AACR IMMUNO-ONCOLOGY (AACR IO)

DISCOVERY AND INNOVATION IN CANCER IMMUNOLOGY: REVOLUTIONIZING TREATMENT THROUGH IMMUNOTHERAPY

February 18–21, 2026 | Los Angeles, CA

AACR American Association for Cancer Research

Current as of February 9, 2026

Poster Session A (To be presented Wednesday, February 18, 7:30-10pm PT)

A001 Epigenetic and metabolic reprogramming for resilient CD8$^+$ T cell responses in the tumor microenvironment. Haidong Dong. Mayo Clinic College of Medicine and Science, ROCHESTER, MN, United States.

A002 Short-form Ron regulates the B cell response in preclinical models of metastatic breast cancer Clint Valencia. Huntsman Cancer Insitute at the University of Utah, Salt Lake City, UT, United States.

A003 Antigen-specific CD8+ T cells remodel the glioblastoma tumor microenvironment. Madeline Ho. UCLA, Los Angeles, CA, United States.

A004 A minimal gene panel approach for cost-effective identification of tumor-reactive T cells. Marie-Therese Neuhoff. DKFZ, Heidelberg, Germany.

A005 Utility of an oncogene-driven spontaneous triple-negative breast cancer model for immunotherapeutic testing. Jessica Finkler. Duke University, Durham, NC, United States.

A006 Clonal dynamics of tumor-infiltrating CD4+ T cells in response to immune checkpoint and Shp-1 inhibition Kaitlyn Flint. University of Utah, Salt Lake City, UT, United States.

A007 Early Signaling Networks of Anti-CD19 CAR-T Cells Revealed by Quantitative Proteomic and Phosphoproteomic Profiling. John Teibo. Department of Biochemistry and Immunology, Ribeirão Preto Medical School, University of São Paulo, Ribeirão Preto, Brazil.

A008 Fine-Tuning Signal Strength in CD5 CAR-NK Cells for Targeted T Cell Cancer Therapy. Seona Jo. Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon, Korea, Rep

A009 Enhanced antitumor efficacy of IL-15/IL-15 receptor α/IL-21-armed ROR1 CAR-NK cells against solid tumors. Inpyo Choi. IngeniumTherapeutics, Daejeon, Korea, Rep

A011 IL-12 armored anti-macrophage CAR T cells reset and reprogram the tumor microenvironment to control metastatic ovarian and lung tumor growth Jaime Mateus-tique. Icahn School of Medicine, New York, NY, United States.

A012 IFNγ-induced antigen loss in chimeric antigen receptor (CAR)-T cell therapy. Miao Cao. Thomas Jefferson Univerisity, Philadelphia, PA, United States.

A013 Programmable JAK/STAT signaling drives CAR T cells to enhanced functional states. Wansang Cho. Stanford University, Palo Alto, CA, United States.

A014 A CD90 NOT gate for cell therapies to treat AML and spare healthy hematopoietic stem cells. Tanveer Gill. A2 Biotherapeutics, Agoura Hills, CA, United States.

A015 Thoracic duct cannulation as a new source for CD3+ T cells and other phenotypes used in cell therapies. Matthew Callaghan. Stanford University, Stanford, CA, United States.

A017 A retrospective clinical study on the 5-year and 10-year survival rates of postoperative malignant tumor patients treated with DC-CIK. daiqing gao. Qingdao Yibaili Cell Biotechnology Co., Ltd.; Qingdao Central Hospital, University of Health and Rehabilitation Sciences, Qingdao, China.

A018 Characterization of the anti-tumor efficacy of memory cytokine enriched NK cells against tumors with neuroendocrine features. Kristen Fousek. National Cancer Institute, Bethesda, MD, United States.

A020 Novel natural killer cell therapy using unique NK cell subset. John Yu. Institute of Stem Cell & Translational Cancer Research, Linkow, Taiwan.

A021 Spatiotemporal gene profiling reveals distinct in vivo dynamics and immune checkpoint regulations of human CAR-T and CAR-NKT cells against solid tumors. Yan-Ruide Li. University of California, Los Angeles, Los Angeles, CA, United States.

A022 Synergizing hypomethylating agents with off-the-shelf CD70-targeted CAR-engineered natural killer T cells for the treatment of acute myeloid leukemia. Yan-Ruide Li. University of California, Los Angeles, Los Angeles, CA, United States.

A023 Rewiring host immunity with cytotoxic agents and tumor targeted costimulatory bispecific antibodies potentiate polyclonal T cell antitumor immunity. Qiaozhi Wei. Regeneron, Tarrytown, NY, United States.

A024 TIGIT blockade enhances the effect of anti-PD-1 against CD155hi expressing tumors in mouse and human models. Hannah Meibers. Arcus Biosciences, Hayward, CA, United States.

A026 Single Arm Pilot Study of Tumor Treating Fields (TTFields) with Nivolumab and Ipilimumab (IpiNivo) in Patients with Metastatic Uveal Melanoma (mUM) Justin Moser. HonorHealth Research Institute, Scottsdale, AZ, United States.

A027 Peripheral Immune Dynamics and Biomarkers of Clinical Response in Patients with Castration-Resistant Prostate Cancer Treated with Combination Immunotherapy. Nicole Toney. National Cancer Institute, Bethesda, MD, United States.

A028 Combination therapy with a TCR Vβ-directed bifunctional molecule, cisplatin and anti-PD-1 promotes antitumor activity in immune checkpoint blockade-refractory head and neck murine tumor models. Francesca Rosato. National Institutes of Health, Bethesda, MD, United States.

A030 Reprogramming the SCLC tumor microenvironment to enhance immunotherapy response. Clara Poupault. Stanford University, Stanford, CA, United States.

A031 Systemic Inflammatory Biomarkers and Lu-177-PSMA Radiopharmaceutical Therapy Response in Sipuleucel-T-Pretreated Metastatic Castration-Resistant Prostate Cancer. Farzana Ali. UCLA Ahmanson Translational Theranostics Division, LOS ANGELES, CA, United States.

A032 Regorafenib–MEK inhibitor combination reshapes tumor cell states and reprograms the tumor microenvironment to enable immunotherapy in group 3 medulloblastoma. JINGJING LIU. St Jude Children's research Hospital, memphis, TN, United States.

A033 Histone methyltransferase PRMT5 promotes melanoma immune evasion by repressing T H 1-related gene networks and endogenous retroelements. Simon Milette. Yale University, New Haven, CT, United States.

A034 TET1 Orchestrates Glucose Metabolism and Counteracts TNBC Aggressiveness under the Oncogenic stress. Hsin-Ling Hsu. National Health Research Institutes, Zhunan, Taiwan.

A035 Identification and validation of an explainable predictive model for early diagnosis of non-small cell lung cancer metastasis: A peripheral immune score based on integrative machine learning. Jianhui Tian. Shanghai Municipal Hospital of Traditional Chinese Medicine, Shanghai University of Traditional Chinese Medicine, shanghai, China.

A036 Spatial multi-omics identifies a tumor microenvironment signature predictive of immunotherapy response in mucosal melanomas. Suhendan Ekmekcioglu. UT MD Anderson Cancer Center and Cleveland Clinics, Houston, TX, United States.

A037 Single-cell spatial immune architectures shape ctDNA release and prognosis in luminal breast cancer. Hengyi Xu. Peking Union Medical College, Beijing, China.

A038 Large-scale single-cell and spatial multi-omics elucidate the mechanism by which mitochondrial copper metabolism biomarkers promote immune evasion in breast cancer. Bowen Chu. Nanjing University, Nanjing, China.

A039 High-throughput high-plex proteomic profiling of hepatocyte toxicity to oncologic drug compounds: a platform for toxicity assessment, immune risk prediction, and drug development acceleration. Nicole Paul. Nomic Bio Inc, Montreal, QC, Canada.

A040 Measurement of CD8+ T cell-mediated anti-tumor immune response induced by neoadjuvant chemo-radiation therapy using T-cell receptor analysis in rectal cancer patient. YONG JOON LEE. CHA Bundang Medical Center, Seongnam, Korea, Rep

A041 LAG-3 is associated with poor prognosis and LAG-3 blockade enhances the efficacy of PD-1 blockade combined with radiation therapy in breast cancer. In Ah Kim. Department of Radiation

Oncology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seoul, Korea, Rep

A042 Onco-fetal immune tolerance factors shape T cell exhaustion and immune evasion in pregnancy and cancer. Jin Soo Joo. Yonsei University, Seoul, Korea, Rep

A043 Single-cell and bulk transcriptomics uncovers GATA3-mediated macrophage immunosuppressive programming in murine and human cancers. Harry Xiao. Cedars-Sinai Medical Center, Los Angeles, CA, United States.

A044 VSIG4 restricts hepatocellular carcinoma control by suppressing tumor-specific CD8 + T cell immunity in the tumor microenvironment. Jinglong Guo. Genentech INC, South San Francisco, CA, United States.

A045 Overcoming platelet-mediated immune suppression in ovarian cancer. Robiya Joseph. University of Texas Health Science Center, Houston, TX, United States.

A046 Dendritic cell dysfunction predicts adverse prognosis in high-risk acute lymphoblastic leukemia. Anil Kumar. Beckman Research Institute of City of Hope, Monrovia, CA, United States.

A047 B7-H4 expression and CCR8^{+} Treg infiltration delineate an immune-cold molecular phenotype in ovarian cancer. Edwin BELLIDO. Hospital Universitario Quirónsalud Madrid, Madrid, Spain.

A048 PITPα-mediated tumor signaling shapes NK cell phenotypes and promotes breast cancer metastasis. Sheera Rosenbaum. University of Colorado Anschutz Medical Campus, Aurora, CO, United States.

A049 CD8+ T cell decline from regression to recurrence in ovarian cancer is linked to expansion of suppressive macrophages. Grace Wolczanski. Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Cambridge, MA, United States.

A050 ATG (anti-thymocyte globulin) with post-transplant cyclophosphamide (PTCy) significantly reduces GVHD and improves survival in haplo-HSCT (haploidentical hematopoietic stem cell transplantation): A systematic review and meta-analysis. Anubhuti Sharma. Guthrie Robert Packer Hospital, Sayre, PA, United States.

A051 Integrative Single-Cell and Spatial Transcriptomics Reveal Metabolic Reprogramming and Spatiotemporal Transition of Macrophages Driving Immune Suppression in Head and Neck Cancer. Ji-Hye Choi. Department of Physiology, Ajou University School of Medicine, Suwon, Korea, Rep

A052 Safety, immunogenicity and resistance of in situ Immunomodulation with CDX-301, radiotherapy, CDX-1140, and Poly-ICLC in patients with unresectable and metastatic solid tumors: a phase 1 trial. Steven Luong. University of Southern California, Los Angeles, CA, United States.

A053 CURE AI predicts immunotherapy treatment benefit for SHH-activated/TP53 wild-type but not SHH-activated/TP53 mutant medulloblastomas. Neil Pfister. Numenos, New York, NY, United States.

A054 AMP-410: A VEGF-dependent conditional 4-1BB agonist drives localized antitumor immunity with high therapeutic index across multiple tumor types. Xiaofei Zhou. Ampersand Biomedicines, Boston, MA, United States.

A055 Metabolic fitness determines T cell fate: CD39/OX40 axis controls anabolic-to-catabolic reprogramming in head and neck squamous cell carcinoma. Sujeetha Rajakumar. Johns Hopkins School of Medicine, Baltimore, MD, United States.

A056 Bispecific T-cell engagers and antibody-drug conjugtes for the treatment of lymphomas. Priya Hays. Hays Documentation Specialists LLC, San Mateo, CA, United States.

A057 Metabolomic profiling reveals age-dependent metabolites that enhance CD8 T cell anti-tumor activity. Jongin Kim. Department of Systems Biology, Yonsei University, Seoul, Korea, Rep

A058 Bispecific NK Cell Engager Targeting immune checkpoint molecule (ICM) Reverses Drug Resistance Driven by Ligand-Independent Constitutive ICM Signaling in DLBCL. Jaewoong Lee. School of Biosystems and Biomedical Sciences, College of Health Science, Korea university, Seoul, Korea, Rep

A059 Breaking tolerance in autochthonous tumors. Mai Huong To. Max-Delbrück-Center for Molecular Medicine, Berlin, Germany.

A060 Treatment of Recurrent Respiratory Papillomatosis with DNA immunotherapy INO-3107 induces activation and enrichment of pro-inflammatory CD4+ T cell responses in blood and airways of patients with clinical response. Elisabeth Gillespie. Inovio Pharamaceuticals, Inc., Plymouth Meeting, PA, United States.

A061 First-in-human hapten-enhanced stressed-ghost cell immunotherapy (STC-1010) for advanced colorectal cancer: preclinical and early clinical data. George Alzeeb. Brenus Pharma, Lyon, France.

A062 Endometriosis as a Neuroimmune Disorder: Integrating Inflammation, Innervation, and Sensitization. Ariana Rahman. mayo clinic, Phoenix, AZ, United States.

A063 TLR4 nanoblocker inhibits ovarian cancer regardless of TNF-α sensitivity. Hadil Gadelrab. SUNY-Upstate Medical University, Syracuse, NY, United States.

A065 Fast and cost-effective prediction of treatment response in head and neck cancer by characterizing the tumor microenvironment from routine H&E slides. Sumona Biswas. Cancer Data Science Lab (CDSL), National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

A066 MMR-stratified spatial programs of normal and cancer-associated fibroblasts and their association with lymphocyte pervasiveness in CRC. Debanjan Barua. Merck Research Laboratories, South San Francisco, CA, United States.

A067 A patient-derived 3D MicroOrganoSpheres® (MOS®) platform to evaluate functional potency of autologous TILs in Non-Small Cell Lung Cancer (NSCLC). Laura Contreras-Ruiz. Xilis Inc., Durham, NC, United States.

A069 Oncogenic EGFR signaling promotes intratumoral infiltration of antigen-specific T cells and myeloid cells while impeding T cell function in a mouse model of glioma. Marissa Li. University of California, Los Angeles, Los Angeles, CA, United States.

A071 Inhibition of Shp-1 in combination with checkpoint inhibitors broadens the repertoire of tumor-infiltrating self-antigen-specific T cells and drives therapeutic rescue of T cell function Joseph Matous. University of Utah, Salt Lake City, UT, United States.

A072 The T cell precursor frequency determines the immunogenicity of cancer neoantigens. Tzu-Jiun Kuo. Max Delbrück Center for Molecular Medicine in the Helmholtz Association, Berlin, Germany.

A073 Inhibition of nonsense-mediated decay in small cell lung cancer promotes tumor cell-intrinsic death and T cell cytotoxicity. Lucia Torres Fernández. University of Cologne, Cologne, Germany.

A074 Immune dysregulation and B-cell fitness driven by PLCγ2 R665W: Insights from a novel conditional B-cell mouse model. Vindhya Nawaratne. Sylvester Comprehensive Cancer Center, Miller School of Medicine, University of Miami, Miami, FL, United States.

A075 Molecular glues activate immunoproteasomes to amplify and expand the MHC-class-I immunopeptidome that promotes TCR-engineered T-cell cytotoxic activity against multiple myeloma. James Driscoll. University Hospitals Cleveland Medical Center, Cleveland, OH, United States.

Poster Session B (To be presented Thursday, February 19, 12:15-3:15pm PT)

B001 Postprandial changes to systemic lipid metabolism enhances adaptive immunity. Alok Kumar. University of Pittsburgh, Pittsburgh, PA, United States.

B002 A LIBRARY OF POTENT TCRS DERIVED FROM HEALTHY DONORS TARGETING KRAS G12D AND G12V NEOANTIGENS. Kendra Foley. BioNTech US, Cambridge, United States.

B003 p53 promotes anti-tumor immunity of human CD8+ T cells. Joseph Crompton. UCLA, Los Angeles, United States.

B004 CD40L and FLT3L fusion proteins in engineered T cells drive myeloid reprogramming and durable antitumor immunity. Shannon Oda. Seattle Children's Research Institute, Seattle, WA, United States.

B005 Harnessing GD2-CAR macrophages to target high-risk neuroblastoma. Shizhen (Jane) Zhu. Mayo Clinic, Rochester, MN, United States.

B006 2T2T: 2 week turnaround to personalised TCR therapy: Rapid identification, validation and prioritization of patient-specific, cancer-targeting TCRs Edward Green. DKFZ, Heidelberg, Germany.

B007 Developing cytokine-armored CAR-NK cells for the treatment of non-small cell lung cancer. Austin Rennels. UCLA, Los Angeles, CA, United States.

B008 NFY-mediated regulation of CD20 is targeted by novel salinomycin derivatives to potentiate anti-CD20 immunotherapy Bhaskar Pradhan. Medical University of Warsaw, Warsaw, Poland.

B009 CAR-T-cell monitoring using specific multimers: a fast and specific method allowing uniform evaluation Elizabeth Epps. Immudex USA, LLC, Philadelphia, PA, United States.

B010 Developing CAR-T/NK cells that target EphA2 for non-small cell lung cancer treatment. Soo Yun Lee. Korea Research Institute of Bioscience and Biotechnology (KRIBB), Daejeon, Korea, Rep

B011 Onboard, tethered IL-12 boosts potency of the Tmod NOT gate and preserves selectivity. Sara Imboden. A2 Biotherapeutics, Agoura Hills, CA, United States.

B012 Decoding CAR T Cell Membrane Architecture with the Proximity Network Assay. Michael Forster. Pixelgen Technologies, Stockholm, Sweden.

B013 Targeting CDC42 increases TCF1-mediated "stemness" and rejuvenates human T cells to enhance CAR-T efficacy. Mingjun Cai. Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States.

B014 Investigating universal mechanisms of leukemic cell resistance to CAR-T cell therapy. Isaac Vigil. University of Colorado Anschutz Medical Campus, Aurora, CO, United States.

B016 Pharmacologic inhibition of the Glucocorticoid Receptor synergizes with immunotherapy to prevent metastatic recurrence in pre-clinical models. Monica Cassandras. Dana-Farber Cancer Institute, Boston, MA, United States.

B017 A sphingolipid-derived paclitaxel nanovesicle enhances efficacy of combination therapies in triple-negative breast cancer and pancreatic cancer. Jianqin Lu. University of Arizona, Tucson, AZ, United States.

B018 Sphingomyelin-derived nanovesicles for the delivery of the IDO1 inhibitor epacadostat enhance metastatic and post-surgical melanoma immunotherapy. Jianqin Lu. The Univeristy of Arizona, Tucson, AZ, United States.

B019 Inhibition of the CXCR1 and CXCR2 chemokine receptors synergizes with docetaxel to remodel the tumor-immune microenvironment and effectively control tumor growth. Lucas Horn. National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

B020 Examination of a novel bi-functional TCR activating molecule in combination with docetaxel in breast and prostate cancer models. Jonelle Lee. Center for Immuno-Oncology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

B021 Alum-anchored IL-12 combined with HDAC inhibition overcomes checkpoint blockade refractory tumors. Christine Minnar. Center for Immuno-Oncology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD, United States.

B022 Synergistic epigenetic modulation with a TCRβ-targeted IL-2 fusion molecule enhances CD8+ T cell-mediated MHC-I independent tumor control via an antibody-linked mechanism. Katherine Lothstein. Center for Immuno-Oncology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, United States.

B023 Activation of antigen-specific CD8 T cells using nano-scale artificial antigen-presenting cells promotes tumor vessel normalization to potentiate different cancer treatments FAISAL JAMAL. National Institute of Immunology, New Delhi, India.

B024 The clinical benefit from treatment of advanced MSS mCRC with the adenosine 2a/2b antagonist etrumadenant is associated with adenosine-mediated T-cell exclusion and enhancement of the effectiveness of immunotherapy. Omar Kabbarah. Arcus biosciences, Hayward, CA, United States.

B025 Anti-GD2 combined with anti-PD1 enhances tumor immunity with T cell memory via inducing immunogenic cell death. Alice Yu. Department of Pediatrics, University of California in San Diego, La Jolla, CA, United States.

B026 Regulation of CTLA-4 and PD-1 blockade immunotherapy by distinct subpopulations of CD4 and CD8 tumor-resident memory T cells. Fathia MAMI-CHOUAIB. INSERM-UMR1186, Gustave Roussy, Villejuif, France.

B027 Tumor IDO1 drives resistance to adoptive cell transfer by suppressing T cell recruitment and effector function. Mamadou Bah. Weill Cornell Medicine, New York, NY, United States.

B028 CD70 Links DNA Damage, Proliferation, and Tumor–Stromal Communication. Tianshun Zhang. The Hormel Institute, University of Minnesota, Austin, MN, United States.

B029 Differential safety profiles of PD-1 inhibitors: A comparative pharmacovigilance analysis of immune-related adverse events with pembrolizumab and nivolumab in FAERS (2015–2024). Zehra Rahman. University of Florida College of Medicine, Jacksonville, GA, United States.

B030 Programmable mRNA 3'UTR engineering restores MHC-I and overcomes immune evasion in prostate cancer. Furong Huang. Duke University, Durham, NC, United States.

B031 Exploring CDKN2A mediated metabolic alterations as an immunotherapy resistance mechanism in non-small cell lung cancer. Haoyi Wu. MD Anderson, Houston, TX, United States.

B032 Characterization of αPD1, αPD-L1, αCTLA4, and αLAG3 as mono and combination therapy in live tumor fragments using an ex vivo cytokine profiling platform. Erika von Euw. Elephas Biosciences, Madison, WI, United States.

B033 Leveraging PSGL-1 blockade to elicit responses to anti-PD-1 immunotherapy resistant melanoma. Hannah Hetrick. Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, United States.

B034 Single-cell immune profiling reveals T cell dynamics in estrogen receptor–positive breast cancer treated with anti-PD-1 and radiation therapy. Na Jeong Kim. Cedars Sinai Medical Center, Los Angeles, CA, United States.

B035 Antibody-lectin chimeras for glyco-immune checkpoint blockade. Megan Priestley. Massachusetts Institute of Technology, Cambridge, MA, United States.

B036 Systemic and tumor-microenvironment inflammation shape outcomes in patients with immunologically cold, treatment-refractory tumors treated with Fc-enhanced anti–CTLA-4 botensilimab. Chloe Delepine. Agenus, Inc., Lexington, MA, United States.

B037 COX-2 inhibitor enhances cabozantinib/Anti-PD1 efficacy in hepatocellular carcinoma. Chien-Hung Chen Chen. National Taiwan University Cancer Center, Taipei, Taiwan.

B038 Inflammatory spatial niches distinguished by antigen presentation and interferon response programs explain the high immune response rate of desmoplastic melanoma: Comparison of biopsies from SWOG S1512 and S1616. Daniel Chen. UCLA, Los Angeles, CA, United States.

B039 T-cell–dominated interferon signaling drives immune checkpoint inhibitor–associated pneumonitis and reveals actionable cytokine targets. Paytsar Topchyan. UCLA, Los Angeles, CA, United States.

B040 Androgen signaling attenuates granzyme B production in CD8+ T cells in ICI-Colitis. Esther Peluso. UCLA, Los Angeles, CA, United States.

B041 GLP-1 receptor agonists associated with improved response to immune checkpoint inhibitors in solid tumors: a multi-institutional retrospective cohort study. Mostafa Eysha. Texas Tech University Health Science Center El paso., El Paso, TX, United States.

B042 Loss of PTEN in Triple-Negative Breast Cancer increases expression of PD-L1 in an NF-kB dependent manner. Destiny Omili. University of Maryland Baltimore, Baltimore, MD, United States.

B043 Inhibition of PSGL-1 overcomes immune suppression and immunotherapy resistance in PDAC. Evelyn Sanchez Hernandez. Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, United States.

B044 USP27X plays a crucial role in controlling the cancer cell growth and shaping the tumor immune microenvironment. Satyam Singh. Roswell Park Comprehensive Cancer Center, Buffalo, New York, USA, Buffalo, NY, United States.

B046 The GPCR-MALT1 protease signaling axis drives an immunosuppressive secretome in triple-negative breast cancer. John Little IV. University of Pittsburgh, Pittsburgh, PA, United States.

B047 EIF4A Blockade Drives Neoantigen Generation and Immune Remodeling in Pancreatic Cancer. Kamini Singh. Montefiore Einstein Comprehensive Cancer Center, Bronx, CT, United States.

B048 Selective targeting and killing of tumor associated macrophages with a novel nanomedicine to overcome the immunosuppressive microenvironment. S. Sakura Minami. Programmable Medicine, Redwood City, CA, United States.

B049 Modulating macrophages to foster antitumor immunity in breast cancer. Tahir Dar. Cedars Sinai Medical Center, Los Angeles, CA, United States.

B050 Spatial Investigation of CD4+ T-cell priming during leukemia initiation. Kyra Boorsma Bergerud. University of Minnesota, Minneapolis, MN, United States.

B051 Systemic proteomic remodeling following nephrectomy in renal cell carcinoma. Stephanie Schwartz. Yale University, New Haven, CT, United States.

B052 Exploring human iNKT cell functionality to enhance adoptive cell therapy against non-small cell lung cancer. Milea DiPonzio. University of Toronto, Toronto, ON, Canada.

B053 Integrated real-time PK/PD cytometry and long-term exploratory immune profiling using Cyto-Chex and TokuKit in global trials. Justin Jarrell. Teiko, San Mateo, CA, United States.

B054 Identification and functional characterization of CD8 T cells recognizing neoepitopes with low affinity (11,987 nM IC50) for MHCI (Kd). Stabonia Maji. UConn Health, Farmington, CT, United States.

B055 Optimizing longitudinal peripheral blood–based immune monitoring in cancer patients by single-cell mass cytometry. Camryn Foster. LBx-Unit and Translational Radiation Oncology, National Center for Tumor Diseases (NCT), Heidelberg University Hospital (UKHD) and German Cancer Research Center (DKFZ), Heidelberg, Germany.

B056 Near-real-time detection of epithelial killing supports BiTE evaluation directly from fresh NSCLC and breast tumors David Graham. Xilis, Durham, NC, United States.

B057 Decoding tumor microenvironment and resistance following immune checkpoint inhibition therapy in anaplastic thyroid carcinoma. Kartik Sehgal. Dana-Farber Cancer Institute, Boston, MA, United States.

B058 Longitudinal single cell and TCRβ profiling of a melanoma patient during adjuvant immune checkpoint inhibitor therapy exhibits significant change in immune cell profiles. Joshua Ni. Keck School of Medicine of University of Southern California, Los Angeles, United States.

B060 CMV-induced adaptive NK cell functions to improve bladder cancer patient outcomes. Bérengère Salomé. Icahn School of Medicine at Mount Sinai, New York, NY, United States.

B061 Path2Omics–TIME_ACT: Pan-cancer prediction of tumor hotness and immune checkpoint blockade response from pathology slides. Danh-Tai Hoang. National Cancer Institute (NCI), NIH, Bethesda, MD, United States.

B062 Leronlimab is associated with long-term survival in metastatic TNBC: Enhancing PD-L1 expression, ICI response, and modulates T cell exhaustion. Richard Pestell. Pennsylvania Cancer and Regenerative Medicine Research Center, Baruch S. Blumberg Institute, Wynnewood, PA, United States.

B063 AGB201, a first-in-class LTβR x EDB bispecific antibody, induces EDB-dependent tertiary lymphoid structure formation and robust anti-tumor activity. Nataša Obermajer. Agni Bio, San Francisco, CA, United States.

B064 Association of different TP53 mutation subtypes with the efficacy of first-line immunotherapy in locally advanced and metastatic lung squamous cell carcinoma. yingyun liang. Shanghai Lung Cancer Center, Shanghai Key Laboratory of Thoracic Tumor Biotherapy, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai 200030, PR China., Shanghai, China.

B065 Reprogramming the Tumor Microenvironment Enables T Cell-Mediated Immunotherapies in Pediatric Solid Cancers. Simon Krost. Hopp Children's Cancer Center Heidelberg (KiTZ), Heidelberg, Germany.

B066 Asymptomatic Lipase Elevation after Immune Checkpoint Inhibitors Reflects Pancreatic Injury with Volume Loss but Minimal Clinical Sequelae. Hamza Chaudhry. MD Anderson Cancer Center, Houston, TX, United States.

B067 Agonistic CD137 (4-1BB) anchored immunotherapy (ANK-203) elicits potent 4-1BBL signaling in vitro and therapeutic responses against established tumors without systemic toxicity in vivo. Robert Newman. Ankyra Therapeutics, Cambridge, MA, United States.

B068 Targeting cancer-intrinsic neddylation overcomes resistance to immune checkpoint blockade therapy in interferon-deficient tumors. Marta Rúbies Bedós. Rudbeck Laboratory, Uppsala University, Uppsala, Sweden.

B069 Seasons of risk: Investigating temporal trends in ICI-associated Myocarditis. Crystal Griffith. Howard University College of Medicine, Washington, DC, United States.

B070 Fc-optimized GITR antibody enhances a CD4 T cell-dendritic cell crosstalk to promote anti-tumor immunity. Yahel Avraham. Weizmann Institute of Science, Rehovot, Israel.

B071 Unveiling natural killer transcriptional plasticity in triple-negative breast cancer patients: a novel dynamic biomarker of immune checkpoint blockade response?. FRANCESCA REGGIANI. AUSL-IRCCS of Reggio Emilia, Reggio Emilia, Italy.

B072 Loss of the Autoimmune Risk Gene TREX1 Reveals a Convergence of Mechanisms Promoting Immune Tolerance Loss and Antitumor Immunity. Klaus Heger. Genentech, Inc., South San Francisco, CA, United States.

B073 MrgprB2-Driven Innate Activation Selectively Mediates Platinum-Induced Neuroimmune Pain. Jing Liu. Johns Hopkins University School of Medicine, Baltimore, MD, United States.

B074 Killing cancer cells by suicidal bombing attack with neutrophil extracellular traps. Zhenghe Wang. Case Western Reserve University, Cleveland, OH, United States.

B075 Innate lymphoid cell reprogramming reveals immunometabolic and epigenetic signatures following checkpoint blockade in head and neck squamous cell carcinoma (HNSCC). Sujeetha Rajakumar. Johns Hopkins University School of Medicine, Baltimore, MD, United States.

B076 Phase 1 Monotherapy and Combination Data for HCB101, a Novel SIRPα–Fc Innate Checkpoint Fusion Protein. Alvin Luk. Hanchorbio Inc., Shanghai, China.

Poster Session C (To be presented Friday, February 20, 12:15-3:15pm PT)

C001 Rapid and efficient generation of format-diverse co-stimulatory CD28 and CD3 multispecific antibody panels for T cell engagement via complementary technologies. Ross Connor. Adimab, LLC, Lebanon, NH, United States.

C002 Novel anti-CD3 heavy chain-only antibodies for use in T-cell engaging therapeutics. Noel Pauli. Adimab LLC, Lebanon, NH, United States.

C003 High-throughput discovery of rare anti-tumor TCRs via synthetic yeast-based libraries. Garrett Rappazzo. Adimab LLC, Lebanon, NH, United States.

C005 Understanding the Role of Tonic TCR Signaling to Optimize CAR-T Efficacy. Samuel Burciaga. University of Colorado Anschutz Medical Campus, Denver, CO, United States.

C006 In vivo CRISPR-screen identifies determinants of early CAR-T cell dysfunction in solid tumors. Paula Barbao. IDIBAPS, Barcelona, Spain.

C007 A versatile microRNA-based platform for activation-dependent regulation of armored CAR T cell payloads. Nina Barceló-Genestar. IDIBAPS, Barcelona, Spain.

C008 NFIL3 emerges as a driver of CAR T cell dysfunction from integrated in vivo/in vitro CRISPR screen. Nayan Jain. Columbia University, New York, NY, United States.

C009 Transcriptional regulation of CD19 by IKZF1 enhances CAR T-Cell immune targeting in mantle cell lymphoma. Anya Sondhi. Sylvester Comprehensive Cancer Center, University of Miami, Miller School of Medicine, Miami, FL, United States.

C010 Anti-FN14 CAR-T cells overcome TGF-β-mediated suppression, and their synergy with methylseleninic acid enhances cytotoxicity and effector function in kidney, prostate, and brain tumors. Obed Amissah. Mayo Clinic, Phoenix/Scottsdale, AZ, United States.

C011 Spatiotemporal requirements of immune checkpoint blockade-mediated control of MHC-deficient melanoma. Elena Shklovskaya. Macquarie University, Sydney, Australia.

C014 A novel TCRβ-directed IL-2 fusion molecule promotes stem-like CD8+ T cells with self-renewing properties in the peripheral lymphoid tissue, further expanded by HDAC inhibition to elicit a sustained anti-tumor therapeutic response. Katherine Lothstein. Center for Immuno-Oncology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, United States.

C015 Bioengineering and characterization of an oncolytic Vaccinia virus platform for tumor localized lentiviral vector production. Jaahnavi Dave. OHRI, Ottawa, ON, Canada.

C016 Local and systemic impact of stromal senescence on melanoma response to immune checkpoint inhibition. Giselle Burton Sojo. Georgetown University, Washington, DC, United States.

C017 Intratumoral dendritic cell immunotherapy rewires the tumor microenvironment through contextualized invariant natural killer T-cell interactions. Vincent Lok. University of South Florida Morsani College of Medicine, Tampa, FL, United States.

C018 Clinical evaluation of a high-content functional precision medicine platform for predicting immunotherapy combination response in solid and hematological cancers. Edward Chow. KYAN Technologies, Singapore, Singapore.

C019 RMC-5127, a RAS(ON) G12V-selective inhibitor, drives durable tumor regressions and increases T cell infiltration in KRAS G12V-driven syngeneic models. Mariela Moreno Ayala. Revolution Medicines, Redwood City, CA, United States.

C020 Spatial and molecular landscape in clear cell renal cell carcinoma bone metastatic patients. Eleonora Dondossola. UT MD Anderson Cancer Center, Houston, TX, United States.

C021 Cryo-Immune Vaccination (CIV): A locoregional device/multidrug immunotherapeutic approach that can bypass toxicity yet systemically eradicate metastatic cancers. George Prendergast. Lankenau Institute for Medical Research, Wynnewood, PA, United States.

C022 T-cell IL-6 expression defines a subset of memory T cells, and correlates with response to immune checkpoint inhibitors in patients with melanoma. Hisashi Kanemaru. Department of Surgery, Keck School of Medicine, University of Southern California, Los Angeles, CA, United States.

C023 Tertiary lymphoid structures generate anti-tumor immunity independently of immune responses in secondary lymphoid organs upon STING and lymphotoxin-β receptor activation. Yasuhiro Kikuchi. Johns Hopkins All Children's Hospital, St. Petersburg, FL, United States.

C025 Effect of Chemotherapy on Spatial Relationships in the Colorectal Cancer Immune Microenvironment. Cheryl Chang. Duke University, Durham, NC, United States.

C027 STING-mediated Myeloid Reprogramming Drives Immunotherapy Response in DNA Repair Mutant Tumors. Robert Samstein. Icahn School of Medicine at Mount Sinai, New York, NY, United States.

C028 Viperin sensitizes melanoma to ICB therapy by enhancing chemokine-mediated immune cell infiltration. Youngeun Gu. Department of Biomedical Sciences, Graduate School of Medical Science, Brain Korea 21 Project, Yonsei University College of Medicine, Seoul, Korea, Rep

C029 Uncovering interferon gamma signaling programs that drive resistance to cancer immunotherapy. Nikita Mehta. Northwestern University, Chicago, IL, United States.

C030 LINE-1 expression imbalance is linked to immune modulation and pluripotency heterogeneity. Qianhui Wan. City of Hope National Medical Center, DUARTE, CA, United States.

C031 Short-Form Ron Tyrosine Kinase Deficiency Uncovers a Critical Regulator of Anti-Tumor T Cell Responses. Marija Nadjsombati. Huntsman Cancer Institute at the University of Utah, SALT LAKE CITY, UT, United States.

C032 Comparison of genomic drivers and transcriptomic features of immunogenicity in pancreatic malignancies James Vafiadis. McGill University, Laval, QC, Canada.

C033 Cell Avidity: the next-gen binding assay to advance immune-based therapeutic development. Keith Bailey. LUMICKS, Fair Oaks, CA, United States.

C034 Epithelial alarmins coordinate type 2 immunity in colorectal cancer. Thornton Thompson. University of Washington, Seattle, WA, United States.

C035 Stromal AXL deficiency drives a Th1/M1-oriented immune response and promotes cell death in OSSC. Camyla Rodrigues Nascimento. School of Dentistry at Araraquara, Sao Paulo State University, ARARAQUARA, Brazil.

C036 Radiotherapy increases circulating early-stage natural killer cells with enhanced cytokine responsiveness in breast cancer. In Ah Kim. Seoul National University, Collge of Medicine, Seoul, Korea, Rep

C037 Tertiary lymphoid structures as a prognostic indicator independent of tumor-infiltrating lymphocytes and tumor mutational burden in microsatellite instability-high colorectal cancer. Jung Ho Kim. Seoul National University Hospital, Seoul, Korea, Rep

C038 Impact of assessment schedules on atezolizumab anti-drug antibody incidence rates. Richard Finn. Department of Hematology/Oncology, University of California Los Angeles, Los Angeles, CA, United States.

C039 Role of recent thymic emigrants in antitumor responses. Mina Yousefelahiyeh. City of Hope, Duarte, United States.

C040 Sustained lymphopenia during neoadjuvant chemo-immunotherapy is associated with worse outcomes in early triple-negative breast cancer. Alexis LeVee. University of California Los Angeles, Los Angeles, CA, United States.

C041 Antitumor and immunomodulatory activity of ARV-6723, a PROteolysis TArgeting Chimera (PROTAC) hematopoietic progenitor kinase 1 (HPK1) degrader, across high- and low-immunogenic solid tumors. Anna Van Acker. Arvinas Operations, Inc., New Haven, CT, United States.

C042 TOP1i-ADC demonstrates immune-stimulating activity in colorectal cancer explants. Durga B Dandamudi. AbbVie, North Chicago, IL, United States.

C043 Novel insights into the immunoregulatory role of radiation activated club cells in non-small cell lung cancer Aakanksha Kapoor. Weill Cornell Medicine, New York, NY, United States.

C044 Analysis of 1000 secreted proteins in functional genomics and compound screens reveals cytotoxic and immunomodulatory targets. Alyssa Rosenbloom. Nomic Bio, Montreal, QC, Canada.

C045 ATRA promotes neutrophil aging and anti-tumor immune responses in murine models of non-small cell lung cancer. William Crosson. UCLA, Los Angeles, CA, United States.

C046 High-throughput phenotypic screening reveals novel immunomodulators that enhance immunotherapy in high-risk neuroblastoma. Doriana Fruci. Ospedale Pediatrico Bambino Gesù, ROMA, Italy.

C048 Macrophage Reprogramming and Immune Checkpoint Blockade Efficacy in the Lewis Lung Carcinoma Model: Utility of longitudinal CD206-Targeted Molecular Imaging. Rebecca Boohaker. Southern Research, Birmingham, AL, United States.

C049 Inhibition of FOXM1 as an immunomodulatory therapeutic strategy for pediatric sarcomas. Tiffany Juan. University of Arizona, Phoenix, AZ, United States.

C050 Simultaneous STING and lymphotoxin-β receptor activation boosts the fitness of tertiary lymphoid structures and prevents future tumor recurrence and metastasis. Masanobu Komatsu. Johns Hopkins All Children's Hospital, St. Petersburg, FL, United States.

C051 Genomic and spatial immune biomarkers predictive of chemoimmunotherapy response in triple-negative breast cancer. Mahak Bhargava. University of Alabama at Birmingham, Birmingham, AL, United States.

C053 Long-read RNA sequencing-based discovery, validation, and immunotherapeutic targeting of melanoma-specific antigens generated through alternative mRNA splicing Ameya Champhekar. University of California, Los Angeles (UCLA), Los Angeles, CA, United States.

C054 Development of the biosimilar Fab version of the monoclonal Nivolumab (anti-PD1) as an immunobiological tool for prospecting new antitumor strategies. Marielly Câmara Rocha. Butantan Institute, São Paulo, Brazil.

C055 Gene Expression Profiling Identifies a Five-Gene Signature Associated with Antibiotic Exposure and Reduced Anti–PD-1 Efficacy in Metastatic Melanoma. Domenico Mallardo. I.N.T. IRCCS Fondazione “G. Pascale”, Naples, Italy.

C056 Insights into immunotherapy response, irAEs, and pre-treatment conditions impacting patient outcomes from the largest plasma proteomics study of patients receiving immune checkpoint inhibitor therapy. Jerid Robinson. Nomic Bio, Montreal, QC, Canada.

C057 Tankyrase Inhibition Reprograms Melanoma Metastases to Overcome Resistance to PD-1 Blockade. Ole Vidhammer Bjørnstad. Department of Immunology and Transfusion Medicine, Oslo, Norway.

C058 Myeloid-T cell interactions and B cell activation mediate response to treatment with entinostat and checkpoint inhibitors in metastatic breast cancer. Edgar Gonzalez. University of Southern California, Los Angeles, CA, United States.

C059 GPC2: An immune checkpoint mediating natural killer cell evasion in MHC-I deficient tumours. Gloryn Chia. National University of Singapore, Singapore, Singapore.

C060 Spatial cell-identity and gene expression inference directly from histopathology slides in colorectal cancer with Path2SpaceHD Victoria Rogness. Cleveland Clinic Lerner College of Medicine, Cleveland, United States.

C062 Tryptophan degradation by intestinal Bacteroides induces anti-tumor immunity and limits melanoma growth Ximena Diaz Olea. Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA, United States.

C063 Bacteroidetes Enrichment Associated with Immune Checkpoint Blockade Resistance and Promotes Tumorigenesis in Hepatocellular Carcinoma. Joan Shang. Icahn School of Medicine at Mount Sinai, New York, NY, United States.

C064 Tumor Ecosystem and Microbiome Features Associated with Efficacy from Avelumab-based Multimodal Therapy in a Phase III Randomized Trial. Tyler Alban. Cleveland Clinic, Cleveland, OH, United States.

C065 Impact of polyethylene glycol bowel preparation on the gut microbiome composition and response to immune checkpoint inhibition. Yongjia Hu. Research Center of the Centre Hospitalier de l'Université de Montréal (CRCHUM), Montreal, QC, Canada.

C066 Matrix-M adjuvant – A promising adjuvant for preventative and therapeutic cancer vaccines development. Berit Carow. Novavax AB, Uppsala, Sweden.

C067 Developing TCR-based precision immunotherapies for EGFR-mutant NSCLC. Yongfeng He. Weill Cornell Medicine, New York, NY, United States.

C068 Recurrent RNA-lipoplex vaccination replenishes neoantigen-specific CD8 tumor-infiltrating lymphocytes. Justin Gibson. Genentech, San Francisco, CA, United States.

C069 Leveraging cDC1 populations for enhanced mRNA cancer vaccination Ross Ward. Icahn School of Medicine at Mount Sinai, New York, NY, United States.

C070 Targeting neoantigens conserved across organs and species overcomes tumor immune escape. Guillaume Mestrallet. mount sinai hospital, New York, NY, United States.

C071 Obesity impairs anti-tumor responses to breast cancer vaccination. Abigail Jolley. Duke University School of Medicine, Durham, NC, United States.

C072 In silico design of a multi-epitope mRNA vaccine for pancreatic ductal adenocarcinoma by targeting S100 proteins, MUC-1, and WT-1. Sreelasya Polavarapu. Oncolysis, Ashburn, VA, United States.

C073 Immunoinformatic design and evaluation of a multi-epitope and multivalent mRNA vaccine targeting NSCLC through MAGE-3, MUC-1, and EGF. Suhani Garg. Oncolysis, Ashburn, VA, United States.

C075 Systems-level computational engineering of a multi-epitope mRNA vaccine for glioblastoma by targeting CD204 positive tumor associated macrophage. Ridhi Gutta. Oncolysis, Ashburn, VA, United States.

C076 Immunoinformatic design and evaluation of a multi-epitope and multivalent mRNA vaccine targeting ovarian cancer through NYESO-1, CT45-1, WT-1, FOLR-1, and LAGE-1. Ridhi Gutta. Oncolysis, Ashburn, VA, United States.