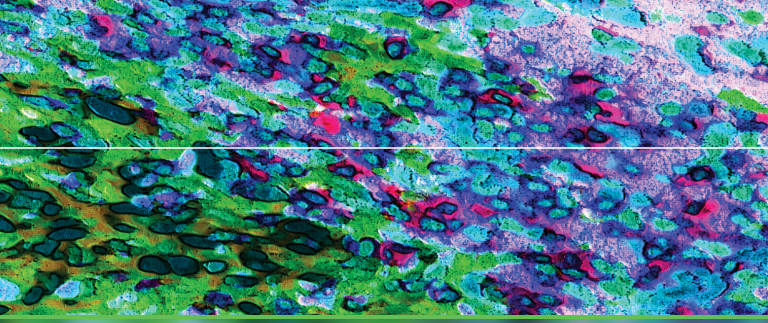
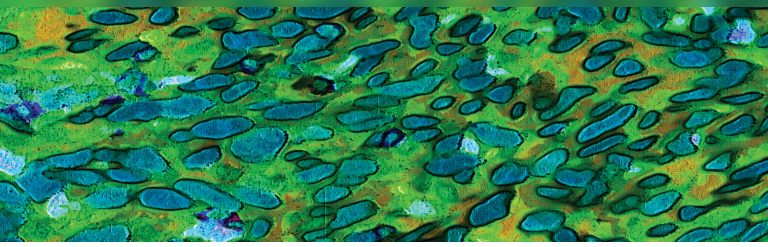


CRI-CIMT-EATI-AACR

FOURTH INTERNATIONAL CANCER IMMUNOTHERAPY CONFERENCE: TRANSLATING SCIENCE INTO SURVIVAL

September 30-October 3, 2018
New York Marriott Marquis
New York, NY



POCKET PROGRAM

Continuing Medical Education Activity-
AMA PRA Category 1 Credits™ available

#CICON18

CANCER RESEARCH INSTITUTE | CIMT Cancer Immunotherapy | eati. | AACR American Association for Cancer Research

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SAVE THE DATE
CRI-CIMT-EATI-AACR
Fifth International Cancer Immunotherapy Conference
September 25-28, 2019, Paris, France

About the Cover Image
Synovial sarcoma primarily strikes adolescents and young adults, with particularly devastating results. Vaccination trials show some promise, which implies that these sarcomas may be immunologically competent. *Cancer Immunology Research,* February 2017; 5(2).

WELCOME

Dear Colleagues,

On behalf of the Cancer Research Institute (CRI), the Association for Cancer Immunotherapy (CIMT), the European Academy of Tumor Immunology (EATI), and the American Association for Cancer Research (AACR), it is our pleasure to welcome you to New York City for the Fourth International Cancer Immunotherapy Conference: Translating Science into Survival. We are very pleased to continue to join forces in the sponsorship of this important conference series.

We are extremely grateful to the Conference Cochairs, including Nina Bhardwaj and Elizabeth M. Jaffee, and the twelve members of the Scientific Planning Committee for their thoughtful insights and expert guidance during the past year of planning. The conference program that they have developed features the latest cutting-edge science in the field of cancer immunotherapy and offers time for thought-provoking discussions. The William B. Coley Lecture on Sunday afternoon will be delivered by Padmanee Sharma of the University of Texas MD Anderson Cancer Center, and the keynote address on Monday morning will be delivered by Ignacio Melero of the Universidad de Navarra, University Clinic and CIMA. Eight general scientific sessions throughout the meeting will address all major areas of cancer immunology and immunotherapy.

More than 400 abstracts will be presented during two poster sessions that will be held in the New York Marriott Marquis, and 16 proffered abstracts will be presented as short talks during thematic scientific sessions. We hope you will use the time during the poster sessions, group meals, and receptions to network with colleagues and establish new collaborations.

We extend our profound thanks to the following organizations for their dedication to this growing field and for their financial support of this conference: Silver Supporters: Amgen; Bristol-Myers Squibb; GlaxoSmithKline (conference charging stations); Janssen Research & Development, LLC; Juno Therapeutics; and Lilly Oncology; Supporter: AbbVie (meeting app); and AbbVie; AstraZeneca; Celgene; Lilly; Merck; Novartis; and Pfizer for their professional educational grants.

Thank you for joining us. We look forward to your active participation during the next few days. Please also note the dates of next year's meeting, which will be presented in Paris, France, on September 25-28, 2019.

With best wishes for an outstanding meeting,

Jill O'Donnell-Tormey, PhD
Chief Executive Officer
and Director of
Scientific Affairs
CRI

Christoph Huber, MD
President
CIMT

Guido Kroemer, MD, PhD
Founding Director
EATI

Margaret Foti, PhD, MD (hc)
Chief Executive Officer
AACR

SCIENTIFIC PLANNING COMMITTEE

CONFERENCE COCHAIRS

Nina Bhardwaj, Icahn School of Medicine at Mount Sinai, New York, NY

Christoph Huber, Association for Cancer Immunotherapy (CIMT), Mainz, Germany

Elizabeth M. Jaffee, Johns Hopkins University School of Medicine, Baltimore, MD

Guido Kroemer, Centre de Recherche des Cordeliers, Paris, France

PLANNING COMMITTEE MEMBERS

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Jedd D. Wolchok, Memorial Sloan Kettering Cancer Center, New York, NY

Laurence Zitvogel, Institut Gustave Roussy, Paris, France

ABOUT THE PARTNER ORGANIZERS

CANCER RESEARCH INSTITUTE

Cancer Research Institute (CRI), founded in 1953 to foster the science of cancer immunology, is the world's leading nonprofit organization dedicated exclusively to saving more lives by fueling the discovery and development of powerful immunotherapies for all types of cancer. CRI funds the most innovative clinical and laboratory research around the world, supports the next generation of the field's leaders, and serves as the trusted source of information on immunotherapy for cancer patients and their caregivers.

THE ASSOCIATION FOR CANCER IMMUNOTHERAPY

The Association for Cancer Immunotherapy (CIMT) is a members-based information and education platform that facilitates the knowledge exchange between academic and industry scientists, physicians, and regulatory authorities who research and develop cancer immunotherapies. CIMT was founded in 2002 by physicians and researchers from different fields of clinical and theoretical medicine as an independent nonprofit organization.

ABOUT THE PARTNER ORGANIZERS

THE EUROPEAN ACADEMY OF TUMOR IMMUNOLOGY

Since 2011 the principal objective of the European Academy of Tumor Immunology (EATI) is to promote tumor immunology at the scientific and clinical levels. EATI promotes all areas of tumor immunology, considered as a continuum between fundamental, translational, and clinical research, as well as the practical implementation of diagnostic and therapeutic procedures in routine clinical practice. EATI strives for excellence, independence, leadership, diversity, and flexibility. Throughout its work, EATI provides independent, authoritative and evidence-based advice to underpin policy for stimulating the implementation of concepts, methods, and procedures inspired by tumor immunology.

AMERICAN ASSOCIATION FOR CANCER RESEARCH

The American Association for Cancer Research (AACR) is the first and largest scientific organization in the world focused on every aspect of high-quality, innovative cancer research. Its reputation for scientific breadth and excellence attracts the premier researchers in the field. The programs and services of the AACR foster the exchange of knowledge and new ideas among scientists dedicated to cancer research, provide training opportunities for the next generation of cancer researchers, and increase public understanding of cancer. The mission of the AACR is to prevent and cure cancer through research, education, communication, and collaboration. Through its programs and services, the AACR fosters research in cancer and related biomedical science; accelerates the dissemination of new research findings among scientists and others dedicated to the conquest of cancer; promotes science education and training; and advances the understanding of cancer etiology, prevention, diagnosis, and treatment throughout the world.

GENERAL INFORMATION

LOCATION OF SESSION ROOMS AND OFFICES
New York Marriott Marquis

Conference Office: Cantor (Ninth Floor)

Conference Registration: Westside Ballroom Foyer (Fifth Floor)

General Session Room: Broadway Ballroom (Sixth Floor)

Press Room: Odets (Fourth Floor)

Speaker Preparation Room: O'Neill (Fourth Floor)

Continental Breakfast: Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

Lunch: Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

Breaks: Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

Poster Sessions and Exhibits: Westside Ballroom (Fifth Floor)

CONFERENCE REGISTRATION
Westside Ballroom Foyer (Fifth Floor)

Saturday, September 29	5:00 p.m.-7:00 p.m.
Sunday, September 30	7:00 a.m.-6:15 p.m.
Monday, October 1	7:00 a.m.-6:15 p.m.
Tuesday, October 2	7:00 a.m.-6:15 p.m.
Wednesday, October 3	7:00 a.m.-12:00 p.m.

GENERAL INFORMATION

SPEAKER PREPARATION ROOM
O'Neill (Fourth Floor)

Speakers must visit the Speaker Preparation Room at least one day prior to their presentations to confirm presentation order and load presentations. The room will be open on the following schedule:

Saturday, September 29	5:00 p.m.-7:00 p.m.
Sunday, September 30	7:00 a.m.-6:15 p.m.
Monday, October 1	7:00 a.m.-6:15 p.m.
Tuesday, October 2	7:00 a.m.-6:15 p.m.
Wednesday, October 3	7:00 a.m.-12:00 p.m.

CERTIFICATES OF ATTENDANCE AND RECEIPTS

Both certificates of attendance and receipts for conference registration fees are available at the conference Registration Desk. Certificates of attendance will also be sent by email after the conference.

ASSISTANCE FOR PHYSICALLY CHALLENGED REGISTRANTS

Registrants with special requirements should notify a member of the conference staff at the Registration Desk upon arrival at the conference.

INTERNET

Wireless Internet is available in the lobby, public spaces, and session rooms in the New York Marriott Marquis. To ensure everyone has access, please limit your connection time and only connect one device at a time.

BUSINESS CENTER

The New York Marriott Marquis's FedEx Business Center is located on the Eighth Floor, to the left of the check-in counter/front desk. The hours of operation are 7:00 a.m. to 7:00 p.m. Monday-Friday, and 8:00 a.m. to 5:00 p.m. on Saturday-Sunday.

POSTER SESSIONS AND EXHIBITS
Westside Ballroom (Fifth Floor)

Poster Sessions and Exhibits will be held on the following schedule:

Poster Session A
Sunday, September 30 • 11:45 a.m.-2:15 p.m.

Poster Set-Up for Session A
7:00 a.m.-11:45 a.m.
(Posters should be removed by 7:00 p.m.)

Poster Session B
Tuesday, October 2 • 12:45 p.m.-3:15 p.m.

Poster Set-Up for Session B
7:00 a.m.-12:45 p.m.
(Posters should be removed by 7:00 p.m.)

We suggest that presenters take the first half hour of the poster session for their lunch. Presenters with an odd number poster board should stand by their poster for the first hour after the half-hour lunch; presenters with an even number should stand by their posters for the second hour after the half-hour lunch.

Exhibits

Sunday, September 30-Tuesday, October 2	10:00 a.m.-5:00 p.m.
Wednesday, October 3	10:00 a.m.-1:00 p.m.

SATELLITE EDUCATIONAL SYMPOSIA

Two Satellite Educational Symposia will be held in conjunction with the CRI-CIMT-EATI-AACR Fourth International Cancer Immunotherapy Conference. These CME-accredited events are supported by parties other than the meeting organizers and are not part of the official program of the conference. Symposia were evaluated by the Satellite Educational Symposia Committee to ensure that the educational content will enhance that provided by the official scientific program. There is no cost to attend these symposia.

Follow that Biomarker: Biomarker Testing to Optimize Immunotherapies for Cancer
Monday, October 1, 2018

6:00 a.m.-6:30 a.m.	Breakfast and Registration Broadway Ballroom Foyer (Sixth Floor)
6:30 a.m.-8:00 a.m.	Program Broadway Ballroom (Sixth Floor)

Improving Patient Outcomes with Cancer Immunotherapies throughout the Lung Cancer Continuum: State of the Science and Implications for Practice
Tuesday, October 2, 2018

6:00 a.m.-6:30 a.m.	Breakfast and Registration Broadway Ballroom Foyer (Sixth Floor)
6:30 a.m.-8:00 a.m.	Program Broadway Ballroom (Sixth Floor)

To view more information or register for any of these symposia, visit www.cancerimmunotherapyconference.org.

EXHIBITING COMPANIES

(as of 9/5/18)

American Association for Cancer Research

The Association for Cancer Immunotherapy

Bristol-Myers Squibb

Cancer Research Institute

Caprion

Celetrix

The European Academy of Tumor Immunology

Genentech USA, Inc.

Immudex

MBL International Corporation

StemImmune LLC

Studylog Systems, Inc.

BREAKS AND MEALS

Breaks and meals are for registered conference attendees, only. Please wear your conference badge at all times. Times and locations are subject to change; please look for additional signage.

Continental breakfast for all attendees will be served in the Westside Ballroom (Fifth Floor) and the Broadway Ballroom Foyer (Sixth Floor) on the following schedule:

Sunday, September 30	7:30 a.m.-8:30 a.m.
Monday, October 1- Wednesday, October 3	7:15 a.m.-8:15 a.m.

On Monday and Tuesday, an early continental breakfast will be available from 6:00 a.m. to 7:15 a.m. in conjunction with the Satellite Educational Symposia.

GENERAL INFORMATION

Lunch and Poster Sessions: Lunch will be served in the Westside Ballroom (Fifth Floor) and the Broadway Ballroom Foyer (Sixth Floor):

Sunday, September 30	11:45 a.m.-2:15 p.m.
Monday, October 1 (Lunch Only)	12:45 p.m.-2:15 p.m.
Tuesday, October 2	12:45 p.m.-3:15 p.m.

Breaks: All breaks will be held in the Westside Ballroom (Fifth Floor) and the Broadway Ballroom Foyer (Sixth Floor) on the following schedule:

Sunday, September 30	9:45 a.m.-10:15 a.m. 4:15 p.m.-4:45 p.m.
Monday, October 1	10:15 a.m.-10:45 a.m. 4:15 p.m.-4:45 p.m.
Tuesday, October 2	10:15 a.m.-10:45 a.m. 4:45 p.m.-5:15 p.m.
Wednesday, October 3	10:15 a.m.-10:45 a.m.

PRESS/MEDIA RELATIONS

There will be a room for media at the conference. It is located in Odets (Fourth Floor) in the Marriott Marquis New York. The media representatives who can assist you are Julia Gunther (770-403-7690, julia.gunther@aacr.org); Rachel Salis-Silverman (267-970-3685, rachel.silverman@aacr.org); Rick Buck (856-562-5668, rick.buck@aacr.org); and Christiana Pascale (215-915-2550, cpascale@w2ogroup.com); and Brian Brewer (917-676-0871, bbrewer@cancerresearch.org).

SOCIAL MEDIA

While we encourage your use of social media in and around the conference, we ask that you be aware of the following guidelines:

- Follow the conference organizers on Twitter (@CancerResearch, @C_IMT, and @AACR) and use the hashtag #cicon18 for this conference.

- Conference attendees may share information from presentations on social media provided that they respect the wishes of presenters. Oral presenters may label any or all slides in their presentations with “DO NOT POST.” Similarly, poster presenters may label their posters with “DO NOT POST.” Attendees must respect the presenters’ requests in these instances and refrain from posting any images from these designated slides or posters on social media.

MEETING POLICIES AND PROCEDURES

- Conference attendees may take photographs during oral or poster presentations provided that the photographs are strictly for personal, noncommercial use and are not to be published in any form. Attendees are prohibited from using flash photography or otherwise distracting the presenters or members of the audience.
- The New York Marriott Marquis is 100% smoke-free; smoking within the hotel is prohibited.
- Children under 12 years of age are not permitted in any scientific session or poster session at any time. Children cannot be left unattended or unsupervised.
- Cell phones, pagers, and other electronic devices must be turned off or placed on “silent” mode before entering a session.
- Lost and Found: Attendees may contact the conference Registration Desk for any lost items.
- Poster presenters are solely responsible for placing their poster on the assigned poster board and removing their poster according to the schedule provided. The conference organizers cannot be responsible for any posters that are not removed at the designated time. Posters left in the Poster Hall after that time may be discarded.
- Poster presenters should not leave any items at their poster board unattended, including poster tubes, meeting bags, Programs, personal items, etc. The conference organizers are not responsible for any items left in the Poster Hall.

CONTINUING MEDICAL EDUCATION (CME)

ACCREDITATION STATEMENT

The American Association for Cancer Research (AACR) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education activities for physicians.

CREDIT DESIGNATION STATEMENT

AACR has designated this live activity for a maximum of 23.5 *AMA PRA Category 1 Credit(s)*™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Credit certification for individual sessions may vary, dependent upon compliance with the ACCME Accreditation Criteria. The final number of credits may vary from the maximum number indicated above.

CLAIMING (CME) CREDIT

Physicians and other health care professionals seeking *AMA PRA Category 1 Credit(s)*™ for this live continuing medical education activity must complete the CME Request for Credit Survey by Wednesday, November 14, 2018. Certificates will only be issued to those who complete the survey. The Request for Credit Survey will be available via a link on the conference website and via email. Your CME certificate will be sent to you via email after the completion of the activity.

STATEMENT OF EDUCATIONAL NEED, TARGET AUDIENCE, AND LEARNING OBJECTIVES

An estimated 1,735,350 new cancer cases will be diagnosed in 2018 in the United States, and 609,640 people will die from the disease. Continued efforts are needed to identify new strategies and therapeutic options to improve patient survival and quality of life.

Immunotherapy is a promising area that takes advantage of the body's natural defenses to fight cancer. Scientists are discovering novel therapeutic strategies to harness the power of the immune system to specifically target tumor cells or to counteract immunosuppressive signals for improved regression and complete remission for cancer patients. New technologies have greatly enhanced our understanding of immune surveillance, vastly contributing to the development of novel immunotherapies. To further improve the prognosis and outcome of subsequent therapies, it is extremely important to understand the interaction of tumor cells with their microenvironment. Adoptive cell therapy (ACT) continues to gain traction, and chimeric antigen receptor (CAR)-modified T cells have shown clinical successes in hematopoietic malignancies. Cancer vaccines are also being developed to both treat and prevent certain cancers. Monoclonal antibodies and checkpoint inhibitors are being used to fight many types of cancer, with 25 monoclonal antibodies and 6 checkpoint inhibitors approved by the FDA. Combination and targeted therapies are promising and active areas of research as researchers learn how to predict an individual's response to treatment. Importantly, as individualized therapy becomes more prevalent, researchers and physicians can utilize technology—to analyze and alter single cells—to aid more patients, faster.

To develop more effective therapies for a broader range of cancer types, it is essential to provide a venue for researchers, physician scientists, and all stakeholders to meet, share novel findings, and have an active exchange of ideas. This joint meeting will provide an unparalleled opportunity for teaching, learning, and networking. The potential of immune-based therapeutics will be fully explored, and successes in clinical trials and clinical trial design will be discussed. This conference will stimulate discussions and an active exchange of scientific ideas for the development of more effective therapies for a broader range of cancer types.

CONTINUING MEDICAL EDUCATION (CME)

After participating in this CME activity, physicians should be able to:

1) Describe the principles of cancer immunotherapy, the value of combination therapy, and mechanisms of new immunotherapy drugs
2) Articulate how checkpoint blockade is being used in a therapeutic setting
3) Assess the contribution of the tumor microenvironment, cancer cell metabolism, and the microbiome in tumor progression, immunosuppression, and growth
4) Articulate how recent advances in genetic engineering are contributing to personalized cancer immunotherapy
5) Identify mechanisms involved in the biology of vaccination
6) Evaluate genomic methods for identifying tumor antigens and predicting response to immunotherapy
7) Utilize technology to aid in cancer cell characterization and immunotherapy

DISCLOSURE STATEMENT

It is the policy of the AACR that the information presented at AACR CME activities will be unbiased and based on scientific evidence. To help participants make judgments about the presence of bias, AACR will provide information that Scientific Program Committee members and speakers have disclosed about financial relationships they have with commercial entities that produce or market products or services related to the content of this CME activity. This disclosure information will be made available in the meeting app and conference website.

ACKNOWLEDGMENT OF FINANCIAL OR OTHER SUPPORT

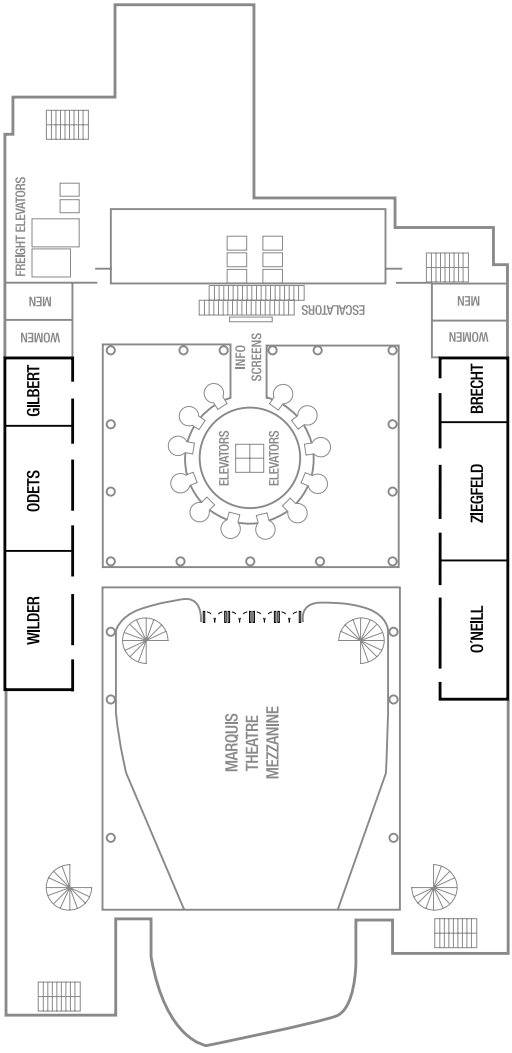
This activity is supported by grants and will be disclosed at the activity.

QUESTIONS ABOUT CME?

Please contact the Office of CME at 215-440-9300 or cme@aacr.org.

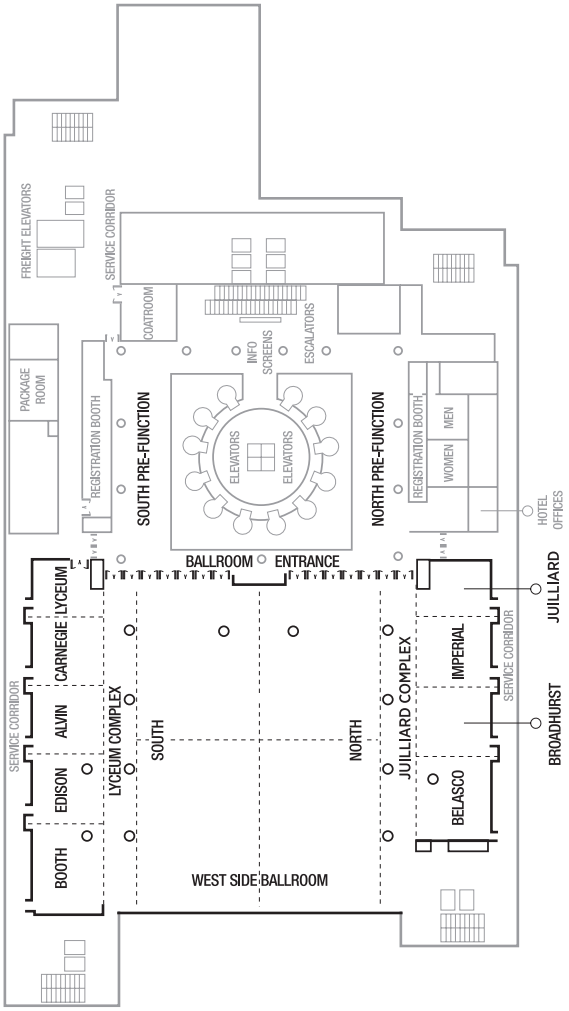
SITE MAPS

FOURTH FLOOR

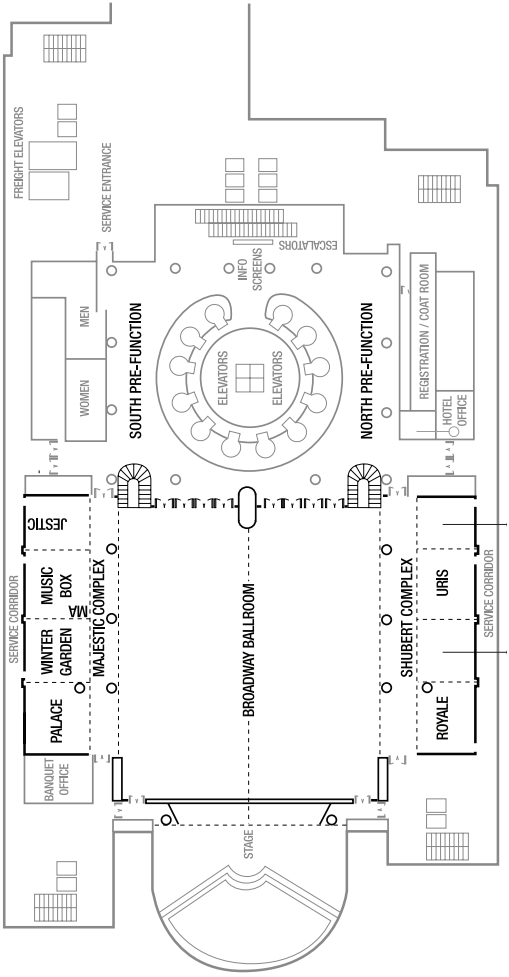


SITE MAPS

FIFTH FLOOR



SIXTH FLOOR


FREIGHT ELEVATORS
SERVICE ENTRANCE
ESCALATORS
INFO SCREENS
MEN
WOMEN
SOUTH PRE-FUNCTION
ELEVATORS
ELEVATORS
NORTH PRE-FUNCTION
REGISTRATION / COAT ROOM
HOTEL OFFICE
JESTIC
MUSIC BOX
MA
WINTER GARDEN
PALACE
BANQUET OFFICE
SERVICE CORRIDOR
MAJESTIC COMPLEX
BROADWAY BALLROOM
SHUBERT COMPLEX
URIS
ROYALE
SERVICE CORRIDOR
STAGE

SUPPORTERS*

SILVER SUPPORTERS

Amgen

Bristol-Myers Squibb

GlaxoSmithKline†

Janssen Research & Development, LLC

Juno Therapeutics

Lilly Oncology

SUPPORTER

AbbVie‡

PROFESSIONAL EDUCATIONAL GRANTS

AbbVie

AstraZeneca

Celgene

Lilly

Merck

Novartis

Pfizer

*As of September 11, 2018
†Charging Stations
‡Meeting App

CONFERENCE SCHEDULE

SUNDAY, SEPTEMBER 30, 2018

8:30 a.m.-8:45 a.m.
Welcome
Broadway Ballroom (Sixth Floor)

Jill O'Donnell-Tormey, Cancer Research Institute, New York, NY

8:45 a.m.-11:45 a.m.
Session 1: Regulating T Cells and Their Response to Cancer
Broadway Ballroom (Sixth Floor)

Session Chair: Christoph Huber, Association for Cancer Immunotherapy (CIMT), Mainz, Germany

8:45 a.m.	**T-cell exhaustion and PD-1 therapy** Rafi Ahmed, Emory University, Atlanta, GA
9:15 a.m.	**Tissue resident memory cells: At the center of tumor control** Christian Ottensmeier, University of Southampton, Southampton, United Kingdom
9:45 a.m.	**Refreshment Break** Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)
10:15 a.m.	**Genetic screens for immunotherapy target discovery** W. Nicholas Haining, Dana-Farber Cancer Institute, Boston, MA
10:45 a.m.	**Dysfunction and stemness of tumor-infiltrating T cells are triggered by a common mechnism** Nicholas P. Restifo, National Cancer Institute, NIH, Bethesda, MD

CONFERENCE SCHEDULE

Session 1 *(cont'd)*

11:15 a.m. **PR1 Mechanistic rationale to combine GITR agonism with PD-1 blockade in cancer patients***
Roberta Zappasodi, Memorial Sloan Kettering Cancer Center, New York, NY

11:30 a.m. **PR2 Neoadjuvant immunotherapy precancer surgery relieves tumor-specific CD8+ T-cell dysfunction and restores memory differentiation potential***
Jake S. O'Donnell, QIMR Berghofer Medical Research Institute, Brisbane, QLD, Australia

11:45 a.m.–2:15 p.m.
Lunch and Poster Session A and Exhibits
Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

Clinical Trials of Cancer Immunotherapies

Genetically Engineered T Cells

Maintenance of Immune Balance: Effects of Targeted and Immune Therapies

Regulating T Cells and Their Response to Cancer

Tackling the Tumor Microenvironment – Beyond T Cells

2:15 p.m.–2:45 p.m.
William B. Coley Lecture
Broadway Ballroom (Sixth Floor)

From the clinic to the lab: Investigating response and resistance mechanisms to immune checkpoint therapy
Padmanee Sharma, The University of Texas MD Anderson Cancer Center, Houston, TX

**Short talk from proffered abstract*

2:45 p.m.-6:15 p.m.

Session 2: Tackling the Tumor Microenvironment – Beyond T Cells

Broadway Ballroom (Sixth Floor)

Session Cochairs: Wolf H. Fridman, Centre de Recherche des Cordeliers, Paris, France, and **Dmitry Gabrilovich,** The Wistar Institute, Philadelphia, PA

2:45 p.m.	**Stromal activation in cancer immunology and immunotherapy** Shannon J. Turley, Genentech, South San Francisco, CA
3:15 p.m.	**Using matrix protein affinity to modulate the tumor microenvironment** Jeffrey A. Hubbell, University of Chicago, Chicago, IL
3:45 p.m.	**The tumor myeloid microenvironment** Miriam Merad, Icahn School of Medicine at Mount Sinai, New York, NY
4:15 p.m.	**Refreshment Break** Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)
4:45 p.m.	**Harnessing natural and engineered properties of NKT cells for cancer immunotherapy** Leonid S. Metelitsa, Baylor College of Medicine, Houston, TX
5:15 p.m.	**PMN-MDSC and neutrophils: Tale of two cells in cancer** Dmitry Gabrilovich
5:45 p.m.	**PR3 Immune-based classification of soft-tissue sarcoma is associated with clinical outcome and unveils tertiary lymphoid structures as surrogate biomarker for the clinic*** Wei-Wu Tom Chen, National Taiwan University Hospital, Taipei, Taiwan

**Short talk from proffered abstract*

6:00 p.m. **PR4 A natural killer–dendritic cell axis defines checkpoint therapy–responsive tumor microenvironments***
Kevin C. Barry, University of California, San Francisco, San Francisco, CA

MONDAY, OCTOBER 1, 2018

8:15 a.m.–8:45 a.m.
Keynote Address
Broadway Ballroom (Sixth Floor)

The immunotherapy faces of Interleukin-8 and CD137
Ignacio Melero, Universidad de Navarra, University Clinic and CIMA, Pamplona, Spain

8:45 a.m.–12:45 p.m.
Session 3: Genetically Engineered T Cells
Broadway Ballroom (Sixth Floor)

Session Cochairs: Crystal L. Mackall, Stanford University School of Medicine, Stanford, CA, and **Jedd D. Wolchok,** Memorial Sloan Kettering Cancer Center, New York, NY

8:45 a.m. **CAR T-cell therapy for lymphoma and multiple myeloma**
James N. Kochenderfer, National Cancer Institute, NIH, Bethesda, MD

9:15 a.m. **Engineering exhaustion-resistant CAR T cells**
Crystal L. Mackall

9:45 a.m. **Cell transfer immunotherapy targeting unique somatic mutations in cancer**
Steven A. Rosenberg, National Cancer Institute, NIH, Bethesda, MD

**Short talk from proffered abstract*

10:15 a.m. **Refreshment Break**
Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)

10:45 a.m. **Advancing CAR T cell therapy for the treatment of brain tumors**
Christine E. Brown, City of Hope National Medical Center, Duarte, CA

11:15 a.m. **Novel approaches to CAR T-cell engineering**
Michel Sadelain, Memorial Sloan Kettering Cancer Center, New York, NY

11:45 a.m. **Utilizing synthetic biology and high-dimension probing to address therapeutic obstacles and empower engineered T cells with the capacity to eradicate tumors**
Philip D. Greenberg, Fred Hutchinson Cancer Research Center and University of Washington School of Medicine, Seattle, WA

12:15 p.m. **PR5 T cells engineered to overcome death signaling within the tumor microenvironment enhance adoptive cancer immunotherapy***
Christopher A. Klebanoff, Memorial Sloan Kettering Cancer Center, New York, NY

12:30 p.m. **PR6 Dual-specific T cells and an indirect vaccine eradicate large solid tumors***
Clare Y. Slaney, Peter MacCallum Cancer Centre, Melbourne, VIC, Australia

12:45 p.m.–2:15 pm.
Lunch and Exhibits
Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

**Short talk from proffered abstract*

CONFERENCE SCHEDULE

2:15 p.m.–5:45 p.m.

Session 4: Maintenance of Immune Balance: Effects of Targeted and Immune Therapies

Broadway Ballroom (Sixth Floor)

Session Cochairs: Catherine Sautès-Fridman, Université Paris-Descartes, Paris, France, and **Ellen Puré,** University of Pennsylvania, Philadelphia, PA

2:15 p.m.	**Inactivation of DNA repair to improve immune surveillance** Alberto Bardelli, University of Turin and Candiolo Cancer Institute, Candiolo, Italy
2:45 p.m.	**CAR T cells: On the road to a cure** David L. Porter, University of Pennsylvania, Philadelphia, PA
3:15 p.m.	**Targeting the immune microenvironment in breast cancer** Peter Savas, Peter MacCallum Cancer Centre, Melbourne, VIC, Australia
3:45 p.m.	**RNA-editing derived epitopes function as cancer antigens to elicit immune responses** Patrick Hwu, The University of Texas MD Anderson Cancer Center, Houston, TX
4:15 p.m.	**Refreshment break** Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)
4:45 p.m.	**Autoimmune rheumatic diseases and cancer** Antony Rosen, Johns Hopkins University School of Medicine, Baltimore, MD
5:15 p.m.	**PR7 Developing syngeneic NOD tumor models to profile immunotoxicity and antitumor immunity in response to cancer immunotherapies in autoimmune-prone mice*** Arabella Young, University of California San Francisco, San Francisco, CA

**Short talk from proffered abstract*

5:30 p.m.	**PR8 Mechanisms of primary resistance to PD-1 checkpoint blockade*** Michelle Krogsgaard, NYU School of Medicine, New York, NY

TUESDAY, OCTOBER 2, 2018

8:15 a.m.–12:45 p.m.

Session 5: Novel Vaccine Platforms and Combinations

Broadway Ballroom (Sixth Floor)

Session Cochairs: Nina Bhardwaj, Icahn School of Medicine at Mount Sinai, New York, NY, and **Cornelis J.M. Melief,** Leiden University Medical Center and ISA Pharmaceuticals, Leiden, The Netherlands

8:15 a.m.	**High-dimensional analysis of effective cancer immunotherapy driven by MHC-I and MHC-II neoepitopes** Robert D. Schreiber, Washington University School of Medicine, St. Louis, MO
8:45 a.m.	**Personalized cancer immunotherapy** Ugur Sahin, BioNTech, Mainz, Germany ***(not eligible for CME credit)***
9:15 a.m.	**Targeting tumor neoantigens to drive effective tumor immunity** Catherine J. Wu, Dana-Farber Cancer Institute, Boston, MA
9:45 a.m.	**Combination immunotherapy of cancer caused by human papilloma virus** Cornelis J.M. Melief
10:15 a.m.	**Refreshment Break** Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)

**Short talk from proffered abstract*

CONFERENCE SCHEDULE

Session 5 *(cont'd)*

10:45 a.m. **Oncolytic viruses: Potential for in situ antitumor vaccination and combination with checkpoint blockade**
Alan Melcher, The Institute of Cancer Research, London, United Kingdom

11:15 a.m. **Nanodisc platform technology for cancer vaccination**
James J. Moon, University of Michigan, Ann Arbor, MI

11:45 a.m. **Peptide-TLR-7/8 agonist conjugate vaccines chemically programmed for nanoparticle self-assembly to enhance the magnitude and breadth of anticancer neoantigen CD8 T cell immunity**
Robert Seder, National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD

12:15 p.m. **PR9 Intratumoral delivery of engineered modified vaccinia virus Ankara expressing Flt3L and OX40L for in situ therapeutic cancer vaccination***
Liang Deng, Memorial Sloan Kettering Cancer Center, New York, NY

12:30 p.m. **PR10 Reprogramming myeloid cells in TME with pepinemab, first-in-class semaphorin 4D MAb, enhances combination immunotherapy***
Elizabeth C. Evans, Vaccinex, Inc., Rochester, NY

12:45 p.m.–3:15 p.m.
Lunch and Poster Session B and Exhibits

Westside Ballroom (Fifth Floor) and Broadway Ballroom Foyer (Sixth Floor)

Convergence of Technology and Cancer Immunotherapy

Microbiome and Metabolism

**Short talk from proffered abstract*

Mutational Analysis and Predicting Response to Immunotherapy

Novel Vaccine Platforms and Combinations

Trials in Progress

Other

3:15 p.m.-6:45 p.m.

Session 6: Mutational Analysis and Predicting Response to Immunotherapy

Broadway Ballroom (Sixth Floor)

Session Cochairs: Drew M. Pardoll, Johns Hopkins University School of Medicine, Baltimore, MD, and **Ton N. Schumacher,** Netherlands Cancer Institute, Amsterdam, The Netherlands

3:15 p.m.	**T-cell recognition in human cancer** Ton N. Schumacher
3:45 p.m.	**Measuring the emergence of non-self in tumors** Benjamin D. Greenbaum, Icahn School of Medicine at Mount Sinai, New York, NY
4:15 p.m.	**Application of TMB in the clinic to predict response to immunotherapy** Naiyer Rizvi, Columbia University Medical Center, New York, NY
4:45 p.m.	**Refreshment break** Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)
5:15 p.m.	**Cancer genetics and response to immunotherapy** Drew M. Pardoll
5:45 p.m.	**Mapping immune recognition of non-self neoantigens in human pancreatic cancer** Vinod P. Balachandran, Memorial Sloan Kettering Cancer Center, New York, NY

6:15 p.m. **PR11 CX3CR1+CD8+ T cells are responsible to the clinical benefit of chemoimmunotherapy in metastatic melanoma patients after disease progression on PD-1 blockade***
Yiyi Yan, Mayo Clinic College of Medicine, Rochester, MN

6:30 p.m. **PR12 Functional identification and therapeutic targeting of tumor neoantigens***
Stephen Philip Schoenberger, La Jolla Institute for Allergy and Immunology, La Jolla, CA

WEDNESDAY, OCTOBER 3, 2018

8:15 a.m.–10:45 a.m.

Session 7: Convergence of Technology and Cancer Immunotherapy

Broadway Ballroom (Sixth Floor)

Session Cochairs: Carl G. Figdor, Radboud University Nijmegen, Nijmegen, The Netherlands, and **Özlem Türeci,** Ganymed Pharmaceuticals, Mainz, Germany

8:15 a.m. **Determinants of effective tumor immunity**
Nir Hacohen, Massachusetts General Hospital and Broad Institute, Cambridge, MA

8:45 a.m. **Microengineered physiologic biomimicry: Human organs-on-chips**
Dan Dongeun Huh, University of Pennsylvania, Philadelphia, PA

**Short talk from proffered abstract*

9:15 a.m. **Enhancing the function of CAR T cells via a universal vaccine strategy**
Darrell Irvine, MIT/Koch Institute for Integrative Cancer Research, Cambridge, MA

9:45 a.m. **PR13 A new high-performance HLA ligand identification strategy enables prediction of T-cell tolerance to neoepitopes***
Martin G. Klatt, Memorial Sloan Kettering Cancer Center, New York, NY

10:00 a.m. **PR14 Identification of specificity TCR groups of tumor antigen-specific T cells***
Liang Chen, Stanford University, Stanford, CA

10:15 a.m. **Refreshment break**
Broadway Ballroom Foyer (Sixth Floor) and Westside Ballroom (Fifth Floor)

10:45 a.m.–12:45 p.m.

Session 8: Microbiome and Metabolism

Broadway Ballroom (Sixth Floor)

Session Cochairs: Guido Kroemer, Centre de Recherche des Cordeliers, Paris, France, and **Laurence Zitvogel,** Institut Gustave Roussy, Paris, France

10:45 a.m. **Manipulating the gut microbiome to improve immunotherapy of melanoma**
Hassane M. Zarour, University of Pittsburgh School of Medicine, Pittsburgh, PA

11:15 a.m. **Targeting the gut and tumor microbiome in response and toxicity to cancer therapy**
Jennifer A. Wargo, The University of Texas MD Anderson Cancer Center, Houston, TX

**Short talk from proffered abstract*

CONFERENCE SCHEDULE

Session 8 *(cont'd)*

11:45 a.m. **Control of tissue immunity and repair by the microbiome**
Yasmine Belkaid, National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD

12:15 p.m. **PR15 The oncometabolite R-2-hydroxyglutarate suppresses the innate immune microenvironment of IDH1-mutated gliomas via Aryl Hydrocarbon Receptor signaling***
Mirco Friedrich, German Cancer Research Center (NI), Heidelberg, Germanys

12:30 p.m. **PR16 Mucosal-associated invariant T cells respond to the cutaneous microbiota and promote skin immunity***
Michael G. Constantinides, National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD

12:45 p.m.–1:00 p.m.
Closing Remarks
Broadway Ballroom (Sixth Floor)

Margaret Foti, American Association for Cancer Research, Philadelphia, PA

1:00 p.m.
Meeting Ends

**Short talk from proffered abstract*

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.-2:15 p.m.
Westside Ballroom (Fifth Floor)

A001 Phase I study of vaccine therapy with a cocktail of peptides for pediatric patients with refractory solid tumors. Yu Akazawa, Ako Hosono, Toshiaki Yoshikawa, Hide Kaneda, Junichi Hara, Yoshiaki Kinoshita, Kenichi Kohashi, Atsushi Manabe, Yoko Shioda, Kayoko Shoda, Manami Shimomura, Shoichi Mizuno, Yasunari Nakamoto, Tetsuya Nakatsura.

A002 Autologous T-cells transduced with the affinity enhanced NY-ESO-1c259TCR in patients with synovial sarcoma expressing low levels of the NY-ESO-1 antigen. Dejka Araujo, Sandra P. D'Angelo, George Demetri, Mihaela P. Druta, John Glod, Warren A Chow, William D. Tap, Joana Senra, Rachel Abbott, Erin Van Winkle, Karen Chagin, Miguel Maroto, Elliot Norry, Malini Iyengar, Trupti Trivedi, Andrew Gerry, Rafael Amado, Crystal Mackall.

A003 Safety and preliminary efficacy of ACTR707, autologous T lymphocytes expressing an antibody-coupled T cell receptor, in combination with rituximab in subjects with relapsed or refractory CD20-positive B-cell lymphoma. Veronika Bachanova, Jonathon Cohen, Luke Akard, Samantha Jaglowski, Jessica Sachs, Ann Ranger, Patricia Harris, Kathleen McGinness, Greg Motz, Ian Flinn.

A004 HER2 cancer vaccine phase I clinical trial shows clinical benefit in 45% of evaluable patients. Jay A. Berzofsky, Lauren V. Wood, Hoyoung Maeng, Jane V. Trepel, David Stroncek, John C. Morris.

A005 A phase I study of the safety and immunogenicity of a multipeptide personalized genomic vaccine in the adjuvant treatment of solid cancers. Ana B. Blazquez, Alex Rubinsteyn, Julia Kodysh, John P. Finnigan, Thomas Marron, Rachel L. Sabado, Marcia Meseck, Timothy J. O'Donnell, Jeffrey Hammerbacher, Michael Donovan, John Holt, Milind Mahajan, John Mandeli, Krysztof Misiukiewicz, Eric M. Genden, Brett A. Milles, Hooman Khorasani, Peter R. Dottino, Hanna Irie, Amy B. Tiersten, Elisa R. Port, Andrea S. Wolf, Hearn J. Cho, Ashutosh Tewari, Samir S. Parekh, Sujit Nair, Matthew D. Galsky, William K. Oh, Sacha Gnjatic, Eric E. Schadt, Phillip A. Friedlander, Nina Bhardwaj.

A006 Phase 1 study to evaluate the safety and tolerability of MEDI4736 (durvalumab, durva) + tremelimumab (treme) in patients with advanced solid tumors. Margaret K. Callahan, Kunle Odunsi, Mario Sznol,

John Nemunaitis, Patrick A. Ott, Patrick Dillon, Reva Schneider, Andrew Park, Paul Schwarzenberger, Toni Ricciardi, Mary Macri, Aileen Ryan, Ralph Venhaus, Jedd D. Wolchok.

A007 Comparison of pre-treatment conditioning on efficacy in two cohorts of a pilot study of genetically engineered NY-ESO-1c259T cells in patients with synovial sarcoma. George Demetri, Dejka Araujo, Brian A. Van Tine, George Demetri, Mihaela Druta, John Glod, Warren A. Chow, Stephan Grupp, Alibiruni Abdul Razak, William D. Tap, Breelyn Wilky, Erin Van Winkle, Elliot Norry, Samik Basu, Karen Chagin, Malini Iyengar, Trupti Trivedi, Rafael Amado, Crystal Mackall.

A008 Neoadjuvant nivolumab, gemcitabine and cisplatin in muscle-invasive bladder cancer: Study update. Shilpa Gupta, Christopher J. Weight, Neeraj Agarwal, Sumati Gupta, Badrinath Konety, Ewan Gibb, Elai Davicioni, Bharat Thyagarajan, Guru Sonpavde.

A009 Forty-three-week follow-up of a phase 1a clinical trial of a PSA, IL-2, GM-CSF containing prostate cancer therapeutic vaccine in PSA defined biochemical recurrent prostate cancer patients. Jonathan F. Head, Gregory A. Daniels, Michelle McKinney, Jessica A. Wang-Rodriguez.

A010 Personalized neoantigen-targeting vaccines for high-risk melanoma generate epitope spreading. Zhuting Hu, Donna Leet, Siranush Sarkizova, Rebecca Holden, Jing Sun, Susan Klaeger, Karl R. Clauser, Sachet A. Shukla, Wandi Zhang, Steven A. Carr, Edward F Fritsch, Bradley L. Pentelute, Nir Hacohen, Derin B. Keskin, Patrick A. Ott, Catherine J. Wu.

A011 First-in-man clinical trial of intratumoral injection of Clostridium novyi-NT spores in patients with treatment-refractory advanced solid tumors: Safety, activity, and immune responses. Filip Janku, Mrinal Gounder, Abdul Mohammad Pezeshki, Ravi Murthy, Andrea Wang-Gillam, Dale Shepard, David S. Hong, Sarina A. Piha-Paul, Anjali Raina, Alexey A. Leontovich, Gary DeCrescenzo, Brent L. Kreider, David Tung, Mary Varterasian, Halle H. Zhang, Khashayarsha Khazaie.

A012 SV-BR-1-GM, a whole-cell targeted immunotherapy for advanced breast cancer: Pharmacodynamic markers of response. Markus D. Lacher, Sanne Graeve, Vivekananda (Vivek) Sunkari, Daniel L. Adams, Cha-Mei Tang, Charles L. Wiseman, George E. Peoples, and William V. Williams.

A013 Haploidentical stem cell transplantation and subsequent immunotherapy with antiGD2 antibody for patients with relapsed metastatic neuroblastoma. Peter Lang, Tim Flaadt, Martin Ebinger, Patrick Schlegel, Holger Lode, Ruth Ladenstein, Anne-Marie Lang, Peter Ambross, Juergen Schaefer, Joerg Fuchs, Hans Loibner, Wolfgang Schwinger, Rupert Handgretinger.

A014 Phase I clinical trial with PD-1/MUC1 CAR-pNK92 immunotherapy. Qiao Li, Yi Wang, Ming Lin, Leiming Xia, Yangyi Bao, Xiang Sun, Lin Yang.

A015 Cellular immunomonitoring for personalized adoptive cellular therapy trial ACTolog® (IMA101-101). Regina Mendrzyk, Alexander Ulges, Thorsten Demberg, Geoffrey Stephens, Carsten Reinhardt, Steffen Walter, Dominik Maurer.

A016 PEGylated IL-10 (Pegilodecakin) induces systemic immune activation, CD8+ T cell invigoration and polyclonal T cell expansion in cancer patients. Martin Oft, Aung Naing, Jeffrey R. Infante, Kyriakos Papadopoulos, Ivan H. Chan, Cong Shen, Navneet P. Ratti, Karen A. Autio, Deborah J. Wong, Manish R. Patel, Patrick A. Ott, Gerald S. Falchook, Shubham Pant, Annie Hung, John B. Mumm, Matthew Adamow, Scott McCauley, Rakesh Verma, Phillip Wong, Peter VanVlasselaer, Joseph Leveque, Nizar M. Tannir.

A017 Immunologic efficacy of heat shock protein 105 peptide vaccine in patients with advanced colorectal and esophageal cancer. Yasuhiro Shimizu, Toshiaki Yoshikawa, Kojima Takashi, Kayoko Shoda, Kazuto Nosaka, Shoichi Mizuno, Satoshi Wada, Yuki Fujimoto, Tetsuro Sasada, Kenichi Kohashi, Hideaki Bando, Itaru Endo, Tetsuya Nakatsura.

A018 Effects of Toca 511 and Toca FC on tumor microenvironment and peripheral blood populations in patien with advanced malignancies. Jaime Merchan, Jordi Rodon, Derek Ostertag, Shree Venkat, Arthur Donahue, Peder Horner, Dalissa Tijera, Thian Kheoh, Douglas J. Jolly, Harry E. Gruber, Jolene S. Shorr, Gerald S. Falchook.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A019 Longitudinal analysis of the landscape of cancer trials testing anti-PD-1/L1 monoclonal antibodies. Jun Tang, Laura Pearce, Jill O'Donnell-Tormey, Vanessa Hubbard-Lucey.

A020 Immunomonitoring for actively personalized peptide vaccines (APVACs) during immunotherapeutic treatment of glioblastoma. Alexander Ulges, Norbert Hilf, Wolfgang Wick, Michael Platten, Pierre-Yves Dietrich, Katrin Frenzel, Arie Admon, Sjoerd S.H. van der Burg, Andreas von Deimling, Per thor Straten, Cecile Gouttefangeas, Judith R. Kroep, Francisco Martínez-Ricarte, Hideo Okada, Christian H. Ottensmeier, Berta Ponsati, Hans S. Poulsen, Stefan Stevanovic, Ghazaleh Tabatabai, Hans-Georg Rammensee, Ugur Sahin, Dominik Maurer, Regina Mendrzyk.

A021 Vaccination with autologous, nonattenuated, live glioblastoma cells induces potent peripheral and intratumoral antitumoral responses: A first-in-human study. Ilan Volovitz, Nati Shapira, Rachel Grossman, Zvi Ram.

A022 Phase 1/2 study to evaluate systemic durvalumab (durva) + intraperitoneal ONCOS-102 in patients with peritoneal disease who have epithelial ovarian (OC) or metastatic colorectal cancer (CRC). Dmitriy Zamarin, Kunle Odunsi, Brian Slomovitz, Vanessa Hubbard-Lucey, Danielle McCabe, Lisa Shohara, Paul Schwarzenberger, Toni Ricciardi, Mary Macri, Aileen Ryan, Anne-Kirsti Aksnes, Lukasz Kuryk, Ralph Venhaus.

A023 Highly-enriched memory stem T cell subsets (TSCM) expressing a novel CAR30 have enhanced antitumor effect in Hodgkin lymphoma. Carmen Alvarez-Fernández, Laura Escribà-Garcia, Ana Carolina Caballero, Jorge Sierra, Javier Briones.

A024 Identifying a T cell receptor for immunotherapy against a leukemia associated self-antigen in an allogeneic setting. Maxi-Lu Böschen, Weiwen Yang, Erlend Strønen, Johanna Olweus.

A025 Eradication of neuroblastoma by T cells redirected with an optimized GD2-specific chimeric antigen receptor and IL-15. Yuhui Chen, Chuang Sun, Leonid Metelitsa, Gianpietro Dotti, Barbara Savoldo.

A026 Novel electroporation method for quick CAR-T cell manufacture. Jian Chen, Xiaofeng Xia.

A027 Targeted insertion of an HPV-16 E7-specific engineered T cell receptor into the TRAC locus. Alexandra Croft, Cameron Brandt, Stephen Burleigh, Eric Chadwick, Melissa Chin, Dean Toy, Bailey Donahue, Clay Patton, Stephen Goldfless, Brian Belmont, Ruth Salmon, Grant Welstead, Blythe D. Sather, David J. Huss.

A028 Memory stem T cells expressing an optimized CD30-specific chimeric antigen receptor (CAR) efficiently eradicate peripheral T-cell lymphoma in vivo. Laura Escribà-Garcia, Carmen Alvarez-Fernández, Ana Carolina Caballero, Rydzek Julian, Einsele Hermann, Jorge Sierra, Michael Hudecek, Javier Briones.

A029 Unexpected antagonism between oncolytic virus derived type I interferon and EGFRvIII CAR T cells. Laura Evgin, Amanda L. Huff, Phonphimon Wongthida, Jill L. Thompson, Timothy Kottke, John Sampson, Luis Sanchez Perez, Richard Vile.

A030 Identification of α-fetoprotein-specific T cell receptors for hepatocellular carcinoma immunotherapy. Yukai He, Wei Zhu, Yibing Peng, Lan Wang, Yuan Hong, Juan Wu, Esteban Celis.

A031 Engineering antigen density sensors for T cell immunotherapy. Rogelio A. Hernandez-Lopez, Wendell A. Lim, Wei Yu.

A032 Chimeric antigen receptor (CAR) targeted epitope determines optimal CAR spacer length for therapy against medulloblastoma. Adam J. Johnson, Cindy A. Chang, Michael L. Baldwin, Jason A. Yokoyama, Michael C.M. Jensen.

A034 High-throughput identification of naturally occurring T cell receptors with therapeutic potential against tumor-associated, viral and neoantigens. Mark Klinger, Peter Ebert, Edward Osborne, Ruth Taniguchi, Joyce Hu, Tim Hayes, Sharon Benzeno, Adria Carbo, Melanie Laur, Erica Eggers, Harlan Robins.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A035 Combinatorial IGK-CD19 CAR primarily targets IgK+ malignant B-cells and is less prone to serum IgG inhibition. Hakan Köksal, Pierre Dillard, Sólrún Melkorka Maggadóttir, Gunnar Kvalheim, Erlend Bremertun Smeland, June Helen Myklebust, Else Marit Inderberg, Sébastien Wälchli.

A036 Multiplex human T-cell engineering by Cas9 base editor technology. Cara Lonetree, Beau R. Webber, Miechaleen D. Diers, Walker R. Lahr, Mitchell Kluesner, Mark J. Osborn, Matthew J. Johnson, Branden S. Moriarity.

A037 A novel pharmacologic "ON/OFF" switch to modulate CAR-T cell function in vitro and in vivo. Katrin Mestermann, Rydzek Julian, Frenz Silke, Einsele Hermann, Michael Hudecek.

A038 Effective rerouting of NK cell cytotoxicity against B-cell malignancies upon TCR gene transfer. Laura T. Morton, Anne K. Wouters, Dennis F. Remst, Renate K. Hagedoorn, Marleen M. Van Loenen, Renate de Boer, J. H.F. Falkenberg, Mirjam H.M. Heemskerk.

A039 FAM49B–specific regulatory T cells recognize and target cancer cells in the context of Qa-1. Hidetoshi Nakagawa, Hye-Jung Kim, Harvey Cantor.

A040 Hijacking CAR19 T cells for use in targeting diverse hematopoietic and solid tumors. Paul Rennert, Fay Dufort, Lihe Su, Lan Wu, Alyssa Birt, Christine Ambrose, Roy Lobb.

A041 Hypoxia-responsive CAR T-cells. Tina Anna Sarén.

A042 A novel nonviral, nonintegrative DNA vector system for T-cell engineering. Patrick Schmidt, Matthias Bozza, Dirk Jaeger, Richard Harbottle.

A043 Anti-CD19 CAR T cells with a CRISPR/Cas9-mediated T-cell receptor knockout show high functionality in the absence of alloreactivity in vitro. Dana Stenger, Tanja Stief, Theresa Käuferle, Semjon Willier, Felicitas Rataj, Kilian Schober, Ramin Lotfi, Beate Wagner, Dirk H. Busch, Sebastian Kobold, Franziska Blaeschke, Tobias Feuchtinger.

A044 Mutated NPM1 as target for immunotherapy of acute myeloid leukemia. Dyantha I. van der Lee, Rogier M. Reijmers, M. Willy Honders, Renate M. Hagedoorn, Rob. M. de Jong, Michel G.D. Kester, Dirk M. van der Steen, Arnoud H. de Ru, Christiaan Kweekel, Inge Jedema, Hendrik Veelken, Mirjam M. Heemskerk, Peter A. van Veelen, J.H. Frederik Falkenburg, Marieke Griffioen.

A045 Chlorotoxin redirects T cells for specific and effective targeting against glioblastomas. Dongrui Wang, Vanessa Jonsson, Sarah Wright, Wen-Chung Chang, Xin Yang, Renate Starr, Alfonso Brito, Brenda Aguilar, Aniee Sarkissian, Lihong Weng, Stephen J Forman, Michael E Barish, Christine E. Brown.

A046 Retargeting NK92 cells using an anti-hPSMA specific chimeric antigen receptor. Gaia Zuccolotto.

A047/PR6 Dual-specific T cells and an indirect vaccine eradicate large solid tumors. Clare Y. Slaney, Bianca von Scheidt, Phillip K. Darcy, Michael Kershaw.
This abstract is also being presented as a proffered short talk (PR6) in Session 3.

A048 Targeting the tumor microenvironment to enhance immunotherapy against cancer. Clare Y. Slaney, Amanda J. Oliver, Michael H. Kershaw.

A049 Three-dimensional microfluidic platform mimicking the tumor microenvironment. Andrea Pavesi, Siew Cheng Wong, Roger Kamm, Sharon Wei Ling Lee, Giulia Adirani.

A050 Intratumoral delivery of a novel STING agonist synergizes with checkpoint blockade to regress multifocal pancreatic cancer. Casey R. Ager, Maria E. Di Francesco, Philip Jones, Michael E. Curran.

A051 Melanoma displays an evolutionarily conserved resistance to upregulation of prophagocytic signals and to CD47 blockade. Katie L. Anderson, Kristin M. Snyder, Daisuke Ito, Debra M. Lins, Lauren J. Mills, Kipp Weiskopf, Nan G. Ring, Aaron M Ring, Yoji Shimizu, Matthew F. Mescher, Irving L. Weissman, Jaime F. Modiano.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A052/PR4 A natural killer–dendritic cell axis defines checkpoint therapy–responsive tumor microenvironments. Kevin C. Barry, Matthew F. Krummel. *This abstract is also being presented as a proffered short talk (PR4) in Session 2.*

A053 Activated B cells in human primary tumors present antigen and increase antitumor function of CD4 T cells in tertiary lymphoid structures. Tullia C. Bruno, Ayana T. Ruffin, Anthony R. Cillo, Robert T. Ferris, Dario A.A. Vignali.

A054 Tumor cell intrinsic factors dictate immune cell infiltration and response to immunotherapy. Katelyn T. Byrne, Jinyang Li, Robert H. Vonderheide, Ben Stanger.

A055 Lineage–tracing reveals a unique contribution of embryonic macrophages to NSCLC progression. Maria Casanova.

A056 Incessant ER stress responses promote dendritic cell dysfunction in ovarian cancer. Chang-Suk Chae.

A057 Imprime PGG, a systemically administered PAMP, mobilizes monocytes in the periphery, facilitates their trafficking to the tumor site and polarizes the tumor microenvironment (TME) to an immuno-active state. Anissa S.H. Chan, Adria Bykowski Jonas, Nadine C. Ottoson, Xiaohong Qiu, Ben Harrison, Keith Gorden, Jamie Lowe, Mark Uhlik, Jeremy Graff, Nandita Bose.

A059 Tackling the tumor microenvironment with CD38 blockade to enhance cancer immunotherapy. Limo Chen, Lixia Diao, Xiaohui Yi, Bertha Leticia Rodriguez, Yanli Li, Pamela Villalobos, Tina Cascone, Xi Liu, Lin Tan, Philip Lorenzi, Jared Fradette, David Peng, Ferdinandos Skoulidis, Youhong Fan, Jaime Rodriguez-Canales, Vassiliki Papadimitrakopoulou, Ethan Dmitrovsky, Lauren A Byers, Jing Wang, Ignasio Wistuba, Jim Heymach, Don Gibbons.

A060 Targeting glioma-macrophage interplay via LOX in PTEN-deficient glioblastoma. Peiwen Chen, Alan Wang, Ronald DePinho.

A061 STING, an immune biomarker for colorectal cancer. Hongjae Chon, Chan Kim.

A062 TIM-3 plays distinct roles in different immune cells to regulate antitumor immune responses. Jie Dai, Jerry Pei, Markus Mohrs, Gavin Thurston, Ella Ioffe.

A063 Multidimensional cytometric analysis of colorectal cancer reveals novel and diverse mediators of antitumor immunity. Noel F. de Miranda, Natasja L. de Vries, Vincent van Unen, Tamim L. Abdelaal, Marieke E. Ijsselsteijn, Ruud van der Breggen, Arantza Farina-Sarasqueta, Koen C.M.J. Peeters, Thomas Höllt, Boudewijn P.F. Lelieveldt, Frits Koning.

A065 Genome-scale CRISPR screens identify essential genes for tumor sensitivity to NK cells. Olli Dufva, Jay Klievink, Khalid Saeed, Matti Kankainen, Mette Ilander, Tiiina Hannunen, Sonja Lagström, Pekka Ellonen, Dean A Lee, Satu Mustjoki.

A066 Expanding insights into the colorectal cancer tumor proteome: Unbiased protein profiling reveals multiple proteomic-based tumor subtypes. Nicholas Dupuis, Jan Muntel, Roland Bruderer, Lukas Reiter.

A067 Cognate interaction with CD4+ T cells instructs M2-like macrophages to acquire M1-like phenotype. David Eisel, Wolfram Osen, Krishna Das, Franziska Marie-Claire Hoerhold, Rainer König, Stefan B. Eichmüller.

A068/PR10 Reprogramming myeloid cells in TME with pepinemab, first-in-class semaphorin 4D MAb, enhances combination immunotherapy. Elizabeth E. Evans, Holm Bussler, Crystal Mallow, Christine Reilly, Sebold Torno, Maria Scrivens, Alan Howell, Leslie Balch, John E. Leonard, Terrence L. Fisher, Clint Allen, Paul Clavijo, Gregory Lesiniski, Christina Wu, Siwen Hu-Lieskovan, Antoni Ribas, Emily Greengard, Ernest S. Smith, Maurice Zauderer. *This abstract is also being presented as a proffered short talk (PR10) in Session 5.*

A069 NIM15 blockade – A new stroma-targeting approach for the treatment of epithelial ovarian cancer. Dyke Ferber, Meggy Suarez-Carmona, Frank Momburg, Marten Meyer, Rebecca Rothenheber, Bénédicte M.A. Lenoir, Sarah Schott, Inka Zoernig, Dirk Jäger, Niels Halama.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A070 Virotherapy eradicates established melanoma by reprograming the tumor microenvironment and engaging the adaptive immunity. Lukas Flatz, Sandra Ring, David Bomze, Lucas Onder, Jovana Cupovic, Sarah Schmidt, Klaus Orlinger, Andrej Besse, Lenka Besse, Christoph Driessen, Hung-Wei Cheng, Alexander Lercher, Daniel Speiser, Tobias Bald, Andreas Bergthaler, Burkhard Ludewig.

A072 Calreticulin exposures by malignant blasts correlates with robust anticancer immunity and improved clinical outcome in AML patients. Jitka Fucikova.

A073 CODEXTM: A novel platform for spatially-resolved deep antigen profiling of single cells in tissue samples. Maria Elena Gallina, Nadya Nikulina, Jaskirat Singh, Gajalakshmi Dakshinamoorthy, Joseph J Kim, Sejal Mistry, Julia Kennedy-Darling.

A074 Spatially-resolved deep antigen profiling of single cells in FFPE tissue samples through CODEXTM. Maria Elena Gallina, Jaskirat Singh, Nadya Nikulina, Gajalakshmi Dakshinamoorthy, Joseph J Kim, Sejal Mistry, Julia Kennedy-Darling.

A075 A protective role for group 3 innate lymphoid cells in colitis-associated colorectal cancer. Jeremy Goc, Nick Bessman, Sheena Sahota, Flamar Anne Laure, Gregory Putzel, David Withers, Janelle Arthur, Manish Shah, Gregory Sonnenberg.

A076 DSP107 -- A novel SIRPα-4-1BBL dual signaling protein (DSP) for cancer immunotherapy. Yosi M. Gozlan, Susan Hilgendorf, Alexandra Aronin, Yehudith Sagiv, Liat Ben-gigi-Tamir, Shira Amsili, Ami Tamir, Iris Pecker, Shirley Greenwald, Ayelet Chajut, Adam Foley-Comer, Yaron Pereg, Amnon Peled, Michal Dranitzki-Elhalel, Edwin Bremer.

A077 Microenvironmental factors shape resistance patterns to immune checkpoint blockade. Shengquing Stan Gu, Xihao Sherlock Hu, Xiaoqing Shawn Wang, Ziyi Li, Nicole Traugh, Xia Bu, Xiaofang Xing, Gordon Freeman, Myles Brown, Xiaole Shirley Liu.

A078 Dissecting the myeloid lineage in human gliomas. Claudia Z. Han, Sascha H. Duttke, Zhengyu Ouyang, Sebastian H. Preissl, Johannes C.M. Schlachetzki, Alexander Nott, Conor Fitzpatrick, Carolyn O'Connor, Nicole G. Coufal, Mihir Gupta, David D. Gonda, Michael L. Levy, Ben-Haim Sharona, Barba David, Joseph D. Ciacci, Alexander A. Khalessi, Clark C. Chen, Bing Ren, Christopher K. Glass.

A079 Secreted IL-12p70 from long-term activated dendritic cells is lost concomitant with their apoptosis and release of IL-10. Morten Hansen, Laura Stentoft Carstensen, Andreas Obers, Inge Marie Stentoft Svane.

A080 Cytokine-induced senescence in neuroblastoma cell lines – therapeutic option or idle wish? Theresa Harmuth, Florian Heubach, Thomas Wieder, Rupert Handgretinger, Peter Lang.

A081 Tumors expressing ACKR1 exhibit a unique signature of tumor-infiltrating immune cells in women with breast cancer. Brittany D. Jenkins, Talina Fleifel, Rachel Martini, Haythem Ali, Lisa Newman, Melissa Davis.

A082 Single-cell RNA-sequencing of metastatic melanoma identifies a cancer cell-intrinsic program associated with immune checkpoint inhibitor resistance. Livnat Jerby, Parin Shah, Michael S. Cuoco, Christopher Rodman, Mei-Ju Su, Johannes M. Melms, Rachel Leeson, Abhay Kanodia, Shaolin Mei, Jia-Ren Lin, Shu Wang, Bokang Rabasha, David Liu, Gao Zhang, Claire Margolais, Orr Ashenberg, Patrick A Ott, Elizabeth I. Buchbinder, Riz Haq, Stephen Stephen Hodi, Genevieve M. Boland, Ryan J. Sullivan, Dennie Frederick, Benchun Miao, Tabea Moll, Keith Flaherty, Meenhard Herlyn, Russell S. Jenkins, Rohit Thummalapalli, Monika S. Kowalczyk, Israel Canadas, Bastian Schilling, Adam N.R Cartwright, Adrienne M. Luoma, Shruti Malu, Patrick Hwu, Chantale Bernatchez, Marie-Andree Forget, David A. Barbie, Alex K. Shalek, Itay Tirosh, Peter K. Sorger, Kai W. Wucherpfennig, Eliezer M. Van Allen, Dirk Schadendorf, Bruce E. Johnson, Asaf Rotem, Orit Rosenblatt-Rozen, Levi A. Garraway, Charles H. Yoon, Benjamin Izar, Aviv Regev.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A083 Inflammasome-independent IL-1β release by myeloid cells promotes vessel destabilization and immune suppression in the tumor microenvironment. Máté Kiss, Lieselotte Vande Walle, Helena Van Damme, Aleksandar Murgaski, Evangelia Bolli, Jiri Keirsse, Maria Solange Martins, Yvon Elkrim, Amelie Fossoul, Jens Serneels, Massimiliano Mazzone, Mohamed Lamkanfi, Jo A. Van Ginderachter, Damya Laoui.

A084 Towards combining androgen deprivation and immunotherapy to prevent progression to castration resistant prostate cancer. John J. Krolewski, Kai Sha, Michalis Mastri, Dean Tang, Kevin Eng, Kent L. Nastiuk.

A085 High infiltration of NK cells expressing elevated LAG-3 in a subgroup of renal cell carcinoma patients. Moon Hee Lee, Petrus Järvinen, Harry Nisén, Oscar Brück, Mette Ilander, Satu Mustjoki, Kreutzman Anna.

A086 Omental fat in ovarian cancer induces lymphangiogenesis. Bénédicte M.A. Lenoir, Dyke Ferber, Victor Starrach, Meggy Suarez-Carmona, Sarah Schott, Inka Zoernig, Dirk Jäger, Niels Halama.

A087 The immunosuppressive property of mesenchymal stem cell in an apoptotic tumor microenvironment. Anita K.Y. Li, Carmen J.M. Cao, Godfrey C.F. Chan.

A088 Selective blockage of the innate immune checkpoint receptor CD47 on mesothelin (MSLN) positive solid tumor cells via dual targeting bispecific antibodies alters the tumor microenvironment to control tumor growth. Stefano Majocchi, Valéry Moine, Xavier Chauchet, Lucile Broyer, Laura Cons, Laurence Chatel, Eric Hatterer, Vanessa Buatois, Hasnaà Haddouk, Gérard Didelot, Giovanni Magistrelli, Yves Poitevin, Ulla Ravn, Anne Papaioannou, Françoise Richard, Limin Shang, Marie H. Kosco-Vilbois, Nicolas Fischer, Walter G. Ferlin, Krzysztof Masternak.

A089 The effect of lactate dehydrogenase-A (LDH-A) knockdown and human prostate-specific membrane antigen (hPSMA) directed CAR T cell treatment on hPSMA(+) Myc-CaP tumors. Mayuresh M. Mane, Khalid Shalaby, Ivan Cohen, Avi Albeg, Jenny Ijoma, Myat Ko, Masatomo Maeda, Kiranmayi Vemuri, Jaya Satagopan, Anna Moroz, Juan Zurita, Larissa Shenker, Ellen Ackerstaff, Masahiro Shindo, Ekaterina Moroz, Maxim A. Moroz, Inna Serganova, Jason Koutcher, Vladimir Ponomarev, Ronald G. Blasberg.

A090 The Duffy Antigen Receptor for Chemokines (DARC) influences levels of tumor-associated leukocytes in the breast tumor microenvironment. Rachel Martini, Brittany D. Jenkins, Clayton Yates, Lisa D. Newman, Melissa Davis.

A091 IL-33 activates antitumoral toxicity in eosinophils through stimulation of contact-dependent degranulation. Fabrizio Mattei, Carla Buccione, Sara Andreone, Francesca Spadaro, Adele De Ninno, Jacopo Mancini, Cristiana Zanetti, Isabella Parolini, Francesca Iosi, Antonella Tinari, Valeria Lucarini, Annamaria Gerardino, Giovanna Ziccheddu, Luca Businaro, Claudia Afferni, Giovanna Schiavoni.

A092 TAM receptors targeting unleashes antileukemic immunity and enables checkpoint blockade leading to eradication of leukemic cells. Hind Medyouf, Irene Tirado-Gonzalez, Aleksandra Nevmerzhitskaya, Arnaud Descot, Devona Soetopo, Ewelina Czlonka, Maresa Weitmann, Carolin Wachtel, Julia Slotta-Huspenina, Christine Tran-Quang, Katharina Götze, Emily Alberto, Carla Vanina Rothlin, Jacques Ghysdael, Hind Medyouf.

A093 Immune resistance emerges from tumor-initiating stem cells. Yuxuan Miao, Elaine Fuchs.

A094 Characterization of pancreatic cancer endothelial cells: Approaching to enhance immune cell infiltration for immunotherapy. Kosei Nakajima, Yashunori Ino, Toshimitsu Iwasaki, Nobuyoshi Hiraoka.

A095 Discovering the immune profiles of a novel anti-folate receptor alpha IgE antibody associated with monocyte-mediated antitumor functions. Mano Nakamura, Heather J. Bax, James F. Spicer, Katie J. Lacy, Sophia Tsoka, Debra H. Josephs, Sophia Karagiannis.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A096 The potential role of fibroblast activation protein as a natural killer cell immune checkpoint. Allison O'Connell, Shangzi Wang, Louis M. Weiner.

A097 Complement system mutations in cancer: Uncovering new relationships between tumor hypoxia and complement. Monica M. Olcina, Nikolas G. Balanis, Ryan K. Kim, Michael G. Thompson, Thomas G. Graeber, Amato J. Giaccia.

A098 SLC12A2 as a novel "brake" on immunogenic apoptotic cell clearance. Justin Shaun Arnold Perry, Sho Morioka, Christopher Medina, Michael Raymond, Kodi Ravichandran.

A099 Using high-throughput phenotypic screening to identify therapeutic targets for the inhibition of myeloid-derived suppressor cells. Elissaveta Petrova, Sandra Schäffner, Jan-Carsten Pieck, Christian Herhaus, Friedrich Rippmann, Oliver Pöschke, Laura Helming.

A100 ROBO2 is a stroma suppressor gene in the pancreas through regulation of TGF-β. Andreia V. Pinho, Mathias Van Bulck, Lorraine Chantrill, Mehreen Arshi, David Herrmann, Claire Vennin, APGI - Australian Pancreatic Cancer Genome Initiative, Anthony Gill, Paul Timpson, Andrew Biankin, Jianmin Wu, Ilse Rooman.

A101 IDO2 host genetic status influences progression and radiotherapy response in pancreatic ductal adenocarcinoma. George C. Prendergast, Avinoam Nevler, Alexander J. Muller, Erika Sutanto-Ward, James B. DuHadaway, Kei Nagatomo, Eric Londin, Kevin O'Hayer, Joseph A. Cozzitorto, Harish Lavu, Theresa P. Yeo, Mark Curtis, Tatiana Villatoro, Benjamin E. Leiby, Jordan M. Winter, Charles J. Yeo, Jonathan R. Brody.

A102 Rescue of lost skin dendritic cells in melanoma is key for the resuscitation of antitumor T cell responses. Anastasia Prokopi, Christoph H. Tripp, Bart Tummers, Kerstin H. Komenda, Katharina Hutter, Giuseppe Cappellano, Lydia Bellmann, Mirjana Efremova, Zlatko Trajanoski, Suzie Chen, Bjorn E. Clausen, Douglas R. Green, Patrizia Stoitzner.

A103 Allosteric inhibition of SHP2 induces antitumor immunity in PD-1-sensitive tumors through modulation of both innate and adaptive mechanisms. Elsa Quintana, Kasia Mordec, Robert J. Nichols, David Wildes, Chris J. Schulze, Darienne R. Myers, Mallika Singh, Elena Koltun, Adrian Gill, Stephen Kelsey, Mark A Goldsmith, Jan A.M. Smith.

A104 Matrix Metalloproteinase-2 and Toll-Like Receptors modulating immune responses in the tumor microenvironment. Luciana Rebiero Muniz-Bongers, Mansi Saxena, Nina Bhardwaj.

A106 Higher numbers of cancer stem cells in the peripheral blood of children with B-ALL after chemotherapy. Mohamed Labib Salem, Mohamed Attia, Said Abdou, Abdel-Aziz A. Zidan, Mona F. Zidan.

A109 Matrix metalloproteinase-2 stimulates Toll Like Receptor-2 on melanoma cells to induce immunosuppressive inflammation in the tumor microenvironment. Mansi Saxena, Keerthi Caroline Sadanala, Luciana Rebiero Muniz-Bongers, Nina Bhardwaj.

A110 Efficacy of anti-PD1 immune checkpoint blockade involves the cooperative interaction of myeloid and lymphoid subpopulations in the tumor microenvironment. Sjoerd Schetters, Yvette Van Kooyk.

A111 Effects of ionizing radiation on brain metastasis-associated inflammation and its implication for immunotherapy. Michael Schulz, Katja Niesel, Anna Salamero Boix, Woon Hyung Chae, Birgitta Michels, Alexander Schaeffer, Maja Strecker, Tijna Alekseeva, Stefan Stein, Henner Farin, Franz Roedel, Harter Patrick, Karlheinz Plate, Lisa Sevenich.

A112 OncoPeptTUME – A novel computational approach analyzes the tumor microenvironment to predict response to checkpoint inhibitors. Xiaoshan Shi, Malini Manoharan, Nitin Mandloi, Sushri Priyadharshini, Laxman Iyer, Rohit Gupta, Papia Chakraborty, Amitabha Chaudhuri, Ravi Gupta.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A113 Harnessing lymphoid organ neogenesis as a novel prognostic biomarker and therapeutic target. Karina Silina, Alex Soltermann, Chiara Burkhardt, Farkhondeh Movahedian Attar, Ruben Casanova, Alessandra Curioni-Fontecedro, Holger Moch, Florian Posch, Thomas Winder, Nick van Dijk, Charlotte Voskuilen, Michiel van der Heijden, Maries van den Broek.

A114 Omental fat in ovarian cancer induces metabolic and immune alterations. Meggy Suarez-Carmona, Nektarios A. Valous, Pornpimol Charoentong, Jakob A. Kather, Mareike Hampel, Bénédicte M.A. Lenoir, Dyke Ferber, Sarah Schott, Sabine Kess, Inka Zoernig, Dirk Jaeger, Niels Halama.

A115 Use of angiotensin system inhibitors is associated with immune activation and longer survival in pancreatic ductal adenocarcinoma patients. Nilesh P. Talele, Hao Liu, Kamila Naxerova, Matthias Pinter, Joao Incio, Hang Lee, Kohei Shigeta, William W. Ho, Theodoros Michelakos, Theodore S. Hong, Jeffrey W. Clark, Janet E. Murphy, David P. Ryan, Vikram Deshpande, Kieth D. Lillemoe, Carlos Fernandez-del Castillo, Michael Downes, Ronald M. Evans, James Michaelson, Dan G. Duda, Cristina R. Ferrone, Yves Bouches, Rakesh Jain.

A116 Lipid control of DNA-stimulated innate immunity. Xiaojun Tan, Conggang Zhang, Zhijian J. Chen.

A117 Tumor-produced IL-6 and IL-8 are associated with MDSC accumulation and correlate with long-term clinical outcomes in melanoma patients. Richard P. Tobin, Kimberly R. Jordan, Dana Davis, Victoria R. Vorwald, Kasey Couts, Dexiang Gao, Derek E Smith, William A Robinson, Virginia Borges, Martin D McCarter.

A118 Clinical impact of PD-L1 expression and epithelial-mesenchymal transition in the tumor microenvironment of extrahepatic cholangiocarcinoma. Takahiro Tsuchikawa, Takashi Ueno, Osamu Sato, Toru Nakamura, Yoshitsugu Nakanishi, Toshimichi Asano, Takehiro Noji, Keisuke Okamura, Toshiaki Shichinohe, Satoshi Hirano.

A119 Combating primary and secondary checkpoint blockade resistance using immunostimulatory CD40L/4-1BBL-encoding oncolytic virotherapy for melanoma. Jessica Wenthe, Mantas Šilanskas, Emma Eriksson, Angelica Loskog.

A120 Intratumoral dendritic cell dynamics in responsive and non-responsive syngeneic murine tumor models. Huizhong Xiong, Stephanie Mittman, Ryan Rodriguez, Marina Moskalenko, Patricia Pacheco Sanchez, Yagai Yang, Rafael Cubas.

A121 Single-cell transcriptomic analyses reveal heterogeneity of vascular endothelial cells in cancer models. Yu Zhu, Nicole Salazar, Kevin Brulois, Eugene Butcher.

A122 Self-recognition of Alu duplex RNAs is the basis for MDA5-mediated interferonopathies. Sadeem Ahmad, Xin Mu, Sun Hur.

A123 Skewed CD4 and CD8 T cell differentiation in pancreatic cancer patients. Cecile Alanio, Bertram Bengsch, Josephine R. Giles, Sarah Henrickson, Nan Ping Weng, Janáe A Ritz-Romeo, Mark O'Hara, Joseph J Melenhorst, Simon Lacey, Regina M Young, Carl H June, E. John Wherry.

A124 Preclinical characterization of AB154, a fully humanized anti-TIGIT antibody, for use in combination therapies. Amy E. Anderson, Annette Becker, FangFang Yin, Hema Singh, Xiaoning Zhao, Lisa Seitz, Rick Stanton, Nigel P.C. Walker, Joanne B.L. Tan.

A125 Pulsatile MEK inhibition improves antitumor immunity and T cell function in Kras mutant lung cancer. Hyejin Choi, Jiehui Deng, Shuai Li, Tarik Silk, Elliott J. Brea, Jonathan Boiarsky, Esra A. Akbay, Paul D. Smith, Taha D. Merghoub, Kwok-Kin Wong, Jedd D. Wolchok.

A126 Approaches to increase the therapeutic window of agonistic anti-CD40 antibodies. Rony Dahan.

A127 Role of macrophage subsets in liver metastasis. Zihou Deng.

A128 Tumor endothelial say IDO to CD40-stimulating immunotherapy. Anna Dimberg, Alexandros Karampatzakis, Sander Tuit, Mohanraj Ramachandran, Grammatiki Fotaki, Luuk van Hooren, Hua Huang, Roberta Lugano, Kaunisto Aura, Peter Ellmark, Sara M Mangsbo, Joachim L. Schultze, Magnus Essand, Maria Georganaki.

A129 Augmenting T cell priming to noninflamed tumors. Stephanie K. Dougan.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A130 Metastatic melanoma patients responding to PD1 therapy have higher proportion of peripheral blood NKT cells. Henna H.E. Hakanen, Micaela Hernberg, Siru Mäkelä, Bhagwan Yadav, Oscar Brück, Susanna Juteau, Laura Kohtamäki, Mette Ilander, Satu Mustjoki, Kreutzman Anna.

A131 Targeting B7-H3 (CD276) in neuroblastoma: In vitro evaluation of Fc-optimized antibodies and immunocytokines. Florian Heubach, Patrick Schlegel, Latifa Zekri, Timo Manz, Sabine Schleicher, Armin Rabsteyn, Gundram Jung, Hans-Jörg Bühring, Stephen D. Gillies, Rupert Handgretinger, Peter Lang.

A132 Identification of pyroptosis inhibitors that target a reactive cysteine in gasdermin D. Jun Hu, Xing Liu, Jingxia Zhao, Shiyu Xia, Jianbin Ruan, Xuemei Luo, Justin Kim, Judy Lieberman, Hao Wu.

A133 APOBEC3 confers resistance to oncolytic VSV therapy. Amanda L. Huff, Phonphimon Wongthida, Timothy Kottke, Jill Thompson, Christopher B. Driscoll, Matthew Schuelke, Kevin G. Shim, Reuben S. Harris, Amy Molan, Jose S. Pulido, Peter J. Selby, Kevin J. Harrington, Alan Melcher, Laura Evgin, Richard Vile.

A134 Single-cell roadmap of the evolution of T cell response during anti-LAG3 and anti-PD1 combination treatment in metastatic melanoma patients. Jani Huuhtanen, Henna H.E. Hakanen, Tapio Lönnberg, Olli H.E. Dufva, Katriina Peltola, Siru Mäkelä, Micaela Hernberg, Petri Bono, Kreutzman Anna, Satu Mustjoki.

A135 Combining low-dose chemotherapy with an NK cell-based immunotherapy as a treatment for triple negative breast cancer. Sarra Idri, Graham Pawelec, Yvonne Barnett, Graham Pockley.

A136 AST-008, a novel TLR9 agonist SNA, induces abscopal antitumor effects in mouse tumor models. Ekambar R. Kandimalla, SubbaRao Nallagatla, Bart R. Anderson, Richard Kang.

A137 The innate/adaptive immune response triggered in response to local immunotherapy of orthotopically growing bladder cancer tumors. Iliana Kyriaki Kerzeli, Sara M. Mangsbo.

A138 CD39 increase on cytotoxic T cell induced by myeloid-derived suppressor cell correlated with poor prognosis in patients with non-small cell lung cancer. Jiae Koh, Kyung Young Lee, Boram Kim, Mi Soon Kim, Hee Jin Cho, Jong-Mu Sun, Jin Seok Ahn, Keunchil Park, Myung-Ju Ahn.

A140 A T-cell utilizing bispecific anti-CD3/GD2 construct mediates superior in vitro efficacy compared to CH14.18 mAb in neuroblastoma patients after allogeneic SCT. Anne-Marie Lang, Gundram Jung, Ursula Seidel, Florian Heubach, Armin Rabsteyn, Patrick Schlegel, Christian Seitz, Emmanuelle Moraes Ribeiro, Rupert Handgretinger, Peter Lang.

A141 Intratumoral depletion of regulatory T cells using CD25-targeted photodynamic therapy induces anti-tumoral immune responses. Heung Kyu Lee, Dong Sun Oh.

A142 Anti-mesothelin immunotoxins induce markers of immunogenic cell death and when injected locally into AE17M mesothelioma tumors enhance the effect of CTLA-4 blockade. Yasmin Leshem, Emily King, Yoram Reiter, Ira Pastan.

A143 Glutaminyl cyclase is an enzymatic modifier of the CD47- SIRPα axis and target for immunotherapy. Meike Emma Willemijn Logtenberg.

A144 The transcriptomic profile of peripheral T cells that maintain dormant state of melanoma cells in patients treated with allogenic melanoma vaccine. Andrzej A. Mackiewicz, Partycja Czerwinska, Marcin Rucinski, Katarzyna Gryska, Iga Grzadzielewska, Anna Jaworska, Jacek Mackiewicz.

A145 Study of mechanisms of immune evasion of oncogenic KRAS in NSCLC. Edurne Mugarza, Febe van Maldegem, Miriam Llorian Sopena, Miriam Molina Arcas, Julian Downward.

A146 Systematic discovery of immune regulatory mechanisms in tumor cells. Deng Pan, Aya Kobayashi, Peng Jiang, Guo-Cheng Yuan, X. Shirley Liu, John Doench, Xintao Qiu, Prakash Rao, Henry Long, Myles A. Brown, Kai W. Wucherpfennig, Lucas Ferrari de Andrade, Rong En Tay, Adrienne M. Luoma, Daphne Tsoucas, Klothilda Lim.

A147 AO-176, a next generation anti-CD47 antibody, induces immunogenic cell death. Daniel S. Pereira, Benjamin J. Capoccia, Ronald R. Hiebsch, Michael J. Donio, Alun J. Carter, Robyn J. Puro, W. Casey Wilson, Pamela T. Manning, Robert W. Carr.

A148 A hydrogel platform for the delivery of specialized pro-resolving mediators to treat chronic inflammatory disease. Padmini Sushila Pillai, Jamie Webster, Robert Langer.

A149 EμTel-Jak2 T-ALL mouse model is dependent upon Myb function and susceptible to immune checkpoint therapy. Sara Roth, Shienny Sampurno, Michaela Waibel, Leonie Cluse, Lloyd A. Pereira, Ricky W. Johnstone, Robert G. Ramsay.

A150 Enhancing abscopal responses to radiation therapy by manipulating autophagy. Marissa Rybstein, Takahiro Yamazaki, Aitziber Buque Martinez, Lorenzo Galluzzi.

A151 Immunotherapy against cancer using iNKT ligands in combination with an attenuated Listeria monocytogenes in humanized mouse models. Noemi Alejandra Saavedra-Avila, Shalu Sharma, Christopher T. Johndrow, Tony Ng, Claudia Gravekamp, Steven A. Porcelli.

A152 Investigating metabolic basis of neurotoxicity during CAR-T therapies. Darin Salloum, Bianca Santomasso, Renier J. Brentjens, Hans-Guido Wendel.

A153 Targeting DNA damage response upregulates PD-L1 level and promotes antitumor immunity in small cell lung cancer. Triparna Sen, Bertha Leticia Rodriguez, Limo Chen, Naoto Morikawa, Junya Fujimoto, Lixia Diao, Youhong Fan, Jing Wang, Bonnie S. Glisson, Ignasio Wistuba, Julien Sage, John V. Heymach, Don L. Gibbons, Lauren A. Byers.

A154 Flow cytometric analysis of immune responses in the melanoma tissue biopsies before or during anti-PD1 immunotherapy. Elena Shklovskaya, Jenny Lee, Su Yin Lim, Sara Alavi, John Thompson, Robyn Saw, Matteo Carlino, Richard Scolyer, Alexander Menzies, Georgina Long, Richard Kefford, Helen Rizos.

A155 Antibody-dependent cancer cell phagocytosis in macrophages induces immune escape by upregulating PD-L1 and IDO. Shicheng Su.

A156 PDA tumor cell death as following combination anti-PD-1 blockade and CXCR4 blockade is a direct effect of CD8+ T cells. Kevin M. Sullivan, Yongwoo David Seo, Xiuyun Jiang, Teresa David Kim, Raymond S.W. Yeung, Venu G. Pillarisetty.

A157 Preclinical pharmacokinetic and pharmacodynamic characterization of AB680, a small-molecule CD73 inhibitor for cancer immunotherapy. Joanne B.L. Tan, Jie Chen, Elaine Ginn, Devika Ashok, Amy E Anderson, Jesus Banuelos, Kristen Zhang, Amber Pham, Timothy Park, Ada Chen, Xiaoning Zhao, Kenneth K.V. Lawson, Jenna Jeffreys, Jarek Kalisiak, Manmohan R. Leleti, Matthew J. Walters, Jay P. Powers.

A158 Delivering type I interferon to dendritic cells empowers tumor eradication and immune combination treatments. Jan H. Tavernier.

A159 Agonistic CD40 antibody therapy induces formation of tertiary lymphoid structures in glioma and inhibits the response to immune-checkpoint blockade. Luuk van Hooren, Alessandra Vaccaro, Maria Georganaki, Mohanraj Ramachandran, Hua Huang, Joey Lau, Anja Smits, Magnus Essand, Anna Dimberg.

A160 Deep immunoprofiling of mouse lung cancer models in steady state and upon drug treatment. Febe van Maldegem, Karishma Valand, Victoria Tsang, Edurne Mugarza, Deborah Caswell, Philip Hobson, Julian Downward.

A161 Targeting gastrointestinal tumors with constant region engineered anti-glycan antibodies. Mireille Vankemmelbeke, Thomas Kirk, Jia X. Chua, Richard McIntosh, Lindy G. Durrant.

A162 AB928, a dual antagonist of the A2aR and A2bR adenosine receptors, relieves adenosine-mediated immune suppression. Daniel DiRenzo, Dana Piovesan, Joanne Tan, Dillon H. Miles, Manmohan R. Leleti, Timothy Park, Ferdie Soriano, Bryan Handlos, Jenna L. Jeffrey, Ehesan U. Sharif, Brandon R. Rosen, Ulrike Schindler, Jay P. Powers, Matthew J. Walters.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A163/PR7 Developing syngeneic NOD tumor models to profile immunotoxicity and antitumor immunity in response to cancer immunotherapies in autoimmune-prone mice. Arabella Young, Vinh Nguyen, Jee Hye Kang, Sadaf Mehdizadeh, Amy Mei, Kathleen C. F. Sheehan, David V. Serreze, Yi-Guang Chen, Robert D. Schreiber, Jeffrey A. Bluestone.
This abstract is also being presented as a proffered short talk (PR7) in Session 4.

A164 Specifically targeting PD-L1 in the tumor-draining lymph node unmasks its spatiotemporal role in perturbing anti-tumor immunity and survival. Floris F. Dammeijer, Mandy van Gulijk, Melanie M. Lukkes, Menno van Nimwegen, Rudi W. Hendriks, Thorbald T. van Hall, Heleen H. Vroman, Joachim J.G.J.V. Aerts.

A165 Depletion of macrophages in the tumor draining lymph node enhances dendritic cell-induced anti-tumor immunity and survival. Floris F. Dammeijer, Mandy van Gulijk, Melanie M. Lukkes, Menno van Nimwegen, Rudi W. Hendriks, Thorbald T. van Hall, Heleen H. Vroman, Joachim J.G.J.V. Aerts.

A166 Reprogramming of exhausted T cells following cure of chronic viral infection. Mohamed S. Abdel-Hakeem, Jean-Christophe Beltra, Zeyu Chen, John Johnson, Saskinath Manne, Mohammed-Alkhatim Ali, E. John Wherry.

A167 Prevalence of TREG cells and effects of their inhibition on growth of oral cancer cells. Sadhna Aggarwal, Suresh C. Sharma, Satya N. Das.

A168 Quiescent stem cells evade immune surveillance. Judith Agudo, Miriam Merad, Brian D. Brown.

A169 Macrophage targeted zoledronic acid conjugated biomineral nanoparticles for γδT cell based cancer immunotherapy. Anusha Ashokan, Minu Anoop, Siju Surendran, Aparna Balakrishnan, Ida M. Anna, Anjana Ramkumar, Girish Chundayil Madathil, Vijay Harish, Manzoor Koyakutty.

A170 Transient microbiota depletion enhances mucosal CD8 T cell responses. Simone Becattini, Alexander Louie, Ingrd M. Leiner, Eric Pamer.

A171 A fully human tissue-based ex vivo cell migration analysis model to study T cell infiltration and distribution in colorectal cancer liver metastases. Anna Berthel, Meggy Suarez-Carmona, Jakob N. Kather, Rodrigo Rojas-Moraleda, Pornpimol Chaorentong, Nektarios A. Valous, Fee Klupp, Martin Schneider, Alexis Ulrich, Markus Buechler, Inka Zoernig, Dirk Jaeger, Niels Halama.

A172 Cxcr6-deficiency impairs cancer vaccine efficacy and resident memory CD8+ T cells recruitment in tumor. Soumaya Karaki, Charlotte Blanc, Thi Tran, Isabelle Galy-Fauroux, Marie Anson, Rachel Golub, Eric Tartour.

A173 The extracellular ATP receptor P2RX7 is required for CD8+ T cells to maintain and respond to chronic virus and melanoma tumors. Henrique Borges da Silva, Stephen C. Jameson.

A174 The anti-LAG-3 antibody REGN3767 promotes immune activation in the tumor microenvironment and enhances antitumor activity of anti-PD-1 antibody REGN2810 in PD-1/LAG-3 humanized mice. Elena Burova, Gabor Halls, Omaira Allbritton, Wen Zhang, William Olson, Markus Mohrs, Gavin Thurston, Ella Ioffe.

A175 Memory T cells targeting unique and shared oncogenic mutations detected in peripheral blood of epithelial cancer patients. Gal Cafri, Rami Yossef, Anna Pasetto, Drew Deniger, Jared J. Gartner, Todd Prickett, Paul F. Robbins, Steven A. Rosenberg.

A176 Overcoming CD8 T cell suppression in the tumor microenvironment. Adam N.R Cartwright, Peng Jiang, Assieh Saadatpour, Guo-Cheng Yuan, Shirley X. Liu, Kai W. Wucherpfennig.

A177 Impact of regulatory T cells on carcinogenesis of oral squamous cell carcinoma. Jaime L. Chao, Peter A. Savage.

A178 Nr4a transcription factors limit CAR T cell function in solid tumors. Joyce Chen, James P. Scott-Browne, Isaac F. Lopez-Moyado, Laura P. Hempleman, Hyungseok Seo, Takashi Sekiya, Akihiko Yoshimura, Anjana Rao.

A179 Targeting UCP2 pathway in melanoma cells reprograms the tumor microenvironment and initiates anti-tumor immune cycle. Wan-Chen Cheng.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A180 HHLA2 is a novel tumor-expressed member of the B7 immune checkpoint family. Jordan Manek Chinai, Hao Wang, Xudong Tang, Murali Janakiram, Haiying Chen, Xingxing Zang.

A181 Origin of tumor-elicited cytotoxic innate-like T cell responses. Chun Chou, Saida Dadi, Briana G. Nixon, Ming Li.

A182 T cell exhaustion assessment using a fully automated sequential chromogenic multiplex assay. Aurélie Collignon, Assil Benchaaben, Anna Martirosyan, Matthieu Duval, Emilie Bonzom, Emmanuel Prestat, Christophe Haond, Jacques Fieschi.

A183 ATOR-1017: A 4-1BB antibody designed for superior safety/efficacy profile in cancer immunotherapy. Eva Dahlén, Anna Rosén, Karin Barchan, Anna Dahlman, Peter Ellmark, Tina Furebring, Karin Enell Smith.

A184 T-cell rejuvenation is associated with vorinostat-induced immune response in combination with immune checkpoint blockade. Nur P. Damayanti, Justin A. Budka, Josue D. Ordaz, Ashley A. Orillion, Khunsha Ahmed, Xioana Chu, Yue Wang, Yunlong Liu, Roberto Pili.

A185 Effective expansion of poly-functional tumor-reactive TILs from NSCLC correlates with an immune-engaged T cell profile in tumor tissues. Rosa De Groot, Marleen M. van Loenen, Aurélie Guislain, Derk M. Amsen, John B.A.G. Haanen, Kim Monkhorst, Koen J. Hartemink, Monika C. Wolkers.

A186 A new strategy to identify and expand tumor-reactive CD8 TILs in human solid tumors. Thomas Duhen, Rebekka Duhen, Ryan Montler, Tarsem Moudgil, Jitske van den Bulk, Bernard A. Fox, Shu-Ching Chang, Gary Grunkemeier, Els M.E. Verdegaal, Noel F. de Miranda, Rom Leidner, Richard B. Bell, Andrew D. Weinberg

A187 RIG-I agonists reinforce antitumor adaptive immunity and decrease Treg activity in breast cancer. David L. Elion, Max E. Jacobson, Donna J. Hicks, Bushra E. Rahman, Violeta Sanchez, Paula I Gonzales-Ericsson, Olga Fedorova, Anna M. Pyle, John T. Wilson, Rebecca S. Cook.

A188 T cell priming with Deep IL-15 improves preclinical safety compared to systemic IL-15, and increases in vivo persistence and activity. Elena Geretti, Philip Bardwell, Xiaoyan Liang, Santina Caruso, De-Kuan Chang, Jesse Lyons, Austin Boesch, Aaron Handler, Carlos Tassa, Sanela Bilic, Janice Lancita, Becker Hawes, Jonathan Fitzgerald, Thomas Andresen.

A189 Targeting T cell epigenetic programs to enhance the efficacy of immune checkpoint blockade. Hazem E. Ghoneim, Yiping Fan, Ardiana Moustaki, Hossam Abdelsamed, Pradyot Dash, Pranay Dogra, Robert Carter, Walid Awad, Geoff Neale, Paul Thomas, Ben Youngblood.

A190 Mechanisms governing Foxp3-dependent and -independent gene expression in regulatory T cells in evolutionary distant mice. Ariella Glasner, Yi Zhong, Joris Van Der Veeken, Alexander Rudensky.

A191 Novel approaches to the study of NK cell exhaustion in humans. Elena Gonzalez-Gugel, Keerthi Caroline Sadanala, Adeeb Rahman, Richard Stephen Blumberg, Amir Horowitz, Nina Bhardwaj.

A192 Non-IL-2 blocking anti-CD25-targeting antibodies: Depletion of regulatory T cells driving optimal effector response for rejection of established tumors. Anne Goubier, Isabelle Solomon, Frederick Arce Vargas, Dimitrios Zervas, Chen Qing, Josephine Salimu, Mark Brown, Pascal Merchiers, Karl S. Peggs, Sergio A. Quezada.

A195 Mechanosensory mechanisms and in vivo tissue topology contribute to rheology of circulating leukocytes resulting in efficient post-capillary vessel wall adhesion and recruitment. Alex Y. Y. Huang, Bryan L. Benson, Luis Correa, Lucy L. Li, Jay T Myers, Umut A Gurkan, Richard Ransohoff.

A196 Systematic identification of markers and drug targets on exhausted CD8+ T cells. Will H. Hudson, Julia L. Gensheimer, Haydn T. Kissick, Rafi L. Ahmed.

A197 The HMG transcription factor TOX induces a transcriptional and epigenetic program of CD8+ T cell exhaustion in chronic infection and cancer. Omar Khan, Josephine R. Giles, Sierra McDonald, E. John R. Wherry.

POSTER SESSION A

Sunday, September 30 • 11:45 a.m.–2:15 p.m.
Westside Ballroom (Fifth Floor)

A198 The inhibitory checkpoint molecule NKG2A is upregulated on tumor infiltrating NK cells and CD8 T cells in human head and neck tumors. Michael J. Korrer, Young Kim.

A199 TNFR2-targeted elimination of Tregs and tumor-residing T cells in a murine colon cancer model. Russell LaMontagne.

A200 Targeting ICOS receptor for development of cancer immunotherapy. Yu-Hsun Lo, Cheng-Chou Yu, Shu-Han Yu, Tsung-Hang Hseih, Mei-Chi Chan, Tsai Shih-Chong.

A201 Single-cell resolution profiling of tumor-reactive CD4 T-cells reveals immune landscape alterations. Assaf Magen, Jia Nie, Thomas Ciucci, Yongmei Zhao, Monika Mehta, Bao Tran, Sridhar Hannenhalli, Rémy Bosselut.

A202 Lysophosphatidic acid impedes the effector function of CD8+ T cells through LPA5R. Divij Mathew, Pamela Strauch, Roberta Pelanda, Raul Torres.

A203 Role of nonimmune functions of regulatory T cells in inflammation and tissue homeostasis. Alejandra Mendoza.

A204 A protective GD3-based vaccine increases NKT cells in a C57BL/6 murine model. Rowan J. Milner, Bikash Sahay, Matthew Cascio, Marc Salute.

A205 Effects of anti-CTLA-4 and anti-PD-1 on memory T-cell differentiation and resistance to tumor relapse. Stephen Mok, Colm R. Duffy, Nana-Ama A.S. Anang, James R. Allison.

A206 Extracellular matrix anchoring of locally administered cytokines safely potentiates systemic cancer immunotherapy. Noor Momin.

A207 PD-1-functionality and CD28 molecule expression in CD8+ T cells of cancer patients. Belinda Palermo, Ornella Franzese, Mariangela Panetta, Virginia Ferraresi, Gabriele Alessandrini, Franco Facciolo, Gennaro Ciliberto, Paola Nistico.

A208/PR2 Neoadjuvant immunotherapy pre-cancer surgery relieves tumor-specific CD8+ T cell dysfunction and restores memory differentiation potential . Jake S. O'Donnell, Jing Liu, Stacey Allen, Scott Mueller, Mark J Smyth, Michele W.L. Teng.
This abstract is also being presented as a proffered short talk (PR2) in Session 1.

A209 Targeting immune cell-specific sphingosine-1-phosphate receptor 4 to restore anti-tumor immunity resulting in improved therapy response. Catherine Olesch, Evelyn Sirait-Fischer, Bernhard Brüne, Andreas Weigert.

A210 Tumor-associated ADAM10 and ADAM17 produce soluble PD-L1 (sPD-L1, sB7-H1) and affect downstream tumor immunity – a resistance mechanism to PD-1 checkpoint blockade in melanoma. Jacob J. Orme, Khalid Jazieh, Susan Harrington, Matthew Ball, Tariq U. Azam, Xin (Cindy) Liu, Tiancheng Xie, Aaron Mansfield, Roxana S. Dronca, Haidong Dong.

A211 Requirement of Treg-intrinsic CTLA4-PKCeta signaling pathway for suppressing tumor immunity. Christophe Pedros, Hsin-Yu Liu, Ann J. Canonigo-Balancio, Kok-Fai Kong, Amnon Altman.

A212 expanded CD8+PD-1+ T cell and TCR repertoire signatured clinical response of adoptive T cell immunotherapy in advanced pancreatic cancers. Guoliang Qiao.

A213 Exploit the zebrafish to study lymphocyte infiltration in MYCN-amplified neuroblastoma. Xiaodan Qin, Andrew Lam, Hui Feng.

A214 An in vitro preclinical package to assess the safety and efficacy of ImmTAC™ molecules. Ana Ribeiro, Tomasz Dobrzycki, Jane Harper, Giovanna Bossi, Debbie Wright, Andrea Stacey, Nicole Bedke, Ruth Martinez-Hague, Dan Blat, Laure Humbert, Zoe Donellan, Samantha Paston, Luise Weigand, Martina Canestraro, Sophie Botta Gordon-Smith, Bent K. Jakobsen, Joseph Dukes.

A215 Thymocyte selection-associated HMG box protein TOX is a master regulator of tumor-specific T cell dysfunction. Andrew C. Scott, Steven Camara, Peter Lauer, Alexandra Synder, Dmitriy Zamarin, Tyler Walther, Olivier Levy, Michael Glickman, Jonathan Kaye, Mary Philip, Andrea Schietinger.

A216 Functionally specialized subsets of exhausted CD8+ T cells mediate tumor control and response to checkpoint blockade. Debattama R. Sen, Brian C. Miller, Rose Al Abosy, Kevin C. Bi, Martin W. LaFleur, Kathleen B. Yates, Ana Lako, Kristen D. Felt, Girish S. Naik, Michael Manos, Evisa Gjini, Yamini V. Virkud, Stephen Hodi, Scott J. Rodig, Arlene H. Sharpe, W. Nicholas Haining.

A217 TCR affinity determines the fate of T cells in tumors. Mojdeh Shakiba.

A218 Modulating glucocorticoid receptor-mediated signaling for enhancement of cancer immunotherapy. Qin Tang, Myles A. Brown.

A219 Using poxvirus to improve immunotherapy for brain glioma. Bingtao Tang, Claire Schane, Joanna Shisler, Edward Roy.

A220 Destabilizing domain technology facilitates exogenous regulation of IL15 and IL12 for adaptive T-cell therapy. Karen Tran, Kutlu Elpek, Tucker Ezell, Scott Heller, Mara Inniss, Abhishek Kulkarni, Dan Jun Li, Grace Olinger, Michelle Ols, Christopher Reardon, Dexue Sun, Tariq Kassum, Michael Briskin, Celeste Richardson, Vipin Suri, Steven Shamah, Michael Gilman.

A221 Epigenetic therapy restores polyfunctionality of malignant pleural effusion T cells in patients with non-small cell lung cancer without downregulation of PD-1. Hsing-Chen Tsai, Yi-Chieh Wu, Shu-Yung Lin, I-Yu Chen, Jih-Hsiang Lee, Kuang-Hua Cheng, Ping-Huai Wang, Huan-Jang Ko, Wen-Chien Huang, Yi-Jhen Huang, Kai-Lin Wei, Chong-Jen Yu, Yen-Ling Chiu.

A222 Exploiting mTORC1-independent protein synthesis in Tregs to boost antitumor immune response. Viviana Volta, Amanda Ernlund, Columba De la Parra, Abilash Gadi, Amanda Valeta-Magara, Robert J. Schneider.

A223 CD36-mediated metabolic adaptation guides regulatory T cells in tumors. Haiping Wang, Ping-Chih Ho.

A224 Bone marrow T cells are tumor infiltrating T cells in pediatric patients with acute leukemia and their phenotype reflects immune evasion of leukemic blasts. Semjon Manuel Willier, Paula Rothaemel, Jonas Wilhelm, Dana Stenger, Theresa Käuferle, Irene Schmid, Michael H. Albert, Vera Binder, Franziska Blaeschke, Tobias Feuchtinger.

A225/PR1 Mechanistic rationale to combine GITR agonism with PD-1 blockade in cancer patients. Roberta Zappasodi, Cynthia Sirard, Yanyun Li, Sadna Budhu, Moshen Abu-Akeel, Cailian Liu, Xia Yang, Hong Zhong, Walter Newman, Jinjin Qi, Phillip Wong, David Schaer, Henry Koon, Vamsidhar Velcheti, Michael Postow, Margaret K Callahan, Jedd D. Wolchok, Taha D. Merghoub. *This abstract is also being presented as a proffered short talk (PR1) in Session 1.*

A226 Cell-free membrane reconstitution system for cis and trans interaction of T cell co-receptors and ligands. Yunlong Zhao, Enfu Hui.

POSTER SESSION B

Tuesday, October 2 • 12:45 p.m.-3:15 p.m.
Westside Ballroom (Fifth Floor)

B001 Generation of ImmTACTM molecules: Engineering high-affinity soluble T cell receptors for the treatment of cancer. Izabela Bombik, Alessio Bortoluzzi, Nicole Mai, Andrew Preston, Annelise Vuidepot, Bent K. Jakobsen, Nathaniel Liddy.

B002 Computational design of hyperstable, modular protein inhibitors targeting PD-1. Cassie M. Bryan.

B003 IL23 secreted by myeloid cells drives castration resistant prostate cancer. Arianna Calcinotto, Clarissa Spataro, Elena Zagaro, Johann de Bono, Andrea Alimonti.

B004/PR14 Identification of specificity TCR groups of tumor antigen specific T cells. Liang Chen, Chunlin Wang, Mark Davis.
This abstract is also being presented as a proffered short talk (PR14) in Session 7.

B005 Linking transcriptomic and imaging features of the melanoma tumor microenvironment. Andrew X. Chen, Robyn Gartrell, Douglas K. Marks, Thomas Hart, Emanuelle Rizk, Anthea Monod, Raul Rabadan, Yvonne Saenger.

B006 Gridded tissue profiling strategy with digital spatial profiling for unbiased tissue sampling. Sarah Church, Chris Merritt, Giang Ong, Andrew White, Kristi Zevin, Sarah Warren, Joseph M. Beechem.

B007 Identification of prostate cancer stem cell antigens for T cell immunotherapy by HLA ligandome analysis. Amy S. Codd, Saly Al-Taei, Serina Tokita, Emi Mizushima, Pierre J Rizkallah, Tom Whalley, Barbara Szomolay, Kristin Ladell, James E McLaren, Sian Llewellyn-Lacey, David A Price, Takayuki Kanaseki, Toshihiko Torigoe, Stephen Man, Zsuzsanna Tabi.

B008 Treatment of IDO1 and TDO2 positive tumors with a kynurenine-degrading enzyme: A highly differentiated approach from IDO1 inhibition. Silvia Coma, Jillian Cavanaugh, James Nolan, Jeremy Tchaicha, Karen McGovern, Everett Stone, John Blazeck, Candice Lamb, George Georgiou, Mark G Manfredi, Michelle Zhang.

B009 New development of monoclonal antibodies targeting TRAIL agonist receptors. Agathe Dubuisson.

B010 A survey of circulating biomarkers in subjects with NSCLC using library-based data independent acquisition mass spectrometry reveals host immune response mechanisms. Nicholas Dupuis, Jakob Vowinckel, Daniel Heinzmann, Claudia Escher.

B011 Inhibition of G9a reestablishes the MHC class I loss due to EMT in lung cancer cells. Heidge Fukumasu, Pedro R.L. Pires, Pedro L.P. Xavier.

B012 Characterizing tumor-induced exhaustion in melanoma patients treated with neo-adjuvant pembrolizumab. Josephine R. Giles, Alexander C. Huang, Saskinath Manne, Jorge C. Henao-Meji, E. John Wherry.

B013 Site specific conjugation of engineered non-native amino acids in an anti-CD3 Fab-folate bispecific antibody significantly enhances its anti-tumor properties in gynecologic cancers. Michael J. Gray, Wisam Barkho, Barbara Tipton, Prathap Shastri, Hyun-Bae Jie, Jeff Steen, Rik Frank, Feng Tian, Dowdy Jackson, Shawn Zhang.

B014 T cell Elispot Proficiency Panel 2017/2018: Evaluating routine T cell Elispot assays. Stephen T. Haley, Charlotte Halgreen, Katrine Frederiksen, Rikke Brogaard, Liselotte Brix.

B015 T cell recognition profiling of CD8+ T cells in tumor-infiltrating lymphocytes expanded for adoptive cell transfer. Christina Heeke, Anne-Mette Bjerregaard, Amalie Kai Bentzen, Marco Donia, Rikke Andersen, Inge Marie Stentoft Svane, Sine Reker Hadrup.

B016 Automated ex vivo expansion of low numbers of tumor-reactive T cells on the CliniMACS Prodigy®. Bianca Heemskerk, Christina Maeder, Elvira Criado-Moronati, Lisa Boettcher, Andrew Kaiser, Mario Assenmacher, Andrzej Dzionek.

B017 Multifunctional immunomodulator capable of hypoxia-sensitive adjuvant delivery and photodynamical assistance for DC antigen presentation for cancer immunotherapy. Sooseok Im, Won Jong Kim.

B018 Landscape of natural HLA class I ligand peptides of cancer cells. Yasuhiro Kikuchi, Takayuki Kanaseki, Ayumi Hongo, Serina Tokita, Toshihiko Torigoe, Kochin Vitaly.

POSTER SESSION B

Tuesday, October 2 • 12:45 p.m.-3:15 p.m.
Westside Ballroom (Fifth Floor)

B019/PR13 A new high-performance HLA ligand identification strategy enables prediction of T cell tolerance to neoepitopes. Martin G. Klatt, Ron S. Gejman, Sung S. Moon, Tatyana S. Korontsvit, Tao Dao, David A. Scheinberg.
This abstract is also being presented as a proffered short talk (PR13) in Session 7.

B020 T cell recognition of large T and small T antigen in Merkel cell polyomavirus-associated cancer. Ulla Kring Hansen, Rikke Lyngaa, Per Thor Straten, Jürgen C. Becker, Candice D Church, Paul Nghiem, Sine Reker Hadrup.

B021 Imaging immunotherapy in the tumor microenvironment in 3D. Stephen J. Kron, Steve Seung-Young Lee, David Scholten, Vytautas Seung-Young Bindokas, Jacqueline Brinkman.

B022 Properties of T cell recognized neoantigens. Pia Kvistborg, Marit M. van Buuren, Daisy Philips, Nienke M. van Rooij, Arno Velds, Sam Behjati, Marlous van den Braber, Mireille Toebes, Lorenzo Fanchi, Maarten Slagter, Inge Marie Stentoft Svane, Patrick Hwu, Joost van den Berg, Michael Stratton, Christian Blank, John B.A.G. Haanen, Can Kesmir, Ton N.M. Schumacher.

B023 Protein logic for ultraspecific T cell targeting and immunostimulation. Marc J. Lajoie, Scott E. Boyken, Alfredo Quijano Rubio, Robert E. Langan, Daniel Adriano Silva Manzano, Umut Y. Ulge, Alexander I. Salter, Anusha Rajan, Isabel Leung, Mesfin M. Gewe, Colin E. Correnti, Stanley R. Riddell, David A. Baker.

B024 Using single cell paired sequencing to isolate cancer-specific T cell receptors for cancer immunotherapy. Karolina Lech, Lucia Correia, Max Beckmann, Maria Busz, Sean Collison, Sterenn Davis, Paraskevi Mallini, Sarah Scaife, Joseph Dukes, Bent K. Jakobsen, Luke Williams, Michelle Teng.

B025 Multiplex three-dimensional mapping of mRNA and protein in the tumor microenvironment. Steve Seung-Young Lee, David Scholten, Vytautas P. Bindokas, Stephen Kron.

B026 Development of tumor-targeted agonistic immunomodulators using the DARPin® Technology Platform. Victor Levitsky, Alexand Link, Michael T. Stump, Elmar vom Baur.

B027 Antitumor effects of the programmed death receptor-1 and the programmed death-ligand 1 blockade in human colorectal carcinoma in a humanized orthotopic mouse model. Li Li, Xin Zhang, Grace Maresh, Linh Hellmers, Avi Patel, Ravan Moret, Sarah Cohen, David Margolin.

B028 Label free Raman signatures of immune cells: A new tool for artificial intelligence in immunotherapy. Girish Chundayil Madathil, Raveena Nagareddy, Anjana Ramkumar, Manu Krishnan, Vijay Harish, Anusha Ashokan, Shanti Kumar Nair, Manzoor Koyakutty.

B029 A novel media supplementation strategy for improved T cell culture and preservation of naivety. Alyssa Master, Roddy S. O'Connor, Saba Ghassemi, Dina S. Schneider, Lisa Karimi-Naser.

B030 Predicting the response of uveal melanoma to immunotherapy with MRI assessments. Alvaro Moreira, Marc Saake, Gerold Schuler, Lucie Heinzerling.

B031 Development of anti-myeloma immunotherapy by exploiting modified antibodies specific for A2/NY-ESO-1. Toshiki Ochi, Masaki Maruta, Kazushi Tanimoto, Hiroaki Asai, Takashi Saitou, Yoshihiro Yakushijin, Hiroshi Fujiwara, Takeshi Imamura, Katsuto Takenaka, Masaki Yasukawa.

B032 PhIP-seq assessment of the serum antibody repertoire before and after immune-related adverse events in four melanoma patients treated with checkpoint blockade immunotherapy. Timothy J. O'Donnell, Meimi Shan, Elliott Merritt, Elena Gonzalez Gugel, Ana B. Blasquez, Marcia Meseck, Phillip A. Friedlander, Alexander Rubinsteyn, Amir Horowitz, Nina Bhardwaj, Uri Laserson.

B033 T cell-induced tumor vulnerability discovery in an IFNγ-independent genomic landscape. Daniel S. Peeper, David Vredevoogd, Thomas Kuilman.

B034 A novel immunomodulatory strategy of targeting glyco-immune checkpoints with EAGLE technology. Li Peng.

POSTER SESSION B

Tuesday, October 2 • 12:45 p.m.-3:15 p.m.
Westside Ballroom (Fifth Floor)

B035 Enhancing antitumoral activity of cell based immunotherapies by modulating the JAK-STAT axis. Luis Alberto Perez-Quintero, Kelly Anne Pike, Penafuerte Claudia, Michel Tremblay.

B036 T cell recognition of breast cancer antigens. Nadia Viborg Petersen, Sofie Ramskov, Rikke Sick Andersen, Özcan Met, Per thor Straten, Amalie Kai Kai Bentzen, Sine Reker Hadrup.

B037 Tunable thermal bioswitches for control of cell-based therapeutics. Dan Ilya Piraner, Mikhail G. Shapiro.

B038 A unified genome-wide analysis of dysfunctional T cell states in cancer and chronic viral infection. Yuri Pritykin, Christina Leslie.

B039 Peptide-MHC-directed expansion of multifunctional antigen-responsive T cells. Vibeke Mindahl Rafa, Mona Bodenhöfer, Amalie Kai Bentzen, Tripti Tamhane, Marco Donia, Inge Marie Stentoft Svane, Søren Nyboe Jakobsen, Christian Schmess, Sine Reker Hadrup.

B040 Electrospun implantable anticancer device comprising immune adjuvant photoresponsive nanoparticles with checkpoint blockade for effective cancer therapy. Afeesh Rajan Unnithan, Arathyram Ramachandra Kururp Sasikala, Chan Hee Park, Cheol Sang Kim.

B041 An injectable magnetic nanogel system for filling surgical residual cavity with effective cancer immunotherapy combined hyperthermic capability. Arathyram Ramachandra Kururp Sasikala, Afeesh Rajan Unnithan, Chan Hee Park, Cheol Sang Kim.

B042 Broad analysis and more accurate predictions of HLA class I epitope binding in 92 common HLA alleles profiled by mono-allelic mass spectrometry. Siranush Sarkizova, Susan Klaeger, Derin B. Keskin, Karl Clauser, Hasmik Keshishian, Christina R. Hartigan, Nir Hacohen, Steven A. Carr, Catherine J. Wu.

B043 Enhanced T-cell immunity in vivo using injectable bioengineered scaffolds. Nisarg Shah, David J. Mooney.

B044 Engineering CAR NK cells for antigen-dependent autocrine expansion. Avishai Shemesh, Kole T. Roybal, Lewis L. Lanier.

B045 Antigen-free cancer vaccine to treat poorly immunogenic tumors. Miguel C. Sobral, Hua Wang, Alexander J. Najibi, Aileen Li, Catia S. Verbeke, David J. Mooney.

B046 Immune repertoire sequencing enables complete B-cell and T-cell clonality determination and minimal residual disease assessment. Chen Song, Luo Sun, Pingfang Liu, Bradley Langhorst, Andrew Barry, Theodore B. Davis, Eileen T. Dimalanta.

B047 Next-generation gene expression enables tumor-focused immuno-oncology therapies. Patrick Stern.

B048 Proteomic approaches for the identification of druggable protein and epigenetic targets to complement melanoma immunotherapy. Alan Tackett.

B049 Empty MHC class I molecules for improved detection of antigen-specific T cells. Tripti Tamhane, Sunil Kumar Saini, Raghavendra Anjanappa, Ankur Saikia, Sofie Ramskov, Marco Donia, Inge Marie Stentoft Svane, Søren Nyboe Jakobsen, Maria Garcia-Alai, Martin Zacharias, Rob Meijers, Sebastian Springer, Sine Reker Hadrup.

B050 Identification of PD-1T TILs and CXCL13 as determinants for response to anti-PD-1 treatment using human tumor explants. Daniela S. Thommen, Viktor H. Koelzer, Petra Herzig, Marjolein H. de Bruijn, Paula Voabil, Marlous van den Braber, Karlijn Hummelink, Kim Monkhorst, Kirsten D. Mertz, Alfred Zippelius, John B.A.G. Haanen, Ton N.M. Schumacher.

B051 Facilitating translational research with interactive tools for immuno-oncology data. Vesteinn Thorsson, James A. Eddy, Andrew Lamb, David A. Gibbs, Ilya Shmulevich, Justin Guinney.

B052 Immunotherapy for melanoma by adenovirus-mediated full-length antibody, nivolumab. Xuchen Wang.

B053 In vivo metabolic labeling and targeted modulation of dendritic cells for enhanced cancer immunotherapy. Hua Wang, David J. Mooney.

POSTER SESSION B

Tuesday, October 2 • 12:45 p.m.-3:15 p.m.
Westside Ballroom (Fifth Floor)

B054 Single-cell analysis illuminates the gradients of immune cell functional states within human melanoma tumors, and facilitates characterization of tumor reactive T cells. Ido Yofe, Hanjie Li, Anne van der Leun, Yaniv Lubling, Dikla Gelbard, Alexander C. J. van Akkooi, Amos Tanay, Ton N.M. Schumacher, Ido Amit.

B055 Enhanced detection of T cells targeting unique neoantigens and shared mutated oncogenes for personalized cancer immunotherapy. Rami Yossef, Eric Tran, Alena Gros, Drew Deniger, Gal Cafri, Steven A. Rosenberg.

B057 Enhancing immunotherapy for triple-negative and HER2+ breast cancer using EpCAM aptamer-siRNA mediated gene knockdown. Ying Zhang, Judy Lieberman.

B058 Rapid and controlled T cell expansion using scaffolds that mimic antigen presenting cells. David K.Y. Zhang, Anna Vaynrub, David J. Mooney.

B059 Synergistic activation of antitumor immunity by an oncolytic virus VG161 armed with multiple immune stimulating genes. Ronghua Zhao, Jun Ding, Dmitry Choujenko, Yanal Murad, Erica Lee, Guoyu Liu, Luke Bu, William Jia.

B060 Commensal bacteria Bifidobacterium stimulates an antitumor response via cross-reactivity. Catherine Ami Bessell.

B062 Investigate the role of T lymphocytes in the regulation of energy expenditure and obesity. Bo Hu, Chengcheng Jin, Xing Zeng, Mark Jedrychowski, Chen Zhao, Alex Banks, Steven Gigi, Diane Mathis, Bruce Spiegelman.

B063 Leveraging gut microbiota networks to impact tumor immunotherapy. Lata Jayaraman, Jaclyn Sceneay, Srimathi Srinivasan, Keith Halley, Meghna Bist, Kathleen Cieciuch, George Marnellos, Christopher Desjardins, Jennifer Wortman, Matthew Henn, David Cook.

B064 Chemical biology studies of anti-inflammatory lipids. Qiang Li, Howard Hang.

B065 Tracking adipose-tissue Treg provenance, dependencies, and activities via T cell receptor transgenic mice. Chaoran Li, Joanna R. DiSpirito, David Zemmour, Raul R. Spallanzani, Wilson Kuswanto, Christophe Benoist, Diane Mathis.

B066 Identifying novel effectors of the gut microbiota that modulate cancer cell killing by CTLs using functional metagenomics. Lior Lobel, Wendy S. Garrett.

B067 Distinct necessity of mitochondrial complex I and III for regulatory T cell function. Elizabeth M. Steinert, Samuel E. Weinberg, Navdeep S. Chandel.

B068 Vitiligo and melanoma: The role of cutaneous human commensal bacteria in anti-melanocyte immune responses. Ivan Vujkovic-Cvijin.

B069 Temozolomide drives mismatch repair deficiency and fosters neoantigen generation in tumor cells. Vito Amodio, Giovanni Germano, Ludovic Barault, Simona Lamba, Giuseppe Rospo, Alessandro Magrì, Federica Maione, Giovanni Crisafulli, Carlotta Cancelliere, Giulia Lerda, Alice Bartolini, Giulia Siravegna, Benedetta Mussolin, Roberta Frappolli, Monica Montone, Giovanni Randon, Filippo de Braud, Nabil Amirouchene Angelozzi, Silvia Marsoni, Maurizio D'Incalci, Armando Orlandi, Enrico Giraudo, Andrea Sartore-Bianchi, Salvatore Siena, Filippo Pietrantonio, Federica Di Nicolantonio, Alberto Bardelli.

B070 Neoepitope and mutation load as a biomarker in a broad cohort of cancer patients treated with immunotherapy. Anne-Mette Bjerregaard, Vinicius Araujo Barbosa de Lima, Annie Borch, Olga Araujo Barbosa de Oestrup, Ulrik Lassen, Sine Reker Hadrup.

B071 Validating sequence similarity-driven neoepitope fitness models via immunogenomics on TCGA and multiregional tumor data. Adrian Bubie, Nicholas Akers, Augusto Villanueva, Bojan Losic.

B072 Immune checkpoint blockade enhances mutated calreticulin-induced T cell immunity in myeloproliferative neoplasms. Cansu Cimen Bozkus, Vladimir Roudko, John P. Finnigan, John Mascarenhas, Ronald Hoffman, Camelia Iancu-Rubin, Nina Bhardwaj.

POSTER SESSION B

Tuesday, October 2 • 12:45 p.m.-3:15 p.m.
Westside Ballroom (Fifth Floor)

B073 A pan-HLA predictor of neoantigen processing and presentation to the tumor cell surface. Trevor Clancy, Richard Stratford.

B074 A recall antigen-based potency assay for immunomodulatory biologics that could discriminate responders from non-responders. Marc Delecommene, Wushouer Ouerkaxi, Pirouz Daftarian.

B075 Modelling response and resistance to immune checkpoint blockade in syngeneic mouse glioma. Katrin Deumelandt, Jens Blobner, Jana K. Sonner, Mirco Friedrich, Edward Green, Michael O. Breckwoldt, Manuel Fischer, Jochen Meyer, Felix Sahm, Daniel Schrimpf, Andreas von Deimling, Michael Platten.

B076 Pan-cancer analysis to identify which cancers may benefit most from LAG-3 blockade. Shridar Ganesan, Anshuman Panda, Gyan Bhanot.

B077 Signatures of T-cell dysfunction and exclusion predict cancer immunotherapy response. Peng Jiang, Shengqing Gu, Deng Pan, Jingxin Fu, Avinash Sahu, Xihao Hu, Ziyi Li, Nicole Traugh, Xia Bu, Bo Li, Jun Liu, Gordon J Freeman, Myles A Brown, Kai W. Wucherpfennig, Xiaole Shirley Liu.

B078 Unbiased identification of CD4+ T-cell epitopes using novel MHC-based chimeric receptors. Jan Kisielow, Franz-Josef Obermair, Manfred Kopf.

B079 Evaluation of tools for predicting mutated tumor antigens from exome and RNA sequencing. Julia Kodysh, John P. Finnigan, Alex Rubinsteyn.

B080 Improved neoantigen vaccine selection by combining prediction of pMHC presentation and T-cell epitopes. Julia Kodysh, Tim O'Donnell, Ana B. Blazquez, John Finnigan, Nina Bhardwaj, Alex Rubinsteyn.

B081 Serum antibody against NY-ESO-1 and XAGE1 predicts clinical responses to anti-PD-1 therapy in non-small-cell lung cancer. Koji Kurose, Yoshihiro Ohue, Takahiro Karasaki, Junichiro Futami, Isao Irei, Takeshi Masuda, Masaaki Fukuda, Akitoshi Kinoshita, Hirokazu Matsushita, Katsuhiko Shimizu, Hiroyuki Yamaguchi, Minoru Fukuda, Kazuhiro Kakimi, Mikio Oka.

B082 PD-1 to CD8 ratio on tumor infiltrating lymphocytes and peripheral blood mononuclear cells as a predictor for determining response of glioblastoma patients to radiation-induced ICD-based DC vaccine therapy. Fang-Yu Lin, Chia-Ing Jan, Wan-Chen Tsai, Horng-Jyh Harn, Hsin-Man Lu, Ming-Chao Liu, Shao-Chih Chiu, Der-Yang Cho.

B083 Defective transcription elongation in a subset of cancers confers immunotherapy resistance. Vishnu Modur.

B084 Methylation landscape of tumors associated with antitumor immune signature. Chan-Young Ock, Changhee Park, Kyeonghun Jeong, Sohee Jung, Jeong Mo Bae, Kwangsoo Kim.

B085 High mutation burden and response to immune checkpoint inhibitors in angiosarcomas of the scalp and face. Corrie Painter, Esha Jain, Michael Dunphy, Elana Anastasio, Mary McGillicuddy, Rachel Stoddard, Beena Thomas, Sara Balch, Kristin Anderka, Katie Larkin, Niall Lennon, Yen-Lin Chen, Andrew Zimmer, Esme O. Baker, Simone Maiwald, Jen Lapan, Jason L. Hornick, Chandrajit Raut, George Demetri, Eric S. Lander, Todd Golub.

B086 Exploiting large-scale HLA peptidomics to generate novel immunotherapies: A data-driven approach to true neoantigen prioritization. Alex S. Powlesland, Geert P.M. Mommen, Ricardo J. Carreira, Jacob P.M. Hurst, Michael J. Cundell, David Lowne, Floriana Capuano, Bent K. Jakobsen.

B087 MHC class II on cancer cells -- role in response to BCG therapy of bladder cancer. Gil Redelman-Sidi, Michael Glickman, Anna Binyamin, Anthony Antonelli.

B088 Mapping tumoral and immune heterogeneity in PD-1 responsive glioblastoma. Paula Restrepo, Raymund Yong, Ilaria Laface, Nadejda Tsankova, Sacha Gnjatic, Adilia Hormigo, Bojan Losic.

B089 Application of precision cancer immunotherapy design tools to bladder cancer: Non-self-like neoepitopes as a prognostic biomarker. Guilhem Richard, Randy F. Sweis, Leonard Moise, Matthew F. Ardito, William A. Martin, Gad Berdugo, Gary D. Steinberg, Anne S. De Groot.

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B090/PR12 Functional identification and therapeutic targeting of tumor neoantigens. Stephen Phillip Schoenberger, Aaron M. Miller, Luise A. Sternberg, Leslie M. Montero Cuencac, Milad Bahmanof, Zeynep Koasaloglu-Yalcin, Manasa Lanka, Ashmitaa Premlal, Pandurangan Vijayanand, Jason Greenbaum, Allesandro Seatte, Ezra E.W. Cohen, Bjoern Peters.
This abstract is also being presented as a proffered short talk (PR12) in Session 6.

B091 Platinoid-chemotherapy upregulation of MHC-I machinery in tumor cells determines the response to checkpoint inhibitors. Shabnam Shalapour, Ingmar Niels Bastian, Weihua Li, Kathleen Niels Fisch, Michael Karin.

B092 Tumor-infiltrating T-cells from renal cell carcinoma patients recognize neoantigens derived from point and frameshift mutations. Sofie Sofie Ramskov, Ulla Kring Hansen, Anne-Mette Bjerregaard, Amalie Kai Bentzen, Marco Donia, Rikke Andersen, Zoltan Szallasi, Inge Marie Stentoft Svane, Aron Charles Eklund, Sine Reker Hadrup.

B093 Development of prediction software PrDx, trained on peptide-MHC stability assays, show new important positions in the binding patterns of the peptides-MHC I&II complexes. Stephan Thorgrimsen, Sune Justesen, Nicolas Rapin.

B094 Successful identification of neo-antigen-specific T cell responses in low mutation burden colorectal cancers for personalized cancer vaccine development. Jitske van den Bulk, Dina Ruano, Marieke E. Ijsselsteijn, Marten Visser, Ruud van der Breggen, Koen C.M.J. Peeters, Thomas Duhen, Rebekka Duhen, Andrew D Weinberg, Sjoerd S.H. van der Burg, Els M.E. Verdegaal, Noel F. de Miranda.

B095 Mapping the genetic features of immune checkpoint responsiveness using AAV-CRISPR mediated in vivo screen. Guangchuan Wang, Ryan Chow, Zhigang Bai, Lupeng Ye, Sidi Chen.

B096 Dissecting the flames from the fire: Distribution of immune checkpoints in hot and cold tumors. Sarah Warren, Tressa Hood, Patrick Danaher, Alessandra Cesano.

B097/PR11 CX3CR1+CD8+ T cells are responsible to the clinical benefit of chemoimmunotherapy in metastatic melanoma patients after disease progression on PD-1 blockade. Yiyi Yan, Haidong Dong, Roxana Dronca, Svetomir Markovic.
This abstract is also being presented as a proffered short talk (PR11) in Session 6.

B098 A novel engineered oncolytic virus as an optimal viro-immunotherapeutic platform for solid tumors. Jennifer Altomonte, Sarah Abdullahi, Teresa Krabbe, Katja Steiger, Roland M. Schmid, Oliver Ebert.

B099 Elucidating the mechanisms that underpin RAG chromatin scanning in V(D)J recombination at antigen receptor gene loci. Zhaoqing Ba, Suvi Jain, Jiazhi Hu, Frederick Alt.

B100 Development of targeted multiple myeloma cancer vaccine and antigen-specific T-cell immunotherapy using novel immunogenic engineered heteroclitic BCMA peptides. Jooeun Bae, Teru Hideshima, Yu-Tzu Tai, Nikhil Munshi, Kenneth Anderson.

B101 Novel oncolytic vaccinia virus platform for systemic delivery of immunotherapeutic payloads. John C. Bell, Adrian Pelin, Michael Huh, Matthew Tang, Fabrice Le Boeuf, Brian Keller, Jessie Duong, Katherine Clark-Knowles, Julia Petryk, Victoria A. Jennings, Alan Melcher, Mathieu Crupi, Larissa Pikor, Caroline Breitbach, Steven Bernstein, Michael Burgess.

B102 Pre-existing citrulline specific CD4 T cells can be efficiently harnessed for tumor therapy. Victoria A. Brentville, Peter Symonds, Katherine W. Cook, Ian Daniels, Suha Atabani, Ruhul Choudhury, Poonam Vaghela, Rachael L. Metheringham, Mohamed Gijon, Wei Xue, Lindy G. Durrant.

B103 Altering the mevalonate pathway to enhance CD8+ T cell responses. Olivia K. Burn, Astrid Authier-Hall, Collin Brooks, Regan Anderson, Andrew Marshall, Gavin Painter, Robert Weinkove, Ian Hermans.

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B104 Post translationally modified homocitrulline induced by MDSCs can be an effective anti-tumour target for CD4 T cells. Katherine W. Cook, Wei Xue, Peter Symonds, Mohamed Gijon, Sabaria Shah, Suha Atabani, Poonam Vaghela, Ruhul Choudhury, Rachael L. Metheringham, Ian Daniels, Victoria Brentville, Lindy Durrant.

B105 A cancer vaccine targeting many neoantigens is required for effective eradication of large tumors. Anna Morena D'Alise, Guido Leoni, Gabriella Cotugno, Francesca Langone, Imma Fichera, Maria De Lucia, Rosa Vitale, Adriano Leuzzi, Veronica Bignone, Elena Di Matteo, Fabio Giovanni Tucci, Lidia Avalle, Valeria Poli, Armin Lahm, Maria Teresa Catanese, Antonella Folgori, Stefano Colloca, Alfredo Nicosia, Elisa Scarselli.

B106/PR9 Intratumoral delivery of engineered modified vaccinia virus Ankara expressing Flt3L and OX40L for "in situ" therapeutic cancer vaccination. Liang Deng, Ning Yang, Yi Wang, Wei Yan, Jiahu Wang, John Choi, Stewart Shuman, Taha D. Merghoub, Jedd D. Wolchok.
This abstract is also being presented as a proffered short talk (PR9) in Session 5.

B107 Next generation of poxvirus-based immunotherapeutics. Laetitia Fend.

B108 Molecular and cellular properties of neoantigen-specific CD8+ T cells on interaction with B16F10 melanoma in situ. John P. Finnigan, Andrew S. Ishizuka, Geoffrey M. Lynn, Alex S. Rubensteyn, Robert A Seder, Nina Bhardwaj.

B109 Broadly neutralizing antibodies against HCV use a CDRH3 disulfide motif to recognize an E2 glycoprotein site that can be targeted for vaccine design. Andrew I. Flyak, Stormy Ruiz, Michelle Colbert, Tiffany Luong, James E. Crowe, Jr., Justin R. Bailey, Pamela J. Bjorkman.

B110 Pro-inflammatory allogeneic dendritic cells promote activation of bystander immune cells and indirectly license antigen-specific T cells. Grammatiki Fotaki, Chuan Jin, Iliana Kyriaki Kerzeli, Mohanraj Ramachandran, Alex Karlsson-Parra, Di Yu, Magnus Essand.

B111 Vaccination against TAP downregulation-induced neoantigens to prevent future tumor development in the setting of recurrence or premalignancy. Greta Garrido Hidalgo, Brett Schrand, Ailem Rabasa, Agata Levay, Tal Gefen, Giri Bhuwan Bhuwan, Anthony R. Ferrantella, Vikas Dudeja, Koen Marijt, Thorbald T. van Hall, Eli Gilboa.

B112 Combined therapy with an autologous tumor cells/ bacillus Calmette-Guérin/formalin-based vaccine plus anti-PD-1 inhibitor enhances the antitumor response in a 4T1 breast cancer model. Maria Jose Godoy Calderon, Eglys González Marcano, Ana Federica Convit.

B113 Protective serum responses by CRISPR/Cas9 edited primary B cells expressing antibodies of choice. Harald Hartweger, Mila Jankovic, Michel C. Nussenzweig.

B114 Cancer immunotherapy combining oral vaccination of recombinant Bifidobacterium longum displaying human Wilms' tumor 1 protein and anti-PD-1 checkpoint blockade for solid tumors in mice experimental model. Koichi Kitagawa, Maho Tatsumi, Mako Kato, Shota Komai, Yoshiko Hashii, Takane Katayama, Toshiro Shirakawa.

B115 Optimization of cancer vaccine development by using Multiplexed Identification of T-cell Receptor Antigen specificity (MIRA). Peter Ebert, Mark Klinger, Edward Osborne, Ruth Taniguchi, Joyce Hu, Tim Hayes, Sharon Benzeno, Adria Carbo, Melanie Laur, Erica Eggers, Harlan Robins.

B116 Nano-neo-mRNA Vaccine: A novel platform technology for cancer-immunotherapy. Manzoor Koyakutty Koyakutty, Navyashree A Ramesh, Ashwathy Nambiar, Najuma Nujum Ambili Anna, Manju C Abraham, Minu Anoop, Anjana Ramkumar, Nair Shanti, Vijay Harish Harish, Anusha Ashokan.

B117 Allogeneic tumor-lysate loaded dendritic cells induce antitumor immunity and tumor responses in preclinical models of pancreatic adenocarcinoma: Towards clinical trials. Sai Ping S. Lau, Priscilla P. Kinderman, Melanie M. Lukkes, Floris P. Dammeijer, Heleen H. Vroman, Menno M. van Nimwegen, Thorbald T. van Hall, Sjoerd S.H. van der Burg, Joachim J.G.J.V. Aerts, Nadine A.G. Pronk-van Montfoort, Casper C.H.J. van Eijck.

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B118 Development of a novel prostatic acid phosphatase-derived vaccine for the treatment of advanced prostate cancer. Pauline Le Vu, Jayakumar Vadakekolathu, Dennis Christensen, Lindy Durrant, Graham Pockley, Stephanie E.B. McArdle.

B119 DC-recruiting biomaterial vaccine to enhance antitumor immunity. Aileen W. Li, Maxence O. Dellacherie, Miguel Sobral, Omar O. Ali, Jaeyun Kim, David J. Mooney.

B120 TIPE2 regulates apoptosis and autophagy to inhibit tumorigenesis in colon cancer. Jun Li, Xiaoli Xia.

B121 Checkpoint inhibitor vaccine stimulates antitumor T cells that block tumor growth. Takuya Tada, Nathaniel R. Landau, Thomas David Norton.

B122 Development of a new immunotherapy treatment for glioblastoma multiforme. Joshua R. D. Pearson, Lindy G. Durrant, Victoria A. Brentville, Graham G. Pockley, Stephanie E.B. McArdle.

B123 Local treatment with PeptiCRAd-1, a novel cancer immunotherapy approach, mediates a systemic anti-tumour CD8+ T-cell response and infiltration of CD8+ and CD4+ T-cells into distant untreated tumours in a clinically relevant humanised mouse melanoma model. Erkko Ylosmaki, Tuuli Ranki, Petri Priha, Charlotta Backman, Matthew Vaughn, Vincenzo Cerullo, Sari Pesonen.

B124 Personalized peptide vaccination based on patient-individual tumor-specific variants induces T cell responses in pediatric patients. Armin Rabsteyn, Christina Kyzirakos, Christopher Schroeder, Marc Sturm, Christopher Mohr, Jakob Matthes, Magdalena Feldhahn, Nicolas Casadei, Martin Ebinger, Stefan Stevanovic, Peter Bauer, Oliver Kohlbacher, Cecile Gouttefangeas, Juergen Schaefer, Hans-Georg Rammensee, Rupert Handgretinger, Peter Lang.

B125 Targeting human CD141+ DC using CLEC9A antibodies for cancer immunotherapy. Kristen Radford, Frances Pearson, Kelly-Anne Masterman, Kirsteen Tullett, Oscar Haigh, Carina Walpole, Ghazal Daraj, Ingrid Leal Rojas, Mireille Lahoud.

B126 Degradation-regulatable architectured implantable macroporous scaffold for the spatiotemporal modulation of immunosuppressive microenvironment and enhanced combination cancer immunotherapy. Long Ren, Il Woo Shin, Chanyoung Song, Yong Taik Lim.

B127 NT219, a novel dual inhibitor of STAT3 and IRS1/2, converts immuno-oncology resistant tumors to responders. Hadas Reuveni, Izhak Haviv, Lana Kupershmidt.

B128 Timing and sequence of CpG and anti-OX40 is critical for in situ vaccination. Idit Sagiv-Barfi, Debra K. Czerwinski, Ronald Levy.

B129 Human endogenous retroviruses as a potential reservoir for T-cell mediated cancer immunotherapy. Sunil Kumar Saini, Anne-Mette Bjerregaard, Andreas D. Ørskov, Ashwin Unnikrishnan, Staffan Holmberg, Govardhan Anande, Amalie Kai Bentzen, Zoltan Szallasi, Aron C. Eklund, Kirsten Grønbæk, Sine Reker Hadrup.

B130 Induced lymphangiogenesis enhances antigen-specific T cell response in anticancer vaccination. Maria Stella Sasso, Sylvie Hauert, Priscilla Briquez, Yue Wang, Jun Ishihara, Jeffrey A. Hubbell, Melody A. Swartz.

B131 Live-attenuated LCMV-based vector for active immunotherapy of HPV16+ cancer. Sarah Schmidt, Ahmed ElGazzar, Weldy V. Bonilla, Mindaugas Pauzuolis, Andrea Reiter, Theresa Kleissner, Daniel Oeler, Felix Stemeseder, Ursula Berka, Bettina Kiefmann, Sophie Schulha, Igor Matushansky, Doron Merkler, Daniel Pinschewer, Klaus Orlinger.

B132 A new concept of cancer immunotherapy by targeting pancreatic ductal adenocarcinoma through a childhood recall antigen. Benson C. Selvanesan, Dinesh Chandra, Wilber Quispe, Ankur Patel, Kiran Meena, Steven K. Libutti, Ziqiang Yuan, Jennifer Chuy, Claudia Gravekamp

B133 Implantable synthetic immune hydrogel for spatiotemporal modulation of tumor-derived immunosuppression and systemic antitumor immunity. Chanyoung Song, Il Woo Shin, Long Ren, Yong Taik Lim.

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B134 Use of p19Arf/interferon-β immunotherapy in association with chemotherapy permits reduced drug dosage and avoids cardiotoxicity associated with doxorubicin. Bryan E. Strauss, Ruan F.V. Medrano, Rodrigo Tamura, Samir F.V. Mendonça, Valker A. Feitosa, Rafael Dariolli, Thiago A. Salles, Aline Hunger, João P.P. Catani, Elaine G. Rodrigues.

B135 Novel immunotherapeutic strategy based on the immunopathologic properties of cancer stem cells. Toshihiko Torigoe, Yoshihiko Hirohashi.

B136 Optimized messenger RNA immunolipoplexes for cancer immunotherapy: Balancing immunogenicity and adjuvancy. Rein Verbeke, Ine Lentacker, Karine Breckpot, Serge Van Calenbergh, Stefaan C. De Smedt, Heleen Dewitte.

B137 Preclinical evaluation of a Wilms' tumor protein 1-targeted interleukin-15 dendritic cell vaccine: T cell activity and batch production. Maarten Versteven, David Damoiseaux, Diana Campillo-Davo, Heleen Van Acker, Hans De Reu, Sébastien Anguille, Zwi N. Berneman, Evelien L. Smits, Viggo F. Van Tendeloo, Eva Lion.

B138 Cancer immunotherapy with APOBEC3B-induced heteroclitic library tumor cell vaccines and immune checkpoint blockade. Richard Vile, Laura Evgin, Timothy Kottke, Matthew Schuelke, Christopher B. Driscoll, Amanda L. Huff, Jill Thompson, Amy Molan, Reuben S. Harris, Jose S. Pulido, Phonphimon Wongthida.

B139 Plant viral particle vaccine induces a potent antitumor response through by induction of antigen specific T-cells and overcoming an immunosuppressive tumor microenvironment. Chuan Wang, Yidao Wang, Alex J. Allen, Jantipa Jobsri, Gareth J. Thomas, Christian H. Ottensmeier, Natalia Savelyeva.

B140 Positron emission tomography-guided photodynamic therapy with biodegradable silica nanoparticles for personalized cancer immunotherapy. Cheng Xu, James Moon.

B141 Antitumor immune responses elicited by mesothelin virus-like particles vaccine effectively controls pancreatic cancer in animal models. Qizhi Cathy Yao, Ethen Poteet, Zhengdong Liang, Phoebe Lewis, Zhiyin Yu, Changyi Chen.

B142 Activation of endogenous anergic self-specific CD8+ T cells by polymeric nanoparticles for enhanced cancer immunotherapy. Qian Yin.

B143 Lace molecular vaccine with adjuvant booster to enhance immunogenicity. Chunson Yu, Haipeng Liu.

B144 Morphologic consequences for non-capsular lymphoid tissue in the case of malignancy of GERD (Barrett's esophagus). Bakhtiyar Talgatuly Azhken.

B145 Identification of tumor cell intrinsic immune evasion mechanisms. Carmen Ballesteros Reviriego, Anneliese O. Speak, Gemma Turner, Vivek O. Iyer, Leopold Parts, David J. Adams.

B146 The tumor necrosis factor superfamily member RANKL suppresses effector cytokine production in group 3 innate lymphoid cells. Jennifer Kaoru Bando, Susan Gilfillan, Christina Song, Keely McDonald, Stanley C-C. Huang, Rodney D. Newberry, Yasuhiro Kobayashi, David S.J. Allan, James R. Carlyle, Marina Cella, Marco Colonna.

B147 From bioactive small molecule to an identified protein target: A new method combining stochastic photomodification with a synthetic antibody mimetic. Kristyna Blazkova, Petr Šimon, Tomáš Knedlík, Petra Dvořáková, Anna Březinová, Libor Kostka, Vladimír Šubr, Jan Konvalinka, Pavel Šácha.

B148 Microvilli enable efficient T cell antigen search and ligand detection. En Cai, Kyle Marchuk, Casey Beppler, Matthew Krummel.

B149 Real-time analysis of cell membrane protein and virus internalization using site-specific conjugation of protease-sensitive probes. Ross W. Cheloha, Zeyang Li, Djenet Bousbaine, Andrew Woodham, Priscillia Perrin, Jana Volaric, Hidde L. Ploegh.

B150 STING acquired species-specific motifs to control alternative immune responses. Carina C. de Oliveira Mann, David S. King, Philip J. Kranzusch.

B151 Exploring the induction of immunogenic cell death (ICD) by high intensity focused ultrasound (HIFU). Heleen Dewitte, Yanou Engelen, Guillaume Lajoinie, Lígia Gomes-da-Silva, Michel Versluis, Stefaan C. De Smedt, Guido Kroemer, Karine Breckpot, Ine Lentacker.

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B152 Generation of monoclonal antibodies against a newly identified target for invasive prostate cancer and their use in the development of an antibody-based targeting therapy. Anna Di Biase, Tarik Regad, Jayakumar Vadakekolathu, Desmond Powe, Hans-Martin Jäck, Edith Roth.

B153 Human NK cell distribution memory and residence in tissue sites. Pranay Dogra, Takashi Senda, Peter Szabo, Dustin Carpenter, Marta Toth, Puspa Thapa, Mark Snyder, Michelle Miron, Brahma Kumar, Donna L. Farber.

B154 Differential effects of corticosteroids and anti-TNF on tumor-specific immune responses – implications for the management of irAEs. Marco Donia, Troels H. Borch, Haja D. Radic, Christopher H. Chamberlain, Aishwarya Gokuldass, Inge Marie Stentoft Svane, Arianna Draghi.

B155 Impact of transcription initation on translation regulation by the mTOR pathway. Sascha H. Duttke, Max Chang, Christopher K. Glass, Andrea Berman, Christopher Benner.

B156 Characterization and role of CCR8+ regulatory T-cells in mouse models of malignant melanoma. Andrew K. Edwards, Mihaela Skobe, Anita Rogic, Marcus Bosenberg.

B157 Modulation of Natural Killer cell dysfunction in human bladder cancer. Adam M. Farkas, Francois Audenet, Harry Anastos, Matthew Galsky, John P. Sfakianos, Nina Bhardwaj.

B158 Clinical features and management of mantle cell lymphoma. Fatiha Grifi, Soraya Bougherira, Amel Djenouni.

B159 Investigating the neuroimmune interaction between nociceptive neurons and dendritic cells. Pavel Hanc, Siyi Huang, Ulrich H. von Andrian.

B160 Comparative analysis of pharmacokinetics and antitumor effect between anti-PD-1 and anti-PD-L1 in mice models. Hiroto Hatakeyama, Taiki Kurino, Hiroyuki Suzuki, Ayu Terui, Tomoya Uehara, Yasushi Arano, Akihiro Hisaka.

B161 Pseudoprogression of metastatic abdominal wall nodules in a patient with lung carcinoma treated with pembrolizumab. Tiffany Hennedige, Daniel Tan, Narayanan Gopalakrishna Iyer, Amit Jain.

B162 Developmental programming of long-term immunity of CD8 T cells by perinatal glucocorticoids. Jun Young Hong, Bharat Vaidyanathan, Jen Young Cho, Ruslan Medzhitov.

B163 Regulation of translation by the interferon-induced antiviral protein viperin. Chun-Chieh Hsu, Maudry Laurent-Rolle, Peter Cresswell.

B164 Inhibiting glycolysis enhances imiquimod-induced immunogenic cell death and the antitumor immune response. Shi-Wei Hunag, Jeng-Jer Shieh, Sin-Ting Wang, Der-Yang Cho, Shao-Chih Chiu.

B165 Investigating in vivo synergistic effect of checkpoint blockade and radiation therapy against chordomas in a humanized mouse model. Wataru Ishida, Kyle L. McCormick, Aayushi Mahajan, Eric L. Feldstein, Michael Lim, Jeffrey N. Bruce, Peter D. Canoll, Sheng-fu L. Lo.

B166 Mass spectrometric characterisation of MHC peptides on therapeutic EBV transformed primary lymphoblastoid cells from HLA A*11 patients. Amit Jain.

B167 Antigen presenting cells as coordinators of T cell responses to gut microbiota. Ranit Kedmi, Kai Mesa, Dan Littman.

B168 A radiosensitivity gene signature and PD-L1 status predict clinical outcome of patients with glioblastoma multiforme in The Cancer Genome Atlas Dataset. Inah Kim, Bum Sup Jang.

B169 Engineering phase separation of multivalent signaling proteins through the solubility of folded protein domains. Jonggul Kim, Jonathon Ditlev, Michael K. Rosen.

B170 Therapeutic implications of altered epigenetics and DNA damage responses in IDH2-mutated hematologic diseases. Julie Leca.

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B171 Elucidating the mechanism of RAG tracking and its impacts on V(D)J recombination. Cheng-Sheng Lee, Jiazhi Hu, Frederick W. Alt.

B172 Molecular mechanisms of Dual-Specificity Phosphatase 22 (DUSP22) in suppression of tumorigenesis: The potential involvement of the EGFR/PD-L1 axis. Wen-Jye Lin, Cheng-Wei Chang, Hsiu-Ping Lin, Hui-Min Ho.

B173 G protein coupling signaling as regulators of dendritic cell maintenance and function in immune responses. Dan Liu, Jason G. Cyster.

B174 Co-expression of stimulators and inhibitors of T-cell activation in melanoma. Rachana Maniyar, Robert Freund, Aryan Malhotra, Sanjukta Chakraborty, Jan Geliebter, Marc Wallack, Raj K. Tiwari.

B175 Semliki Forest virus-mediated oncolytic immunotherapy in mouse GL261 glioblastoma model. Miika Martikainen, Di Yu, Mohanraj Ramachandran, Grammatiki Fotaki, Minttu-Maria Martikainen, Andres Merits, Magnus Essand.

B176 Sequential immunotherapy and association with clinical outcomes in advanced stage cancer patients. Mehmet Bilen, Dylan Martini, Yuan Liu, Colleen Lewis, Hannah Collins, Julie Shabto, Mehmet Akce, Haydn Kissick, Bradley Carthon, Walid Shaib, Olatunji Alese, Rathi Pillai, Conor Steuer, Christina Wu, David Lawson, Ragini Kudchadkar, Bassel El-Rayes, Viraj Master, Suresh Ramalingam, Taofeek Owonikoko, R. Donald Harvey.

B177 Analysis of immunogenic cell death (ICD) induced in multiple myeloma cells. Maiko Matsushita, Sho Kashiwazaki, Satoshi Kamiko, Ryo Uozaki, Daiju Ichikawa, Yutaka Hattori.

B178 Development and pre-clinical efficacy characterization of a systemically administered multiple Toll-like receptor (TLR) agonist for antitumor immunotherapy. Michael J. Newman.

B179 The regulation of silent apoptotic cell-clearance in tissue-resident macrophages. Kathleen Pestal, Gregory M. Barton.

B180 Effects of EMT process under MHC class I and TAP1 gene expression related to antigen presentation. Pedro Ratto Lisboa Pires, Pedro L.P. Xavier, Heidge Fukumasu.

B181 Adenovirus, Semliki Forest virus and Vaccinia virus-induced immunogenic cell death augments oncolytic virus immunotherapy. Mohanraj Ramachandran, Magnus Essand.

B182 Repurposing antiviral T cells to fight tumors. Pamela C. Rosato, Sathi Wijeyesinghe, J. Michael Stolley, Christine Nelson, Rachel L. Davis, Luke S. Manlove, Christopher A. Pennell, Bruce R. Blazar, Clark C. Chen, Melissa A. Geller, Vaiva Vezys, David Masopust.

B183 LFA-1 signals via Crk adapter proteins to induce actin-dependent T cell migration and mechanosensing. Nathan H. Roy, Joanna L. MacKay, Alexander Buffone Jr, Krista L. Newell, Tanner F Robertson, Sangya Agarwal, Mobin Karimi, Daniel A Hammer, Janis K Burkhardt.

B184 Modulating antigen flow to control immune tolerance. Megan K. Ruhland, Edward W. Roberts, Matthew F. Krummel.

B185 Epithelial cancer cell expressed genes contribute to clinically relevant immune-based classifications of breast cancer. Jonathan Shepherd, Charles Perou.

B186 Tumor cell-derived proteases contribute to antigen processing and enhance cross-presentation. Nicholas J. Shields, Katie A. Young, Christopher Jackson, Sarah A. Young.

B187 Origins of neoantigens for the major histocompatibility complex class I pathway. Ewa Maria Sroka, Rodrigo Prado Martins, Chrysoula Daskalogianni, Sebastien Apcher, Robin Fahraeus.

B188 CMTM6, beyond a regulator of PD-L1 expression. Chong Sun, Riccardo Mezzadra, Raquel Gomez-Eerland, Ingrid Hofland, Dennis Peters, Annegien Broeks, Hugo M. Horlings, Wei Wu, Albert J. R. Heck, Ton N.M. Schumacher.

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B189 Recognition of cytosolic DNA in tumor cells depends on cGAS and STING. Manuel Adrian Suter, Wendy Ya Ling Zhang, Muznah Bte Nazar Khan Khatoo, Nikki Ya Ling Tan, Chien Tei Too, Shubhita Tripathi, Paul A. MacAry, Veronique Angeli, Stephan Gasser.

B190 WASP-dependent actin protrusions mechanically potentiate killing by cytotoxic T cells. Fella Tamzalit, Mitchell S. Wang, Weiyang Jin, Vitaly S. Boyko, John M. Heddleston, Charles T. Black, Lance C. Kam, Morgan Huse.

B191 The impact of postoperative myeloid-derived suppressor cells on prognosis of gastric cancer patients. Shinya Urakawa, Hisashi Wada, Masaki Mori, Yuichiro Doki.

B192 CD56 participation in immune effector cell activation and tumor cell eradication: A role for interleukin-15. Heleen H. Van Acker, Maarten Versteven, Hans De Reu, Peter Ponsaerts, Zwi N Berneman, Viggo F. Van Tendeloo, Evelien L. Smits.

B193 PD-L1 somatic alterations predict sensitivity of advanced prostate cancer patients to platinum-based chemotherapy. Panagiotis J. Vlachostergios, Aileen Lee, Charlene Thomas, Priyanka Patel, Amy L. Hackett, Naureen Rashid, Ana M. Molina, David M. Nanus, Himisha Beltran, Scott T. Tagawa.

B194 Quantifying the interaction between macrophages and deformable microparticles with cell-like mechanical properties. Daan Vorselen, Yifan Wang, Matt Footer, Wei Cai, Julie Theriot.

B195 Chemical probes for exploring muropeptide-pattern recognition receptor interactions in cells. Yen-Chih Wang.

B196 Examining proteasome sensitivity of lymphoid malignancy: Ubiquilin 1 (Ubqln1) is required for BCR-induced proliferation of B cells. Alexandra M. Whiteley, Eric Brown, Daniel Finley.

B197 Translational control in macrophages during inflammatory response. Kehui Xiang, David P. Bartel.

B198 Dissection of RORγt functions in lymphoid cell fate determination and differentiation. Hao Xu, Dan Littman, Wendy Huang.

B199 Potent induction of immunogenic cell death by PT-112. Takahiro Yamazaki, Tyler David Ames, Lorenzo Galluzzi.

B200 Single-cell RNA-sequencing (ScRNA-seq) reveals broad heterogeneity among CD8 T cells during chronic viral infection and identifies a critical role for CD4 help in promoting the differentiation of a potent cytotoxic CD8 T cell subset. Ryan Zander, David Schauder, Gang Xin, Christine Nguyen, Xiaopeng Wu, Weiguo Cui.

B201 Exploration and exploitation of macrophage death pathways: Infection by Mycobacterium tuberculosis as a model. Li Zhang, Carl Nathan.

B202 Defining the role of IL-27 signaling on responses to metastatic melanoma. Anthony T. Phan, Christopher A. Hunter.

B203 Chemokine modulation to enhance the effectiveness of pembrolizumab in patients with metastatic triple negative breast cancer. Yara Abdou, Pawel Kalinski, Mateusz Opyrchal.

B204 Collimator design and simulation for preclinical radiotherapy applications using a clinical cell irradiator. Jessica Benitez, Davide Fontanarosa, Robert Mazzieri, Davide Moi.

B205 Adoptive transfer of autologous T cells, modified with a MART-1 specific TCR and cultured in IL-7/IL-15, for the treatment of metastatic melanoma patients. Raquel Gomez-Eerland, Maartje Rohaan, Joost van den Berg, Maaike van Zon, Renate de Boer, Noor Bakker, Bastiaan Nuijen, Ton N.M. Schumacher, John B.A.G. Haanen.

B206 Evaluation of tumor biomarkers in patients with microsatellite-stable, metastatic colorectal or pancreatic cancer treated with the CXCL12 inhibitor NOX-A12 and preliminary safety in combination with PD-1 checkpoint inhibitor pembrolizumab. Niels Halama, Ulrike Prüfer, Anna Froemming, Diana Beyer, Dirk Eulberg, Jarl Ulf Jungnelius, Aram Mangasarian.

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B207 Nivolumab +/- Ipilimumab in patients with hypermutated cancers detected in blood: NIMBLE. Naiyer Rizvi, Patricia Tang, Nina Bhardwaj, Timothy A. Chan, Jeffrey S. Weber, Michael Vickers, Sofya Pintova, Holger Hirte, Neil H. Segal, Neesha Dhani, Daniel Cho, Stephen Chia, Caitlin Burns, Donsheng Tu, Laura Pearce, Alison Urton, Martin Smoragiewicz, Janet Dancey.

B208 APAVAC®, a very simple autologous vaccine (AV) process with clinical efficacy in advanced cancers (C): Results of a pilot study including 55 patients. Jean-François Rossi, Nicole Rouquet, Patrick Frayssinet.

B209 Phase 1/2 study of mRNA vaccine therapy + durvalumab (durva) ± tremelimumab (treme) in patients with metastatic non-small cell lung cancer (NSCLC). Joshua Sabari, Kristen Aufiero Ramirez, Paul Schwarzenberger, Toni Ricciardi, Mary Macri, Aileen Ryan, Ralph Venhaus.

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