



ABSTRACT TITLES

Abstracts to be presented in Poster Session A (Thursday, September 25, 7:00- 9:30 P.M. EDT)

A001 PR009 Whole-genome-based, tumor-informed circulating tumor DNA detection correlates with treatment response and survival of pediatric solid tumor

Loretta Lau, Children's Cancer Institute, Sydney, , United States of America

A002 PR011 Precision Diagnosis in High-Risk Pediatric Oncology through Integrated Whole Genome, Transcriptome, and Epigenome ;Profiling ;

Mark Cowley, Children's Cancer Institute, Sydney, , Australia

A003 The clinical impact of targeted next-generation sequencing for advanced pediatric and AYA sarcoma patients in the iCat2/GAIN Consortium Study

Hannah Comeau, Dana Farber/Boston Children's Cancer and Blood Disorders Center, Boston, MA, United States of America

A004 PR012 Investigating the potential of extracellular vesicle biomarkers for synovial sarcoma detection

Maryke Grobler, Treehouse Childhood Cancer Initiative, Santa Cruz, CA, United States of America

A005 Nationwide Genome-Guided Precision Oncology in Pediatric Solid Tumors: Results from the STREAM Program

Ji Won Lee, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, , South Korea

A006 Genetic predisposition discoveries of clinical utility by exome sequencing performed for therapeutic purposes in children with relapsing or refractory cancer in the MAPPYACTS study

Tiphaine Adam de Beaumais, Gustave Roussy, Villejuif, , France

A007 Mosaicism in cancer-susceptibility genes in early-onset childhood cancer

Sneh Patel, Dana-Farber Cancer Institute, Boston, MA, United States of America

A008 PR002 Membrane localization mediated by BRAF fusion partners is necessary for transformation of human neural stem cells

Alexander Zhang, Dana Farber Cancer Institute, Boston, MA, United States of America

A009 PR010 Implementation and Performance of a Neuroblastoma Liquid Biopsy Panel for Non-Invasive Molecular Monitoring

Lea Surrey, Children's Hospital of Philadelphia, Philadelphia, PA, United States of America



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A011 Comprehensive molecular characterization of pediatric solid tumors in China: Findings from the Thousand Stars Precision Oncology Project

Zanmei Xu, Origimed, shanghai, , China

A012 Through the lens of tumor heterogeneity: unraveling developmental dynamics and chemotherapy resistance in retinoblastoma

Shannon Sweeney, St Jude Children's Research Hospital, Memphis, TN, United States of America

A013 Multi-omic profiling of plasma circulating tumor DNA (ctDNA) detects and differentiates Wilms tumors and malignant rhabdoid tumors of the kidney

Nensi Ruzgar, Dana-Farber Cancer Institute & Broad Institute of Harvard and Massachusetts Institute of Technology, Boston, MA, United States of America

A014 Understanding the transcriptional heterogeneity of pediatric low-grade gliomas and its implication for tumor pathophysiology. ;

Michelle Boisvert, Broad Institute of MIT and Harvard, Cambridge, MA, United States of America

A015 Targetable gene dependencies in Ewing sarcoma subtypes

Dusan Pesic, The Hospital for Sick Children (SickKids), Toronto, ON, Canada

A016 ews-nf: A custom workflow for tumor cell annotation and analysis of single-cell RNA-sequencing of paired patient Ewing sarcoma specimens from the Sean Karl cohort

Allegra Hawkins, Alex's Lemonade Stand Foundation, Bala Cynwyd, PA, United States of America

A017 PR013 Alectinib in children and adolescents with solid or CNS tumors harboring ALK-fusions: An update from the iMATRIX alectinib phase I/II open-label, multi-center study.

Francis Mussai, Roche Products Ltd, WELWYN GARDEN CITY, , United Kingdom

A018 PR014 B7-H3-CAR T cells expressing 41BB ligand for pediatric solid tumors: Preliminary results of a phase 1 study

Rebecca Epperly, St. Jude Children's Research Hospital, Memphis, TN, United States of America

A019 Precision radiotherapy for incurable brain tumors: Phase 1b dose & regimen optimization study of iopofosine I 131 in inoperable relapsed or refractory pediatric high-grade glioma, interim data assessment

Jarrold Longcor, Cellectar Biosciences, Florham Park, NJ, United States of America

A020 PR004 KAT6A and KAT6B are ;therapeutic targets to enhance the efficacy of differentiation therapy and GD2 immunotherapy in neuroblastoma

Nina Weichert-Leahey, Dana-Farber Cancer Institute, Boston, MA, United States of America



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A021 Standardized Oncogenic Classification Guidance of Critical Diagnostic and Therapeutic markers in pediatric cancers: NTRK fusions

Alanna Church, Boston Children's Hospital and Harvard Medical School, Boston, MA, United States of America

A022 PR005 CDK8 Inhibition Releases the Muscle Differentiation Block in Fusion-Driven Alveolar Rhabdomyosarcoma

Susu Zhang, Dana-Farber Cancer Institute, Boston, MA, United States of America

A023 PR006 CBL mutations in pediatric solid and CNS tumours are a marker of receptor tyrosine kinase activation and a potential therapeutic target

Paul Ekert, Children's Cancer Institute, Sydney, NSW, Australia

A024 Insights across indications from the Pediatric Bespoke Therapeutic Development Workshop initiative

David Jenkinson, LifeArc, London, , United Kingdom

A025 PR001 The potential of BCL-xL degradation as a strategy to eliminate chemotherapy-resistant neuroblastoma persister cells

Matteo Calafatti, Children's Hospital of Philadelphia, Philadelphia, PA, United States of America

A026 Defining the epigenetic drug landscape and rational combinations for pediatric cancer using the PRISM screening assay

Colleen Harrington, Broad Institute, Cambridge, MA, United States of America

A027 ADAR1 loss in combination with PKR activation leads to anti-tumor effects in TP53-Mut AML

Audrey Taillon, Dana-Farber Cancer Institute, Boston, MA, United States of America

A028 Identification of biomarkers of response to RAS-RAF-MEK pathway inhibition in RAS-altered rhabdomyosarcoma.

Angelina Vaseva, Oregon Health & Science University, Portland, OR, United States of America

A029 Histotripsy induces an anti-tumor immune response with an abscopal effect in a syngeneic neuroblastoma mouse model

Yuqing Xue, University of Chicago, Chicago, IL, United States of America

A030 Accelerating therapeutic discovery for pediatric pancer: Optimization of 80S ribosome inhibitors for T-cell acute lymphoblastic leukemia ;

Iris Valtingojer, Sanofi, Vitry-sur-Seine, , France



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A031 A combined degrader-antisense therapeutic for ;fibrolamellar carcinoma

Mahsa Shirani, Rockefeller University, New York, NY, United States of America

A032 Molecular insights into KIAA1549::BRAF fusion proteins: Implications for targeted therapy in pediatric low-grade gliomas

Daniel Christen, Dana-Farber Cancer Institute, Boston, MA, United States of America

A033 Targeting ROR2 with an antibody-drug conjugate to overcome MYOD1 L122R driven therapy resistance in rhabdomyosarcoma

Jihee Lee, Massachusetts General Hospital/Harvard Medical School, CHARLESTOWN, MA, United States of America

A034 PRKG1 hinders myogenic differentiation and predicts ;response to AKT ;inhibitor ipatasertib in Rhabdomyosarcoma.

Jaume Mora, Pediatric Cancer Center Barcelona, barcelona, , Spain

A035 PR003 EWS::FLI1 Expression in Human Embryonic Mesenchymal Stem Cells Leads to Transcriptional Reprogramming, Defective DNA Damage Repair and Ewing Sarcoma. ;

Jaume Mora, Pediatric Cancer Center Barcelona, barcelona, , Spain

A036 The recombinant immunotoxin GB13 demonstrates significant therapeutic potential for H3.3K27M mutant DIPG with its efficacy linked to the activation of Golgi-to-ER retrograde transport pathways

Yue Hao, Translational Genomics Research Institute, Phoenix, AZ, United States of America

A037 CDK12 – A druggable dependency and potential therapeutic target of desmoplastic small round cell tumor

Shruthi Sanjitha Sampath, Tulane University School of Medicine, New Orleans, LA, United States of America

A038 Overcoming myeloid-mediated immunosuppression and enhancing blood-brain barrier access to advance B7H3 CAR T cell therapy in high-risk Medulloblastoma

Serge Yaacoub, Children's National Hospital, Washington, DC, United States of America

A039 PR007 Reprogramming the Myeloid Tumor Microenvironment with CD123 CAR T Cells Enhances B7-H3 CAR T Cell Therapy in DIPG

Khatereh Khorsandi, Center for Cancer and Immunology Research, Children's National Hospital, Washington, DC, United States of America



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A040 PR008 Characterization of cytotoxic cell abundance and genetic variants in immune related genes in pediatric acute lymphoblastic leukemia patients

Maria Sol Ruiz, CONICET - Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de, Ciudad Autónoma de Buenos Aires, Argentina

A041 Therapeutic induction of tertiary lymphoid structures by STING and lymphotoxin- β receptor agonists sensitizes poorly immunogenic rhabdomyosarcoma to PD-1 blockade

Yasuhiro Kikuchi, Johns Hopkins All Children's Hospital, St.Petersburg, FL, United States of America

A042 Immune heterogeneity across pediatric ependymoma subtypes revealed by B cell repertoire profiling ;

Amelia Stepniak, University of Pittsburgh, Pittsburgh, PA, United States of America

A043 Combination Therapeutic Targeting of Chromatin Complexes in Neuroblastoma

Melinda Soeung, Dana-Farber Cancer Institute, Boston, MA, United States of America

A044 The biology of childhood tumors with germline CHEK2 loss of function variants

Laura Raiti, The Royal Children's Hospital, Melbourne, , Australia

A045 Cooperation between germline and somatic drivers in childhood cancer: insights from the ZERO cohort

Noemi Fuentes-Bolanos, Children's Cancer Institute, Lowy Cancer Research Centre, UNSW Sydney, Sydney, NSW, Australia

A046 MAPK pathway mediates resistance to p53 reactivation therapies in Diffuse Midline Glioma ;

Apichaya Sethaudom, Dana-Farber Cancer Institute, Boston, MA, United States of America

A047 PML nuclear bodies under siege: How a single phospho-switch fuels neuroblastoma aggression

Sreenidhi Mohanvelu, Oklahoma State University, Stillwater, OK, United States of America

A048 Overcoming clinical resistance to EZH2 inhibition using rational epigenetic combination therapy

Helen Mueller, Memorial Sloan Kettering Cancer Center, New York, NY, United States of America

A049 ZFTA::NCOA2 -dependent DNA binding and transcriptional regulation: Comparison to ZFTA::RELA and other common non- RELA ZFTA fusions ;

Xuefei Ma, St. Jude Children's Research Hospital, Memphis, TN, United States of America



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A050 Truncated PPM1D cooperates with the PI3K pathway to drive Diffuse Midline Gliomas

Adam Fiseha Kebede, Dana-Farber Cancer Institute, Boston, MA, United States of America

Abstracts to be presented in Poster Session B (Friday, September 26, 5:00- 7:00 P.M. EDT)

B001 Expanded genomic profiling informs clinical management of pediatric patients with leukemia treated at Northeast pediatric cancer programs

Sabrina Testa, Dana-Farber Cancer Institute/ Fondazione IRCCS San Gerardo dei Tintori, Department of Pediatrics, Monza, Italy', Boston, MA, United States of America

B002 Rapid and accurate diagnosis of childhood cancers using long-read nanopore RNA sequencing

Matt Hudson, Hospital for Sick Children, Toronto, ON, Canada

B003 Characterization of CD20 transcriptional diversity using short- and long-read sequencing in pediatric acute lymphoblastic leukemia: potential implications for rituximab plus chemotherapy treatment

Maria Sol Ruiz, CONICET - Universidad de Buenos Aires, Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales (IQUIBICEN), Buenos Aires, Buenos Aires C1428EGA, Argentina; Universidad de Buenos Aires, Facultad de Ciencias Exactas y Naturales, Depart, Ciudad Autonoma de Buenos Aires, , Argentina

B004 Chronic Myeloid Leukemia in a 40-Day-Old Infant: Diagnostic Role of Cytogenetics and BCR::ABL1 Detection in Early Identification of Congenital CML.

Merinsa Irsalieva, International School of Medicine, Bishkek, , Kyrgyzstan

B005 Evaluation of TP53 expression in pediatric b-cell acute lymphoblastic leukemia and its correlations with clinicopathological profiles ;

HASIB THONDIKODAN, PGIMER , CHANDIGARH, INDIA, CHANDIGARH, , India

B006 Tissue-specific mutational outcomes underlying ;the late effects of anthracyclines on tumours, blood, and heart

Mathepan Mahendralingam, Hospital for Sick Children, Toronto, ON, United States of America

B007 Therapy-associated paracrine signaling alters the cell states in Rhabdomyosarcoma ;

Sabateeshan Mathavarajah, Massachusetts General Hospital, Charlestown, MA, United States of America

B008 The role of circulating tumor DNA (ctDNA) in profiling hepatoblastoma tumor heterogeneity ;



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Josephine Wilson, Harvard Medical School, Boston, MA, United States of America

B009 Cancer-associated fibroblasts remodel the extracellular matrix in Adamantinomatous Craniopharyngioma

Shriya Rangaswamy, Dana Farber Cancer Institute, Boston, MA, United States of America

B010 Metabolic Starvation Reprograms YAP1 Signaling to Enhance Tumorigenesis in Hepatoblastoma

SAFIYA KHURSHID, Sanford Research, Sioux Falls, SD, United States of America

B011 Investigating how Nf1 mutations differentially regulate pediatric high-grade and low-grade glioma penetrance

Griselda Yvone, Cedars-Sinai Medical Center, Los Angeles, CA, United States of America

B012 KinLET: A phase I dose-finding, safety and pharmacokinetic trial of [¹⁷⁷Lu]Lu-edotreotide for the treatment of somatostatin receptor positive tumors in the pediatric population aged 2 to less than 18 years old

Theodore Laetsch, Children's Hospital of Philadelphia, Philadelphia, , United States of America

B013 Uncovering and targeting resistance mechanisms to BET inhibitors in pediatric Fusion-Positive Rhabdomyosarcoma

Silvia Pomella, Bambino Gesù Children's Hospital IRCCS, Rome, , Italy

B014 Effects of chronic histone deacetylase inhibitor treatment on Ewing sarcoma cells highlight Ret as a potential therapeutic target.

Arnold Rabson, Child Health Institute of New Jersey, New Brunswick, NJ, United States of America

B015 CDK12 pharmacological targeting promotes cell death by abrogating DNA damage response, impairs PAX3-FOXO1 expression and synergizes with BRD4 and PARP inhibitors in fusion positive rhabdomyosarcoma

Marika Attili, Bambino Gesù Children's Hospital, IRCCS, Rome, , Italy

B016 Factors Driving Chemo-persistence in Atypical Teratoid Rhabdoid Tumors

Kelly Cai, Dana Farber Cancer Institute, Boston, MA, United States of America

B017 Precision Nanotherapy for the Treatment of Progressive Neuroblastoma

Loganayaki Periyasamy, Oklahoma State University, Stillwater, OK, United States of America

B018 Combined AKT and XPO1 Inhibition Thwarts Chimeric Transcription-Factor Driven Pediatric Sarcoma Pathogenesis

Casey Langdon, Medical University of South Carolina, Charleston, SC, United States of America



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B019 O-mannosylation represents a therapeutic opportunity in BRAF fusion protein oncogenesis

Anna Borgenvik, Dana-Farber Cancer Institute, Boston, MA, United States of America

B020 Preclinical investigation of FGFR inhibitors in pediatric low-grade gliomas

April Apfelbaum, Dana-Farber Cancer Institute, Boston, MA, United States of America

B021 Investigating the cyclin A/B RxL inhibitor CID-078 in pediatric cancers with RB1 loss and high E2F1

Chelsea Mayoh, Children's Cancer Institute, Lowy Cancer Centre, UNSW Sydney, Kensington, , Australia

B022 Tumor-enriched splicing events exhibit histology-specific prevalence in pediatric CNS tumors and encode tumor-specific antigens with immunotherapeutic potential

Ryan Corbett, Children's National Hospital, Washington, DC, DC, United States of America

B023 Identifying effective targeted inhibitors as single-agents or in combination for FGFR1-altered pediatric low-grade gliomas

Sarah Lamson, Dana-Farber Cancer Institute, Boston, MA, United States of America

B024 Uncovering replication stress vulnerabilities in pediatric low grade gliomas using a genome wide CRISPR-Cas9 knockout screen

Joohee Lee, Dana-Farber Cancer Institute, Boston, MA, United States of America

B025 Multi-omic characterisation of the immune microenvironment in Rhabdoid Tumours

Erin Coll, Children's Cancer Institute, Sydney, NSW, Australia

B026 Exploring the role of neuroblastoma catecholamine production ;on regulating CD8+ T cell exhaustion

Mark Chudnovsky, Dana-Farber Cancer Institute, Boston, MA, United States of America

B027 EZH2 and Menin inhibition induce neuronal differentiation and GD2 expression in neuroblastoma

Silvi Salhotra, Dana-Farber Cancer Institute, Boston, MA, United States of America

B028 MicroRNA-mediated reconstruction ;of the tumor microenvironment: Enhancing CAR T-cell therapy for Diffuse Intrinsic Pontine Glioma

Kaleem Coleman, Children's National Hospital, Washington, DC, United States of America



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B029 Feasibility of Low-Cost Genomic Newborn Screening for Pediatric Cancers via Targeted NGS Pooling

Arindam Bhattacharjee, Brigham and Women's Hospital, Boston, MA, United States of America

B030 Altered distribution of double-negative T cell subsets in pediatric acute lymphoblastic leukemia

Dana Tleugozhina, Nazarbayev University, Astana, , Kazakhstan

B031 Uncovering genetic and regulatory drivers of tumor-specific splicing in pediatric brain tumors

Patricia Sullivan, Center for Cancer and Immunology Research, Children's National Hospital, Washington, DC, United States of America

B032 Accelerating pediatric genomic research: The NIH Gabriella Miller Kids First program for cross-disease data sharing and discovery

Marcia Fournier, National Institutes of Health, BETHESDA, MD, United States of America

B033 The Gabriella Miller Kids First Data Resource Portal and CAVATICA: Interoperable cloud platforms for pediatric cancer research

Joseph Flores-Toro, National Cancer Institute, Rockville, MD, United States of America

B034 Mechanisms underlying Fibrolamellar Carcinoma

Sanford Simon, Rockefeller University, New York, NY, United States of America

B035 Zebrafish modeling predicts clinical outcomes in human acute lymphoblastic leukemia

James Allen, MGH, Charlestown, MA, United States of America

B036 NRF2 promotes hepatoblastoma cell migration via mTORC1/2 signaling

Nicholas O'Brien, Baylor College of Medicine, Houston, TX, United States of America

B037 Dynamic characterization of tumor-microenvironment factors that drive pediatric low-grade gliomas

Jenna Robinson, Dana-Farber Cancer Institute, Boston, MA, United States of America

B038 SOX2 promotes progenitor-like program choroid plexus development and tumorigenesis

Haotian Zhao, New York Institute of Technology College of Osteopathic Medicine, Old Westbury, NY, United States of America

B039 Exploring the early genetic determinants of tumor risk in Li-Fraumeni Syndrome ;

Laura Raiti, The Hospital for Sick Children, Toronto, Toronto, , Canada



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B040 Uncovering senescence-driven pathways in diffuse midline glioma progression and treatment resistance

Timothy Chang, DFCI/BCH/Broad, Boston, MA, United States of America

B041 Defining essential PPM1D-regulated DNA damage response phosphosites in diffuse midline gliomas

Ria Kedia, Dana Farber Cancer Institute, Boston, MA, United States of America

B042 The PIK3CA/AKT pathway drives therapy resistance in rhabdomyosarcoma

Yueyang Wang, Massachusetts General Hospital, Charlestown, MA, United States of America

B043 Dysregulated AKT signaling reprograms osteosarcoma to drive selective reliance on EP300

Ian Delahunty, St Jude Children's Research Hospital, Memphis, TN, United States of America

B044 Exosomes under RD3 command: A new frontier in neuroblastoma biology

Aravindan Natarajan, Oklahoma State University, Stillwater, OK, United States of America

B045 Breaking the Warburg code: RD3 redefines energetics in metastatic Neuroblastoma

Aravindan Natarajan, Oklahoma State University, Stillwater, OK, United States of America

B046 Filtering artifactual signal for DNA-methylation arrays in pediatric tumors: A benchmarking of preprocessing algorithms

Raoul Santiago, Laval University, Québec, , Canada

B047 Data Resources for Pediatric Cancer Research: Finding and Accessing Data supported by the National Cancer Institute

HEATHER K BASEHORE, National Cancer Institute, East Earl, PA, United States of America

B048 The Ewing Sarcoma Institute – a catalyst to improve outcomes for patients with Ewing sarcoma globally

Heinrich Kovar, St. Anna Children's Cancer Research Institute, Vienna, , Austria

B049 Bispecific Aptamers for Enhanced Binding, Internalization, and Therapeutic Delivery in Burkitt Lymphoma

Joshua Shelton, University of Missouri-Columbia, Columbia, MO, United States of America

B050 Using therapeutic storytelling and coloring to support emotional resilience in children with cancer: The impact of Jacob's Big Brave Adventure

Latorra Garland, Jacob Way Organization, Arlington, TX, United States of America



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B051 Implementation of an Early Mobility Initiative in a Pediatric Bone Marrow Transplant Unit

Kylie James, UTHSC College of Medicine, Memphis, TN, United States of America

B052 "Site-Specific Risk and Metastatic Patterns in Pediatric Osteosarcoma: A Retrospective Cohort Study from Puerto Rico ;

MiaSara Pérez Salvá, Centro Comprensivo de Cáncer Universidad de Puerto Rico, San Juan, , United States of America

B053 Comprehensive, high-sensitivity, high-resolution ;somatic variant detection in clinical samples ;with linked-reads

Cory Padilla, Dovetail Genomics, SCOTTS VALLEY, CA, United States of America

B054 Chylous malignant pleural effusion in pediatric neuroblastoma: A rare and fatal presentation ;

Sara Abu Aleenein, Jordan University of Science and Technology, Amman, , Jordan