The phosphorylation by activated-AMPK induces ERAD of PD-L1 through abnormal glycosylation. Jong-ho Cha, Inha University, Incheon, South Korea.

B41 Bis-indole derived NR4A1 antagonist induces PD-L1 degradation and enhances antitumor immunity. Keshav Karki, Texas A&M University, College Station, TX.

B42 Human CD141+ dendritic cells (cDC1) are impaired in advanced melanoma patients but can be targeted to increase efficacy of anti-PD-1 checkpoint inhibitor therapy. Liam O'Brien, Mater Research



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Institute, The University of Queensland, Translational Research Institute, Woolloongabba, QLD, Australia.

B43 Simultaneous inhibition of CXCR1/CXCR2, TGF- β , and PD-L1 overcomes immune resistance driven by tumor plasticity. Lucas A. Horn, Laboratory of Tumor Immunology and Biology, CCR, NCI, NIH, Bethesda, MD.

B44 The role of MDSCs in breast cancer dormancy and recurrence. Mahnaz Janghorban, Baylor College of Medicine, Houston, TX.

B45 Phosphatidylserine suppresses T cells through GPR174, and coinhibition of adenosine receptors and GPR174 synergistically enhances T-cell responses. Marc A. Gavin, Omeros Corporation, Seattle, WA.

B46 The long noncoding RNA INCA1 is a novel regulator of PD-L1 expression in tumors. Marco Mineo, Harvey W. Cushing Neuro-oncology Laboratories (HCNL), Department of Neurosurgery, Harvard Medical School and Brigham and Women's Hospital, Boston, MA.

B47 CHIME screening identifies PTPN2 as a novel regulator of antitumor immunity. Martin LaFleur, Harvard University, Boston, MA.

B48 PI3K δ -specific inhibitors may act as adjuvants in the immunotherapy of glioblastoma. Tony To, The HK PolyU, Hong Kong, HKSAR.

B49 The association between IKK α , immunologic markers, and clinical outcomes in patients with ER-positive tamoxifen-treated breast cancer. Phungern Khongthong, University of Glasgow, Glasgow, United Kingdom.

B50 Targeting Notch-1 and microRNAs crosstalk in breast cancer stem cells: A potential target for overcoming doxorubicin resistance. Rana Hamed, Alexandria University, Alexandria, Egypt.

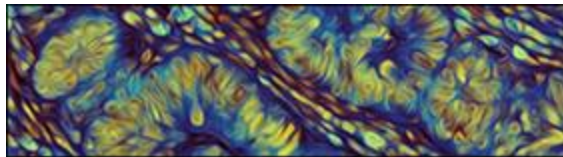
B51 Novel syngeneic animal model of tobacco-associated oral cancer reveals the activity of in situ anti-CTLA-4. Robert Saddawi-Konefka, Moores Cancer Center, University of California San Diego, La Jolla, CA.

B52 The systematic identification of novel immune checkpoint averting the metastasis of ovarian cancer: The role of IL-20/IL24-IL20RA axis. Rong Xiang, Nankai University, Tianjin, China.

B53 Development of SB 11 and SB 12, structurally unique linkage analogs of SB 11285 as STING agonists for Immuno-oncology. Shenghua ZhouSpring Bank Pharmaceuticals, Hopkinton, MA.

B54 Single-cell analytics in claudin-low TNBC reveals immunostimulatory effects of low-dose metronomic cyclophosphamide treatment. Swarnima Singh, Baylor College of Medicine, Houston, TX.

B55 Exploratory biomarker analyses of tumor and peripheral blood samples from the phase I durvalumab plus gefitinib trial in EGFR-mutated NSCLC. Tammie C. Yeh, AstraZeneca, Boston, MA.



B56 YAP1 inhibits host cell immunity and increases human papillomavirus (HPV) infection to drive cervical tumorigenesis. Xiangmin Lv, Vincent Center for Reproductive Biology, Department of Obstetrics & Gynecology, Massachusetts General Hospital & Harvard Medical School, Boston.

B57 MUC3A induces PD-L1 and reduces tyrosine kinase inhibitor effects functions in EGFR-mutant non-small cell lung cancer. Yan Gong, Zhongnan Hospital of Wuhan University, Wuhan, China.

B58 Gasdermin E suppresses tumor growth by activating antitumor immunity. Ying Zhang, Program in Cellular and Molecular Medicine, Boston Children's Hospital, Boston, MA.

B59 IL35/STAT3 axis as regulator of tolerance and T-cell exclusion in pancreatic cancer. Yuliya Pylayeva-Gupta. University of North Carolina at Chapel Hill, Chapel Hill, NC.

B60 Perturbation biology of colorectal cancer organoids reveals patient-specific signaling rewiring and interference with immunity. Zlatko Trajanoski, Medical University of Innsbruck, Innsbruck, Austria.

B61 Transcriptomic landscape of the immune suppressant FTY720 in antitumor. Zuoquan Xie, Shanghai Institute of Materia Medica, Shanghai, China.

B62 Development of novel chimeric antigen receptor T cells for immunotherapy of hepatocellular carcinoma. Leidy D. Caraballo G., Augusta University, Augusta, GA.

B63 Calcium electroporation offers an effective local treatment with immunogenic cell death and the potential for systemic remission in melanoma. Liam Friel Tremble, University College Cork, Cork, Ireland.

B64 Coexpression of a CD19-OX40-CD3 ζ CAR with membrane-bound IL-15 enhances natural killer cell function. Luxuan G. Buren, Nkarta Therapeutics, South San Francisco, CA.

B65 CT-0508, a novel CAR macrophage product directed against HER2, promotes a proinflammatory tumor microenvironment. Konrad Gabrusiewicz, Carisma Therapeutics, Philadelphia, PA.

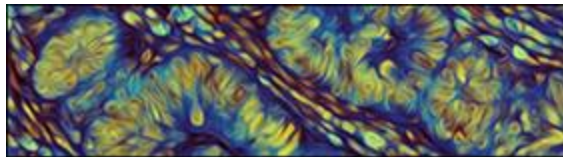
B66 Deep TLR PrimedTM T cells induce potent antitumor activity without systemic toxicity. Nathan Westcott, Torque Therapeutics, Cambridge, MA.

B67 Development of MyD88 L265P mutation-specific TCR gene therapy for treatment of B-cell lymphoma and leukemia. Özcan Çinar, Max-Delbrück-Center for Molecular Medicine, Charité - Universitätsmedizin Berlin, Berlin, Germany.

B68 NF- κ B p50-deficient immature myeloid cell (p50-IMC) adoptive transfer slows the growth of murine prostate and pancreatic ductal carcinoma. Rahul R. Suresh, Department of Oncology, Johns Hopkins University School of Medicine, Baltimore, MD.

B69 Assessment of CCR5/maraviroc immunotherapy in combination with PD1 and MR-guided radiotherapy for treatment of pancreatic cancer. Sophie Hughes, University of Oxford, Oxford, United Kingdom.

B70 Universal adapter CAR-engineered NK-92 cells target patient-derived glioblastoma cancer stem cells. Stefan Grote, Hematology/Oncology, University Children's Hospital, Tuebingen, Germany.



B71 Modulation of integrin CD11b as a novel therapeutic strategy against lung cancer. Terese D. Geraghty, Rush University, Chicago, IL.

B72 Humanized NSG-Tg(Hu-IL15) mice support preclinical immune-oncology efficacy for testing of NK cell-based immunotherapy. Li-Chin Yao, The Jackson Lab, Sacramento, CA.

B73 A novel candidate for immunologic target in treatment of multiple myeloma. Maiko Matsushita, Keio University, Faculty of Pharmacy, Tokyo, Japan.

B74 Dual mechanism of ONCR-177 enhances antitumor immunogenicity. Melissa Hayes, Oncorus, Cambridge, MA.

B75 Nanoparticle formulation of the STING agonist SB 11285. Radhakrishnan Iyer, Spring Bank Pharmaceuticals, Hopkinton, MA.

B76 Discovery of novel first-in-class nucleotide analogs as RIG-I agonists for immuno-oncology. Sreerupa Challa, Spring Bank Pharmaceuticals, Hopkinton, MA.

B77 TNFR2 blockade alone or in combination with PD-1 blockade shows therapeutic efficacy in murine cancer models. Russell LaMontagne, Boston Immune Technologies & Therapeutics, Boston, MA.

B78 NIR light-triggered photoimmunotherapy selectively destroy tumor cells in a clinically relevant desmoplastic heterocellular model. Shazia Bano, Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School, Boston, MA.

B79 PET CT might be better than CT scan when evaluating immune checkpoint inhibitor response. Sung Yong Lee, Korea University Guro Hospital, Seoul, Republic of Korea.

B80 High-dimensional DNA damage and repair (DDR) cytometric profiling of human T-cell subsets revealed distinct DDR signatures. Yuki Muroyama, Institute for Immunology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA.

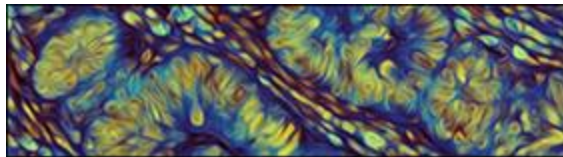
B81 Prognostic significance of matrix metalloproteinase-3 expression in patients with resected lung adenocarcinoma. Jung-Jyh Hung, Taipei Veterans General Hospital, Taipei, Taiwan.

B82 Loss of PD-1 promotes antitumor immunity by improving functions of both PD-1+ and PD-1- CD8+ T cells in the tumor microenvironment. Kristen E. Pauken, Harvard Medical School, Boston, MA.

B83 A role of a transcription factor TOX in promoting CD8+ T-cell exhaustion in cancer via single-cell transcriptome analysis. Kyungsoo Kim, Yonsei University, Seoul, Korea.

B84 In vitro and in vivo characterization of tumor-educated human monocytic myeloid-derived suppressor cells. Latika Singh, Merck & Co., Inc., Boston, MA.

B85 Combination therapy using the programmed death receptor-1 and the programmed death-ligand 1 inhibitors and Fluorouracil in human colorectal carcinoma in a humanized patient-derived orthotopic mouse model. Li Li, Ochsner Clinic Foundation, New Orleans, LA.



B86 27-hydroxycholesterol acts on myeloid cells to inhibit both T cell expansion and cytotoxic activity. Liqian Ma, University of Illinois at Urbana-Champaign, Urbana, IL.

B87 NK cells lose their ability to control MHC-I-deficient tumor cells outside circulation. Marta Requesens, Center for Cancer Immunology and Cutaneous Biology Research Center, Department of Dermatology and Center for Cancer Research, Massachusetts General Hospital and Harvard Medical School, Boston, MA.

B88 GPNMB expression modulates the tumor immune microenvironment in mouse models of breast cancer. Matthew G. Annis, McGill University, Montreal, QC, Canada.

B89 Dual PD-1 and VEGFR-2 blockade induces vascular normalization and enhances antitumor immune responses in hepatocellular carcinoma. Meenal Datta, MGH/HMS, Boston, MA.

B90 Deep characterization of in vitro chronically stimulated T cells through single-cell multiomic analysis. Mirko Corselli, BD Biosciences, San Diego, CA.

B91 BRCA1 mutation in breast cancer cells and generation of metastasis associated fibroblasts. Neetha Rajan Latha, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala, India.

B92 VHL inactivated kidney epithelial cells reprogram macrophage behavior through IL-6 and CXCL-1 secretion. Thi-Ngoc Nguyen, Department of Biomedical Sciences and Engineering, Institute of Systems Biology and Bioinformatics, and Center for Chronic Disease Research and Management, National Central University, Taoyuan, Taiwan.

B93 Tumor lymphangiogenesis improves responsiveness to radiotherapy in mouse melanoma. Nikolaos Mitrousis, Pritzker School of Molecular Engineering, University of Chicago, Chicago, IL.

B95 PD-L1-mediated nanotherapeutic targeting of glioma-infiltrating myeloid cells synergizes with radiotherapy for glioblastoma. Peng Zhang, Northwestern University, Chicago, IL.

B96 Calreticulin exposure on malignant blasts correlates with improved NK cell-mediated cytotoxicity in AML patients. Peter Holicek, Sotio, Prague, Czech Republic.

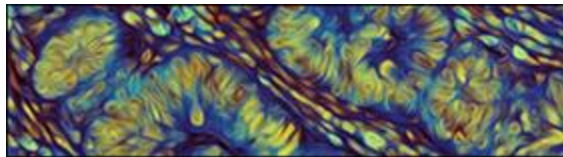
B97 The immunomodulatory roles of tumor-associated lymphatics in triple-negative breast cancer. Peyman Hosseinchi, Pritzker School of Molecular Engineering, Chicago, IL.

B98 IGFBP2 reprograms pancreatic cancer immune surveillance at epitranscriptome levels. Ping-Chieh Chou, Wake Forest Baptist Medical Center, Winston-Salem, NC.

B99 Active and quiescent tertiary lymphoid structures, differentiated using FOXP1 expression, play a role in immunity to breast cancer. Pushpamali De Silva, Institut Jules Bordet, Université Libre de Bruxelles, Brussels, Belgium.

B100 An emerging model for cancer development from a tumor microenvironment perspective in mice and humans. Ryuji Yamaguchi, JRC Medical Research Company, Osaka, Japan.

B101 Molecular characteristics of tumor-associated macrophages in human melanoma metastases. Saem Park, The University of Auckland, Auckland, New Zealand.



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B102 Epithelium-derived cytokines in breast carcinogenesis. Sanne Kroon, Massachusetts General Hospital, Boston, MA.

B103 Molecular heterogeneity of gastric cancer explained by methylation-driven key regulators. Seungyeul Yoo, Icahn School of Medicine at Mount Sinai, New York, NY.

B104 Immunomodulatory effect of 15-hydroxy prostaglandin dehydrogenase in colon cancer. Shakti R. Satpathy, Lund University, Malmo, Skane, Sweden.

B105 The impact of cholesterol and its metabolites on ovarian tumor microenvironment and cancer progression. Sisi He, University of Illinois Urbana-Champaign, Urbana, IL.

B106 Engineering cryogels to modulate oxygen tension in reconstructed tumor microenvironments. Thibault Colombani, Northeastern University, Boston, MA.

B107 Dormant breast tumor cells avoid the adaptive immune system through regulation of the immune and tumor microenvironment. Timothy N. Trotter, Duke University, Durham, NC.

B108 Hypoxia induces phenotypic and functional changes in NK cells which negatively impacts antitumor immunity in the solid tumor microenvironment. Upasana Sunil Arvindam, Department of Microbiology and Immunology, University of Minnesota, Minneapolis, MN.

B109 Multiplex and 3D immunofluorescence microscopy reveal spatiotemporal mechanisms of cancer immunotherapy. Vivien I. Maltez, NIH, Bethesda, MD.