Proffered Talks

P001 **Discovery and validation of mTOR as an immune mediator of the FLASH effect**. Danielle P Johnson Erickson. University of Washington Department of Radiation Oncology, Seattle, WA, United States.

P002 **FLASH radiotherapy enhances immune activation and spares lymphocytes tumor draining lymph nodes**. Michael Spiotto. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

P003 **Harnessing Macrophage Plasticity and Radiotherapy for Breast Cancer Immunotherapy**. Nir Ben Chetrit. Weill Cornell Medicine, New York, NY, United States.

P004 **Mapping the tumor-sentinel node immune migratome demonstrates a key role for CCR7+ dendritic cells in the successful response to immunoradiotherapy**. Robert Saddawi-Konefka. UC San Diego, La Jolla, CA, United States.

P005 **Fibroblast Activation Protein (FAP)-targeted radioligand therapy as a promising treatment for glioblastoma**. Ines Camille Azrour. University of California Los Angeles, Los Angeles, CA, United States.

P006 **Partial tumor volume irradiation by 177 Lu-PNT6555 induces diverse immune responses in a syngeneic murine tumor model**. Maya E Takashima. University of Wisconsin - Madison, Madison, WI, United States.

P007 **A digital pathology multimodal artificial intelligence algorithm is associated with pro-metastatic genomic pathways in oligometastatic prostate cancer**. Matthew P Deek. Rutgers Cancer Institute, New Brunswick, NJ, United States.

P008 **Evaluating associations between genomic classifier and digital pathology based mutli-modal AI biomarkers in oligometastatic castration-sensitive prostate cancer**. Philip A Sutera. University of Rochester, Rochester, NY, United States.

P009 **Gadolinium-based nanoparticles sensitize ovarian peritoneal carcinomatosis to targeted radionuclide therapy**. Clara Diaz Garcia-Prada. UCLA, Los Angeles, CA, United States.

P010 **Monitoring of cancer ferroptosis with [18F]hGTS13, a system xc- specific radiotracer**. Abraham S Moses. Stanford University, Palo Alto, CA, United States.

P011 **STN1 (OBFC1) promotes DNA double-strand break repair in a potentially CTC1-STN1-TEN1 (CST) complex-independent role in pancreatic cancer**. Tiantian Cui. City of Hope National Medical Center, Duarte, CA, United States.

P012 **PSMA-RLT and targeting the cGAS-STING pathway as a combination approach for Prostate Cancer**. Beatrice Louis. University of California at Los Angeles, Department of Molecular and Medical Pharmacology, David Geffen School of Medicine, Ahmanson Translational Theranostics Division, Los Angeles, CA, United States.

P013 **Low-dose radiation acts as a promising preconditioning regimen for dendritic cell vaccines**. Eric Kwon. Washington University in Saint Louis School of Medicine, Saint Louis, MO, United States.

P014 **Sparing Blood and Immune Rich Organs Significantly Reduces Immune Suppression During Lung SBRT: Randomized, Phase 2 Trial**. Krishni Wijesooriya. University of Virginia, Charlottesville, VA, United States.

P015 **Targeting SPP1 to Enhance CAR T Cell Therapy in Glioblastoma: Implications for Integrating Radiation therapy in Resistant Solid Tumors**. Sharareh Gholamin. City of Hope, Duarte, CA, United States.

P016 **Optimizing macrophage-mediated abscopal effects for enhanced clinical translation: Radiation therapy combined with CD47 blockade**. Yoko Nishiga. Stanford University, Stanford, CA, United States.

P017 **Circulating tumor DNA kinetics identify prodynorphin signaling as a target to radiosensitize non-small cell lung cancer**. Ziwei Wang. Stanford University, Stanford, CA, United States.

P018 **Mapping cellular and microenvironmental determinants of persister populations in pancreatic cancer following neoadjuvant chemoradiation**. Vincent Bernard. MD Anderson Cancer Center, Houston, TX, United States.

P019 **Spatiometabolic mapping of cytoarchitectural changes in lung adenocarcinoma following radiotherapy**. Gina Bouchard. University of Colorado Anschutz Medical Campus, Aurora, CO, United States.

P020 **Phase III randomized trial of Intensity-Modulated Proton Beam Therapy (IMPT) versus Intensity-Modulated Photon Therapy (IMRT) for the management of head and neck oropharyngeal cancer**. Steven Frank. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

P021 **Countering adenosine (ADO) in rectal cancer to improve RT responses to immune checkpoint blockade: trial to test the safety and efficacy of PD1 (AB122) and ADO dual receptor (AB928) antagonists with chemotherapy after short-course RT**. Encouse Golden. Weill Cornell Medicine, New York, NY, United States.

P022 **Investigating the role of the tumor microenvironment in the rectal cancer response to preclinical radio-immunotherapy combinations**. Lydia Melissourgou-Syka. CRUK Scotland Institute for Cancer Research, Glasgow, Scotland.

Poster Session A : Monday, January 27 at 4:10 p.m.

A001 **Prospective study of anaemia in cancer patients undergoing chemoradiation using serial haemoglobin measurement in North Central region, Nigeria.** Simeom Chinedu AruaH. National Hospital Abuja, Abuja, Nigeria.

A002 **Flash proton re-irradiation and hypofractionation alleviate radiation-induced toxicity of the head and neck tissues in mice**. Priyanka Chowdhury. University of Pennsylvania, Philadelphia, PA, United States.

A003 **Influence of beam pauses, dose, and dose rate on the FLASH effect in two mouse models**. Danielle P Johnson Erickson. University of Washington Department of Radiation Oncology, Seattle, WA, United States.

A004 **Nodal Management in Cancer Treatment: Synergistic Potential of Immune Checkpoint Inhibitors**. Su-Jin Koh. Ulsan University Hospital, Ulsan, South Korea.

A005 **18F-Fluorthanatrace PARP inhibitor PET tracer: Potential implications for theranostics**. Lilie Lin. University of Texas, MD Anderson Cancer Center, Houston, TX, United States.

A006 **Using ChatGPT to solve clinical radiobiology problems**. Yung-Shuo Kao. Taoyuan General Hospital, Ministry of Health and Welfare, Taoyuan, Taiwan.

A007 **Artificial Intelligence in Radiation Therapy: Bringing in a New Era of Cancer Therapy, Accurate and Fast**. Newtone Kisia. The Nairobi Hospital, Nairobi, KENYA.

A008 **Imaging response to induction PD-1 and PARP inhibition in patients with locally advanced head and neck squamous cell carcinoma**. Xuguang S Chen. University of North Carolina at Chapel Hill, Chapel Hill, NC, United States.

A009 **Targeting DNA damage responsive pathways in cancer therapy**. Junjie Chen. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

A010 **PARP1 selective inhibition sensitize triple-negative breast cancers to photon and alpha-particle therapy regardless of homologous recombination proficiency status**. Poliana C Marinello. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

A011 **Activity of antibody-drug conjugates with radiation in preclinical bladder cancer models**. Kent Mouw. Dana-Farber Cancer Institute, Brigham and Women's Hospital, Boston, MA, United States.

A012 **Development of a Translational Tumoroid-Organoid Platform Revealing Tumor-Specific Radiosensitization in Rectal Cancer Using Matched Patient-Derived Models**. Paul B. Romesser. Memorial Sloan Kettering Cancer Center, New York, NY, United States.

A013 **Shikonin, a Strong Inhibitor of Phosphoinositide 3-Kinase (PI3K) and Mitogen-Activated Protein (MAP) Kinase Pathways, Induces Cell Death in UV-B Irradiated B16F10 Melanoma Cells**. AALIM MAQSOOD BHAT. CSIR-Indian Institute Of Integrative Medicine Jammu, Jammu, INDIA.

A014 **Mitochondrial dynamics in insulin-like growth factor binding protein 3-mediated radiosensitivity of oral squamous cell carcinoma cells**. Ya-Wen Chen. National Institute of Cancer Research, National Health Research Institutes, Miaoli, Taiwan, Zhunan Town, Tawain.

Poster Session B: Tuesday, January 28 at 6:15 p.m.

B001 **Double targeted therapy PSCA-CAR-T cells and PSMA-radioligand in metastatic castration-resistant prostate cancer**. Iveta Fajnorova. UCLA, Los Angeles, CA, United States.

B002 **Pre-vaccine radiation and CTLA-4 blockade increase adjuvant effects of SARS-COV-2 mRNA vaccines**. Adam Grippin. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

B003 **Landscape of chemoradiation plus immunotherapy trials across multiple locally advanced cancer types: The more, the better?** Bin Gui. Northwell Health, New Hyde Park, NY, United States.

B005 **Copper-67 based targeted radioligand therapy to the somatostatin receptor 2 (SSTR2) provides added efficacy and may prime small cell lung cancer for immunotherapy**. Jaclyn L Lange. Clarity Pharmaceuticals, Melbourne, Australia.

B006 **Targeting REV-ERB/RORα/IRF3 axis to enhance radiation-induced immune response in cancer Radiotherapy**. Nan LI. UT MD Anderson Cancer Center, Houston, TX, United States.

B007 **CD163+ Tumor-Associated Macrophage Evasion Contributes Radiation Resistance and Poor Prognosis in Estrogen Receptor-Negative Breast Cancer**. Danushka S. Seneviratne. Department of Radiation Oncology, Stephenson Cancer Center, Oklahoma University Health Science Center, Oklahoma City, OK, United States.

B008 **Understanding myeloid and lymphoid cell heterogeneity following radiotherapy and its impact on metastasis development in breast cancer**. Alessandra Perini. Centre for Tumour Microenvironment; Barts Cancer Institute; Queen Mary University of London (QMUL), London, Unitedc Kingdom.

B009 **Abscopal Effect in Metastatic Melanoma: Generating Clinical Insights From Radiation-Induced Immune Response**. Baovy N Phan. Union College, Schenectady, NY, United States.

B010 **Interim Report of Phase I Study of Window-of-Opportunity Fractionated Stereotactic Radiotherapy Combined with Checkpoint Blockade Prior to Surgical Resection for Newly Diagnosed Glioblastoma**. Samuel Ryu. Stony Brook University, Stony Brook, NY, United States.

B011 **Adenosine Signaling and Immune Modulation in the Tumor Microenvironment: Insights from Lung Cancer Murine Model of Radiation Therapy**. Krishan K Saini. Department of Radiation Oncology, Columbia University Irving Medical Center, New York, NY, New York, NY, United States.

B012 **Interferon- γ is Required for Immunotherapy Induced Radiosensitivity in Solid Tumors**. Annette Wu. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

B013 **Autoimmunity mechanisms in combined radiotherapy and immune-checkpoint inhibitor therapy-induced myocarditis**. Shiguang Yu. University of Missouri, Columbia, MO, United States.

B014 **Dual checkpoint blockade mitigates the immunosuppressive effects of radiotherapy amplified by experimental liver metastasis**. Han Zang. UCSF, San Francisco, CA, United States.

B015 **PLK4 inhibition as a strategy to enhance non-small cell lung cancer radiosensitivity**. Kishore Banik. Yale University School of Medicine, New Haven, CT, United States.

B016 **Targeting the angiotensin receptor in cancer-associated fibroblasts improves tumour perfusion, oxygenation, and radiotherapy response**. Kevin L Bennewith. BC Cancer Research Institute, Vancouver, BC, United States.

B017 **Combining baseline microenvironment biomarkers with hypoxia imaging to predict radiochemotherapy outcomes in head and neck cancer**. María J. Besso. German Cancer Research Center (DKFZ) Heidelberg, Division of Radiooncology Radiobiology, Germany, Heidelberg, Germany.

B018 **GSK3β inhibition synergizes with radiation therapy to stimulate type-I interferon and anti-tumor effects in lung cancer**. Chen Braun. University of Texas MD Anderson Cancer Center, Houston, TX, United States.

B019 **Mathematical modeling-based optimization of gamma knife surgery after checkpoint blockade in melanoma brain metastases**. Joseph D. Butner. The University of Texas MD Anderson Cancer Center, Houston, TX, United States.

B020 **Quercetin sensitizes PDAC cells to radiation therapy in vitro and in vivo**. Vishwa Gandhi. University of Pittsburgh, Pittsburgh, PA, United States.

B021 **FTO inhibition enhances the therapeutic index of radiation therapy in head and neck cancer**. Lu Ji. Stanford University School of Medicine, Stanford, CA, United States.

B022 **Systematic Analysis of Tumor and Immune EV Subset Changes with Radiation Therapy**. Jennifer C Jones. NIH, Bethesda, MD, United States.

B023 **Deep mutational scanning of KEAP1 to identify mutations resistant to radiation therapy and oxidative stress**. Noah Kastelowitz. Stanford University School of Medicine, Stanford, CA, United States.

B024 **CRISPR-Cas9 screening reveals a novel JAK1 dependent mechanism of radioresistance in Head and Neck Squamous Cell Carcinoma**. Vanessa M Kelley. Yale University, New Haven, CT, United States.

B025 **Identifying and Exploiting a Novel Role of FTO in Promoting Cysteine Metabolism for NSCLC Therapy**. Nishanth Kuganesan. Stanford University, Stanford, CA, United States.

B026 **Development of a novel theranostic agent targeting MET in lung and head and neck cancer.** Rachel L Minne. University of Wisconsin School of Medicine and Public Health, Madison, WI, United States.

B027 **Investigating NRF2-mediated radioresistance in HPV-negative head and neck squamous cell carcinoma preclinical models**. Aakshi Puri. Princess Margaret Cancer Centre, Toronto, ON, CANADA.

B028 **Multimodal approach to characterization of metabolism and immune modulation with insights from spatial metabolomics and transcriptomics**. Chelsea L. Rahiman. Columbia University Irving Medical Center, New York, NY, United States.

B029 **TWIST1 Associates with Resistance to Treatment and Twist1 Drives Tumor Progression in vivo for Small Cell Lung Cancer**. Phuoc T. Tran. University of Maryland School of Medicine, Baltimore, MD, United States.

B030 **Novel strategy to improve response of high risk HPV+ HNSCC to radiation therapy**. sri Vemulamanda. Lineberger Comprehensive Cancer Center, Cary, NC, United States.

B031 **Proteomic profiling of oligometastatic castration-sensitive prostate cancer treated with stereotactic ablative radiotherapy**. Jarey Wang. Johns Hopkins University School of Medicine, Ellicott City, MD, United States.

B032 **Concurrent mutant KRAS inhibition and Stereotactic Body Radiation Therapy (SBRT) for preclinical KRAS G12D-Driven Pancreatic Ductal Adenocarcinoma (PDAC) treatment**. Tianyu Wang. The University of Texas MD Anderson Cancer Center UT Health Science Center at Houston Graduate School of Biomedical Sciences, Houston, TX, United States.

B033 **Long-Term Quality of Life and Hearing Preservation after Stereotactic Radiosurgery for Vestibular Schwannoma**. Shayzal Siddiqui. Oakland University William Beaumont School of Medicine, Rochester, MI, United States.

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