



Society for NeuroOncology

24TH ANNUAL MEETING *and* EDUCATION DAY

OF THE SOCIETY
FOR NEURO-ONCOLOGY

November 20-24, 2019
Marriott Desert Ridge Hotel

Phoenix, Arizona

INNOVATION TO OVERCOME TUMOR RESISTANCE

SOC-NEURO-ONC.ORG

MEETING PROGRAM

PUT GBM ON PAUSE



In patients with newly diagnosed GBM,
OPTUNE® + TMZ HAS BEEN PROVEN TO PROVIDE

OS with Optune + TMZ vs TMZ alone was significantly higher at the 2-year landmark analysis and remained higher at 5 years^{1,3}

- Median OS was significantly extended with Optune—by nearly 5 months ($P < 0.001$)¹
- Optune + TMZ also significantly improved PFS vs TMZ alone (median PFS: 6.7 months vs 4.0 months, $P < 0.001$)¹

Indications For Use

Optune is intended as a treatment for adult patients (22 years of age or older) with histologically-confirmed glioblastoma multiforme (GBM).

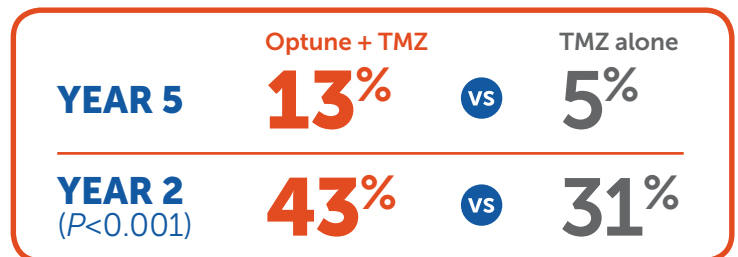
Optune with temozolomide is indicated for the treatment of adult patients with newly diagnosed, supratentorial glioblastoma following maximal debulking surgery, and completion of radiation therapy together with concomitant standard of care chemotherapy.

Important Safety Information

Contraindications

Do not use Optune in patients with an active implanted medical device, a skull defect (such as, missing bone with no replacement), or bullet fragments. Use of Optune together with implanted electronic devices has not been tested and may theoretically lead to malfunctioning of the implanted device. Use of Optune together with skull defects or bullet fragments has not been tested and may possibly lead to tissue damage or render Optune ineffective.

Do not use Optune in patients that are known to be sensitive to conductive hydrogels. In this case, skin contact with the gel used with Optune may commonly cause increased redness and itching, and rarely may even lead to severe allergic reactions such as shock and respiratory failure.



Warnings and Precautions

Optune can only be prescribed by a healthcare provider that has completed the required certification training provided by Novocure (the device manufacturer).

Do not prescribe Optune for patients that are pregnant, you think might be pregnant or are trying to get pregnant, as the safety and effectiveness of Optune in these populations have not been established.

The most common ($\geq 10\%$) adverse events involving Optune in combination with temozolomide were thrombocytopenia, nausea, constipation, vomiting, fatigue, medical device site reaction, headache, convulsions, and depression.

Use of Optune in patients with an inactive implanted medical device in the brain has not been studied for safety and effectiveness, and use of Optune in these patients could lead to tissue damage or lower the chance of Optune being effective.

If the patient has an underlying serious skin condition on the scalp, evaluate whether this may prevent or temporarily interfere with Optune treatment.



PUT LIFE ON **PLAY**

Josh is JB's
brother and caregiver.

JB is an
Optune user.

LONG-TERM QUALITY SURVIVAL^{1,2}

Patients treated with Optune + TMZ maintained QoL over time^{2,4}

Both HCPs and patients reported stable QoL evaluation scores up to 1 year of Optune use

- HCP-reported KPS* was approximately 90 at baseline and 12 months⁴
- Patient-reported Global Health Status[†] was approximately 70 at baseline and 12 months²

Patient image reflects the health status of the patient at the time the photo was taken.

*HCP-reported data collected per Karnofsky Performance Score (KPS) assessment at baseline and then repeated monthly. Patient functional status via KPS (at multiple time points) measured patient independence in activities of daily living.

[†]Patient-reported data collected per EORTC QLQ-C30 at baseline and Months 3, 6, 9, and 12. This 30-question survey covered 5 daily-functioning domains (Physical, Role, Social, Emotional, and Cognitive).

EORTC QLQ-C30, European Organisation for Research and Treatment of Cancer core quality of life questionnaire; GBM, glioblastoma; OS, overall survival; PFS, progression-free survival; QoL, quality of life; TMZ, temozolomide.

References: 1. Optune Instructions for Use. Novocure 2019. 2. Taphoorn MJB, Dirven L, Kanner AA, et al. Influence of treatment with tumor-treating fields on health-related quality of life of patients with newly diagnosed glioblastoma: a secondary analysis of a randomized clinical trial. *JAMA Oncol.* 2018;4(4):495-504. 3. Stupp R, Taillibert S, Kanner A, et al. Effect of tumor-treating fields plus maintenance temozolomide vs maintenance temozolomide alone on survival in patients with glioblastoma: a randomized clinical trial. *JAMA.* 2017;318(23):2306-2316. 4. Zhu J-J, Demireva P, Kanner AA, et al. Health-related quality of life, cognitive screening, and functional status in a randomized phase III trial (EF-14) of tumor treating fields with temozolomide compared to temozolomide alone in newly diagnosed glioblastoma. *J Neurooncol.* 2017;135:545-552.

Please see Optune Instructions for Use (IFU) for complete information regarding the device's indications, contraindications, warnings, and precautions at Optune.com/Safety.

Meet an Optune user at Booth #208 to learn more about putting GBM on pause and life on play

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OPTUNE[®]
Elevate Expectations

24TH ANNUAL MEETING *and* EDUCATION DAY OF THE SOCIETY FOR NEURO-ONCOLOGY

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WELCOME TO PHOENIX!

Dear Colleagues,

We are pleased to welcome you to the 24th Annual Meeting of the Society for Neuro-Oncology, which this year is taking place at the beautiful JW Marriott Desert Ridge Hotel in Phoenix, Arizona. The SNO Annual Meeting serves as the nexus for scientific research and clinical progress and we are so glad that you have chosen to be a part of it!

The Society thanks Ranjit Bindra, Michelle Monje, Duane Mitchell, and Daniel Cahill for organizing an exceptional Education Day focused on the mechanisms of tumor resistance, as well as Christina Amidei and Deborah Forst for their work in organizing a wonderful concurrent track focused on palliative care and medical complications in brain tumors.

The theme of this year's main Scientific Meeting is Innovation to Overcome Tumor Resistance, and we are thrilled that an outstanding group of plenary speakers are sharing their insights with us, including Alan D'Andrea (Dana Farber Cancer Institute), Thomas Gajewski (University of Chicago), Charles Limb (University of California, San Francisco), Matthew Meyerson (Dana-Farber Cancer Institute), Michelle Monje (Stanford University), and Kevan Shokat (University of California, San Francisco).

As is typical of the SNO Annual Meeting, conference participants will have the opportunity to attend early morning and lunchtime didactic sessions on a broad and varied range of neuro-oncology topics. Outstanding science will be presented in over 200 oral talks selected from the submitted abstracts. Please be sure to download the app and create your own custom schedule!

In keeping with previous SNO Annual Meetings, the conference will provide a variety of opportunities to interact and connect with like-minded colleagues from around the world. A number of social events have been organized, including a special Welcome Reception on Thursday and a Gala Event on Saturday, that will allow participants to experience a taste—literally and figuratively—of the fascinating culture and delicious cuisine of America's "Great Southwest".

Against this backdrop, we believe the SNO Annual Meeting will be an outstanding forum for networking and building lasting relationships with like-minded colleagues from around the world.

We hope you enjoy the meeting and the city of Phoenix!

Sincerely,

Daphne Haas-Kogan, Monika Hegi, Michael Lim, David Schiff
2019 Scientific Program Chairs



Daphne Haas-Kogan



Monika Hegi



Michael Lim



David Schiff

MEETING OVERVIEW

The 24th Annual Meeting and Education Day of the Society for Neuro-Oncology will take place at the JW Marriott Desert Ridge in Phoenix, Arizona. The beautiful city of Phoenix borders Scottsdale and is about 30 minutes from the Phoenix Sky Harbor International Airport.

Building on the success of past SNO meetings, the conference chairs have organized sunrise sessions, plenary and concurrent sessions with featured oral abstract presentations, enhanced oral e-Talk presentations, and poster presentations. Special lunch tutorials and industry-sponsored symposia will provide in-depth information on evolving technologies and therapeutics.

SNO DAILY HIGHLIGHTS

SNO Daily Highlights will again be featured this year, in which invited discussants will review the most cutting-edge science from that day's basic science and clinical research presentations. The SNO Daily Highlights will be video-taped and made available for viewing on Friday and Saturday evenings via the meeting app.

Friday Discussants

*Jasmine Jo
Joanna Phillips*

Saturday Discussants

*Manish Aghi
Annie Huang*

Daily Previews

*Daphne Haas-Kogan
David Schiff
Monika Hegi*

Meeting Highlights and Awards Summary

Michael Lim

E-TALKS

Don't miss this year's e-Talk sessions on Friday and Saturday evenings, supported by Novocure. Located in Wildflower A, B and C, adjacent to the Poster reception on the Ballroom Lawn, these interactive 4-minute oral e-Talk presentations are followed by viewing and discussion in the main poster area.

Friday from 7:30 - 8:34 (See pages 34-37 for full speaker list)

- **Group 1:** Health Outcomes/Neurological Complications of Cancer and Cancer Therapy/Quality of Life/Radiotherapy/Surgical Therapy/CNS Metastases
- **Group 2:** Drug Resistance/Drug Discovery/Experimental Therapeutics
- **Group 3:** Imaging/Pediatric Tumor Models/Pediatric Clinical Trials/Molecular Pathology/Health Outcomes

Saturday from 5:00 - 6:00 (See pages 45-48 for full speaker list)

- **Group 1:** Adult Therapeutics/Immunology/Rare Tumors
- **Group 2:** Angiogenesis and Invasion/Radiation Biology and DNA Repair/Tumor Models/Stem Cells/Epidemiology
- **Group 3:** Cell signaling/Cell Biology/Metabolism/Genetics/Epigenetics/Computational Omics

SPEAKER READY ROOM

All oral presenters are asked to drop off their slides in the Speaker Ready Room located in Pinnacle Peak 2 if they did not previously upload them via the web. Check your email for presentation requirements.

INTERNET ACCESS

Wi-Fi, supported by Karyopharm Therapeutics, is available in the main conference rooms and foyer areas.

Network name: **SNOMeeting** Password: **SNO2019**

Charging stations for mobile devices, supported by Elekta and Emulate Therapeutics, can be found in the Ballroom Foyer.

SNO CAREER LOUNGE

The "SNO Career Lounge" facilitates a convenient environment where prospective candidates and employers can connect. The Career Lounge is located in Pinnacle Peak 1, and will be open Thursday, Friday and Saturday, from 10:00am – 4:00pm. Scheduling of interviews may be arranged by contacting the Career Lounge Coordinators, Sheela Purandhara and Olivia Singh at SNOcareerlounge@gmail.com.

SNO APP

Download the official SNO meeting app, supported by Novocure, and put everything you need to know about this year's conference right into the palm of your hand! Customize your conference experience by creating your schedule in advance, communicate with other attendees, view posters, text questions to moderators, and take session notes. Access the Attendee Directory to connect with new acquaintances, browse the scientific abstracts, claim CME, and view daily video previews/highlights of the day.



The SNO meeting app is currently available in the App Store and Android Market. To download, simply search for "**SNO Annual Meeting**" and then select the event SNO2019.

To start using the SNO2019 event app, please sign-in using the same username and password that was used to register for the conference to access the mobile app.

There will also be a dedicated app assistant at booth 111, located near the registration desk, if you need further assistance.

VIRTUALBOARD

VirtualBoard, a platform provided by GENOMET, allows clinicians to present cases virtually anywhere and gather consensus in real time from colleagues. For further information, please visit them at booth 109, near the registration desk.

WELCOME RECEPTION

All registrants are invited to attend the Welcome Reception on Thursday evening starting at 7:30pm on the Sunset Lawn. Generously supported by Orbus Therapeutics, the Welcome Reception is a great opportunity to catch-up with colleagues and make new connections!

GALA DINNER

Join your colleagues from around the world for a special evening to experience a taste—literally and figuratively—of the fascinating culture of the great Southwest. The evening begins as we gather for libations in front of the Sunset Lawn and then proceed down a candle lit path to the Desert Kivas where you will be treated to delicious Southwestern Cuisine and lively music for the remainder of the evening. Western attire optional, but definitely encouraged! Pre-purchased ticket required.

EDUCATIONAL OBJECTIVES

After attending this conference, participants should be able to:

- Discuss new CNS cancer technologies in the areas of cell biology, cell signaling, genetics, epigenetics, immune-based therapies including CAR T therapy, stem cells, metabolomics, tumor microenvironment, lower grade gliomas, radiobiology and radiomics, synthetic lethal strategies, and viral therapy,
- Implement higher quality clinical trials based on an understanding of strategies for choosing which therapies to evaluate in specific patient populations,
- Apply novel trial designs beyond the traditional phase I, II and III studies for more efficient evaluation of target drugs,
- Identify obstacles to clinical trial enrollment and discuss technologies to increase accessibility and data capture,
- Incorporate new endpoints in clinical trials that measures what is of most importance to patients,
- Describe new advances in the treatment of CNS metastases,
- Utilize patient reported outcomes to evaluate net clinical benefits for patients undergoing treatment, and
- Apply information on sexual differences in brain tumors and reproductive and women's issues to efficiently address therapeutic implications.

TARGET AUDIENCE

The SNO annual meeting will be of value to neuro-oncologists, medical oncologists, adult and pediatric neurosurgeons, pediatric neuro-oncologists, neuroradiologists, neuropathologists, radiation oncologists, neuro-psychologists, epidemiologists, basic and translational scientists and allied health professionals.

EDUCATIONAL METHODS

Lectures, Question-and-Answer Sessions, Panel Discussions, Posters, etc.

EVALUATION

A course evaluation form will provide participants with the opportunity to comment on the value of the program content to their practice decisions, performance improvement activities, or possible impact on patient health status. Participants will also have the opportunity to comment on any perceived commercial bias in the presentations as well as to identify future educational topics.

ACCREDITATION/CREDIT DESIGNATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of The University of Texas MD Anderson Cancer Center and the Society for Neuro-Oncology. The University of Texas MD Anderson Cancer Center is accredited by the ACCME to provide continuing medical education for physicians.

The University of Texas MD Anderson Cancer Center designates this live activity for a maximum of 28.25 AMA PRA Category 1 Credits™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

CME CERTIFICATES AND ATTENDANCE VERIFICATION CERTIFICATES

Certificates awarding AMA PRA Category 1 Credit™ will only be available online via the SNO app and/or website. These will be available from the start of the meeting through January 17th, 2020. **(Certificates will not be available after the January 17th, 2020 deadline).** Physicians will be directed to the evaluation questionnaire and a CME Verification Form which must be completed prior to the CME certificate being displayed. Once displayed the certificate may be printed or downloaded. An email address may also be entered to send the certificate. A record of the CME certificate will be saved for future access.

Certificates of attendance will also be available online via the app and/or website for other health care professionals and international faculty upon completion of the evaluation form. This certificate may be used in verifying attendance or for requesting credits with state nursing boards, specialty societies or other professional associations. A record of this certificate will be saved for future access.

The University of Texas MD Anderson Cancer Center has implemented a process whereby everyone who is in a position to control the content of an educational activity must disclose all relevant financial relationships with any commercial interest that could potentially influence the information presented. MD Anderson also requires that all faculty disclose any unlabeled use or investigational use (not yet approved for any purpose) of pharmaceutical and medical device products. Specific disclosure will be made to the participants prior to the educational activity. Agendas are subject to change because we are always striving to improve the quality of your educational experience. MD Anderson may substitute faculty with comparable expertise on rare occasions necessitated by illness, scheduling conflicts, and so forth.



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The Society for Neuro-Oncology gratefully acknowledges the SNO Platinum Partners listed below. Their on-going support allows SNO to fulfill its mission to advance neuro-oncology research and education.

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EDUCATIONAL GRANTS

The conference organizing committee wishes to express appreciation to the following companies for their commitment to continuing medical education by providing an educational grant in support of this conference:

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ANCILLARY & COMMITTEE MEETINGS

Wednesday, November 19, 2019

Time	Function	Room
6:00-9:00pm	Novocure Advocacy Advisory Board	Chairman's Boardroom
6:30-10:00pm	Basic and Translational Brain Tumor Research Dinner Meeting	Grand Canyon 8-13

Thursday, November 21, 2019

Time	Function	Room
7:00-9:00am	Allied Health Breakfast Networking Session	Grand Sonoran A-D
8:00-5:00pm	FORMA Therapeutics Team Meetings	Desert Suite VIII
8:00-6:00pm	BMS Internal Field Medical Advisory Board	Desert Suites IV&VI
10:00-2:00pm	GCAR CRA Training	Desert Suite VII
11:50-12:50pm	Women in Neuro-Oncology (WiN) Committee Luncheon	Grand Sonoran A-D
11:50-12:50pm	SNO Guidelines Committee Meeting	Desert Suite I
3:00-7:00pm	Presentation of Clinical Protocol and Discussion of Clinical Evidence	Grand Sonoran A-D
4:00-8:00pm	The Glioma Longitudinal Analysis Consortium Meeting	Grand Sonoran JK
5:30-7:30pm	SNO Board of Directors Meeting	Desert Suites III&V
5:30-9:30pm	GCAR Investigator Meeting	Grand Sonoran G
7:00-9:00pm	NCI-CONNECT/CERN Foundation Workshop	Capri Room
7:15-8:45pm	NBTS Project HOPE/CARE	Desert Suite II
7:30-8:30pm	Young Investigator's Networking Reception <i>Pre-registration required</i>	Wildflower Ballroom
7:30 - 8:30pm	Allied Health Reception	Pinnacle Peak I

Friday, November 22, 2019

Time	Function	Room
8:00-9:00am	SNO Public Policy Committee	Desert Suite I
12:00-1:30pm	Clinical Trial and Right to Try Patient Findings with ERC1671	Desert Suite II
	Immunotherapy in Recurrent Glioblastoma Patients	
12:15-1:15pm	Northwest Biotherapeutics Patient Advocacy Group Lunch	Desert Suite I
12:15-1:15pm	SNO Young Investigator Networking Luncheon	Grand Sonoran A-D
12:15-1:15pm	Meet the SNO Journal Editors	Grand Sonoran HI
12:15-1:15pm	Insight into the Brain Metastasis Journey: Survey Results from Patients, Caregivers and Physicians	Desert Suites IV&VI
12:15-1:15pm	VirtualBoard	Desert Suite 7
3:00-3:30pm	SNO External Relations Committee	Presidential Board Room
5:00-6:00pm	Neuro-Oncology Fellowship Program Directors Meeting	Grand Sonoran F
5:00-10:00pm	Tocagen Investigator Meeting	Desert Suites III&V
5:15-6:15pm	Brain Tumor Nonprofit Leadership Collaboration	Desert Suites IV&VI
5:30-7:30pm	MD Anderson Neuro-Oncology Alumni Fellowship	Desert VII
5:30-7:30pm	MGH/DFCI/BWH Neuro-Oncology Fellowship Reception	Desert I
7:00-9:00pm	Agios Reception	Grand Sonoran A-D
9:00-11:00pm	SNO Invited Faculty Reception	Capri Room

Saturday, November 23, 2019

Time	Function	Room
6:30-8:30am	<i>Neuro-Oncology Practice</i> Editorial Board Meeting	Grand Sonoran H&I
6:30-8:30am	Tocagen Advisory Board Meeting	Desert Suites III&V
7:00-8:30am	Neuro-Oncology Administrators Networking Breakfast	Grand Sonoran J&K
12:00-2:00pm	ERC Clinical Advisory Board Meeting	Desert Suite II
12:15-1:15pm	Neuro-Oncology Trainee Forum	Grand Sonoran A-D
12:15-1:15pm	SNO International Outreach Luncheon	Desert Suites III&V
12:15-1:15pm	Northwest Biotherapeutics Nonprofit Investigator Meeting	Desert Suite I
1:30-3:30pm	<i>Neuro-Oncology</i> Editorial Board Meeting	Grand Sonoran H&I
5:00-6:00pm	OurBrainBank: "Unleashing Patient Power" info session	Desert Suite I
5:00-7:00pm	Oncoceutics, Inc. Investigator Meetings	Grand Sonoran A-D
6:00-7:00pm	SNO Partners Advisory Council Meeting	Desert Suites IV&VI

Sunday, November 24, 2019

Time	Function	Room
7:00-8:30am	Tocagen Patient Advocacy	Desert Suite III&V
7:00-8:00am	<i>Neuro-Oncology Advances</i> Editorial Leadership Meeting	Grand Sonoran H&I
8:00-8:45am	Meningioma Consortium	Grand Sonoran H&I

The logo for the Society for NeuroOncology (SNO) features the letters 'SNO' in a large, white, serif font. A stylized infinity symbol is integrated into the letter 'O'.

Society for NeuroOncology

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@NEUROONC #SNO2019

Follow our Featured Voices of the 2019 SNO Annual Meeting

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PROGRAM AT A GLANCE

Thursday, November 21, 2019 Education Day

8:00 - 8:10am	Welcome and Introduction <i>Grand Canyon 1-7</i>
8:10 - 8:50am	Keynote Presentation: Michael Taylor
8:50 - 9:30am	Keynote Presentation: Angelo Volandes
9:30 - 9:45am	Break
9:45 - 11:50am	<div> <i>Grand Canyon 1-7</i> Resistance to Therapy - Immunology </div> <div> <i>Grand Canyon 8-13</i> Palliative Care in Brain Tumor Patients </div>
11:40 - 12:50pm	Lunch
12:50 - 2:55pm	<div> <i>Grand Canyon 1-7</i> Resistance to Therapy - Molecular Therapy </div> <div> <i>Grand Canyon 8-13</i> Medical Complications of Therapy or Survivorship </div>
2:55 - 3:15pm	Break
3:15 - 3:55pm	Keynote Presentation: Victoria Foster <i>Grand Canyon 1-7</i>
3:55 - 4:55pm	Panel Discussions
7:30 - 10:00pm	Welcome Reception <i>Sunset Lawn</i>

Friday, November 22, 2019 Main Meeting

SUNRISE SESSIONS 7:00 - 8:30am	<i>Grand Canyon 1-6</i> Advancing Immunotherapy for Brain Tumors	<i>Grand Saguaro North</i> Joint ASNO/SNO Session: BBB Disruption, Old But New?	<i>Grand Canyon 7</i> Brain Tumor Epidemiology in the Post-GWAS Era
	<i>Grand Canyon 8-13</i> Noncoding Epigenomics & Genomics of Glioma	<i>Grand Saguaro East-West</i> Clinical Update on the 2019 SNO Brain Metastases Conference	<i>Grand Saguaro South</i> Transforming Metabolism to Therapeutics in Glioma, from Bench to Clinic
9:00 - 9:05am	Scientific Meeting Welcome <i>Grand Canyon Ballroom</i>		
9:05 - 9:30am	Keynote Presentation: Alan D'Andrea		
9:30 - 9:55am	Keynote Presentation: Michelle Monje		
9:55 - 10:20am	Keynote Presentation: Matthew Meyerson		
10:20 - 10:30am	Lifetime Achievement Award: Jonathan Finlay		
10:30 - 10:40am	Neuro-Oncology Community Service Award: Kathy Oliver		
10:40 - 10:50am	Jan Esenwein Public Service Award: Kay Verble		
10:50 - 11:20am	Presidential Address: Patrick Wen		
11:30 - 12:00pm	Top Scoring Abstracts		
12:00 - 1:30pm	Lunch - Lunchtime Tutorials and Educational Sessions / Independent Supported Symposia		
1:30 - 3:00pm	<i>Grand Canyon 1-6</i> CONCURRENT SESSION 1A: Adult Clinical Trials I/ Radiation	1:30 - 3:00pm <i>Grand Canyon 8-13</i> CONCURRENT SESSION 1B: Practical and Applied Neuro-Oncology	1:30 - 3:00pm <i>Grand Canyon 7</i> CONCURRENT SESSION 1C: Microenvironment/ Angiogenesis and Invasion
3:00 - 3:15pm	Break	3:00 - 3:15pm	Break
3:15 - 5:00pm	CONCURRENT SESSION 2A: Adult Clinical Trials II/ Immunology Pre-Clinical I	3:15 - 5:00pm CONCURRENT SESSION 2B: Molecular Pathology	3:15 - 5:00pm CONCURRENT SESSION 2C: Drug Discovery/ Drug Resistance and Experimental Therapeutics
5:30 - 7:30pm	Independent Supported Symposia		
7:30 - 8:34pm	E-TALKS <i>Wildflower A-C</i>		
7:30 - 9:30pm	POSTER SESSION <i>Ballroom Lawn</i>		

PROGRAM AT A GLANCE

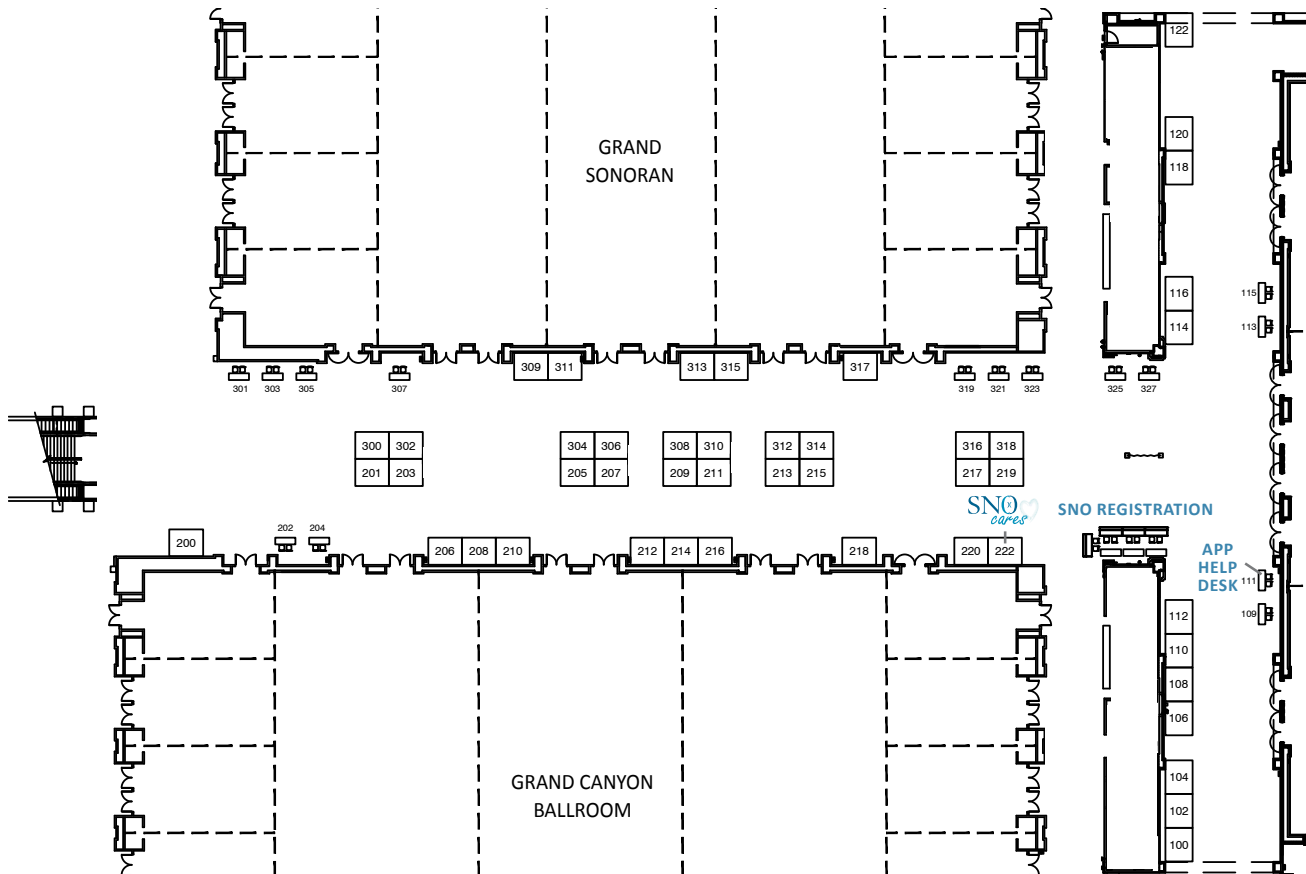
Saturday, November 23, 2019 Main Meeting

SUNRISE SESSIONS 7:00 - 8:30am	<i>Grand Saguaro East-West</i> Challenges in Targeting Oncogenic Signaling Pathways in GBM	<i>Grand Saguaro North</i> Clinical Trials in Meningiomas: Updates, Ongoing and New Proposed Trials	<i>Grand Canyon 8-13</i> EANO/SNO Status Update: New Developments in Diagnostics and Treatments
	<i>Grand Saguaro South</i> Neuro-Oncology of Women: Considerations in Gender Affirmation, Sex Differences, Oncofertility, and Reproductive Choice	<i>Grand Canyon 7</i> Next Generation Brain Tumor Models as the Basis for Therapeutic Discovery	<i>Grand Canyon 1-6</i> Targeting Molecular Alterations in High-Grade Brain Tumor
9:00 - 9:05am	Welcome <i>Grand Canyon Ballroom</i>		
9:05 - 9:28am	Keynote Presentation: Charles Limb		
9:28 - 9:51am	Keynote Presentation: Thomas Gajewski		
9:51 - 10:14am	Keynote Presentation: Kevan Shokat		
10:14 - 10:47am	Victor Levin Award: Patrick Wen		
10:47 - 11:02am	Break		
11:02 - 12:00pm	Top Scoring Abstracts		
12:00 - 1:30pm	Lunch - Lunchtime Tutorials and Educational Sessions / Independent Supported Symposia		
1:30 - 3:00pm	<i>Grand Canyon 1-6</i> CONCURRENT SESSION 3A: Meningioma/ Benign Tumors	1:30 - 3:00pm <i>Grand Canyon 7</i> CONCURRENT SESSION 3B: Surgery/Radiation Therapy/ CNS Metastasis	1:30 - 3:00pm <i>Grand Canyon 8-13</i> CONCURRENT SESSION 3C: Cell Biology and Metabolism
3:00 - 3:15pm	Break	3:05 - 3:15pm	Break
3:15 - 5:00pm	CONCURRENT SESSION 4A: Pediatrics: Clinical and Basic	3:15 - 5:00pm CONCURRENT SESSION 4B: Neuro-Imaging	3:15 - 5:00pm CONCURRENT SESSION 4C: RANO Update
5:00 - 6:00pm	E-TALKS <i>Wildflower A-C</i>		
5:00 - 7:00pm	POSTER SESSION <i>Ballroom Lawn</i>		
5:00 - 7:00pm	Independent Supported Symposia		
7:00 - 10:00pm	SNO GALA <i>Desert Kivas (separate ticket required)</i>		

Sunday, November 24, 2019 Main Meeting

SUNRISE SESSIONS 7:00 - 8:30am	<i>Grand Saguaro East-West</i> Mechanisms of Tumor Evolution and Drug Resistance	<i>Grand Canyon 7</i> Role of Surgeons in Clinical Trials	<i>Grand Saguaro South</i> Liquid Biopsy - Strategies for Diagnosing and Monitoring CNS Tumors
	<i>Grand Saguaro North</i> AAN/SNO: Cognitive Impairment in Glioma Patients: Current Understanding and Future Directions	<i>Grand Canyon 1-6</i> Consortium to Inform Molecular and Practical Approaches to CNS Tumor Taxonomy (cIMPACT) Update on Classification and Grading of Diffuse Gliomas	<i>Grand Canyon 8-13</i> Tumor Immune Microenvironment & Immunosuppression; Beyond Adaptive Immune Checkpoint Immunotherapy
8:45 - 10:15am	<i>Grand Canyon 1-6</i> CONCURRENT SESSION 5A: Immunology Pre-Clinical and Clinical II	8:45 - 10:15am <i>Grand Canyon 8-13</i> CONCURRENT SESSION 5B: Genetics and Epigenetics	8:45 - 10:15am <i>Grand Canyon 7</i> CONCURRENT SESSION 5C: Cell Signaling/Radiobiology and DNA Repair
10:15 - 10:30am	Break	10:15 - 10:30am	Break
10:30 - 12:15pm	CONCURRENT SESSION 6A: Stem Cells/Tumor Models/ Molecular Pathology	10:30 - 12:15pm CONCURRENT SESSION 6B: Genetics and Epigenetics II	10:30 - 12:15pm CONCURRENT SESSION 6C: Immunology Pre-Clinical and Clinical III
12:15 - 12:30pm	Highlights of SNO <i>Grand Canyon 1-6</i>		
12:30pm	Adjourn		

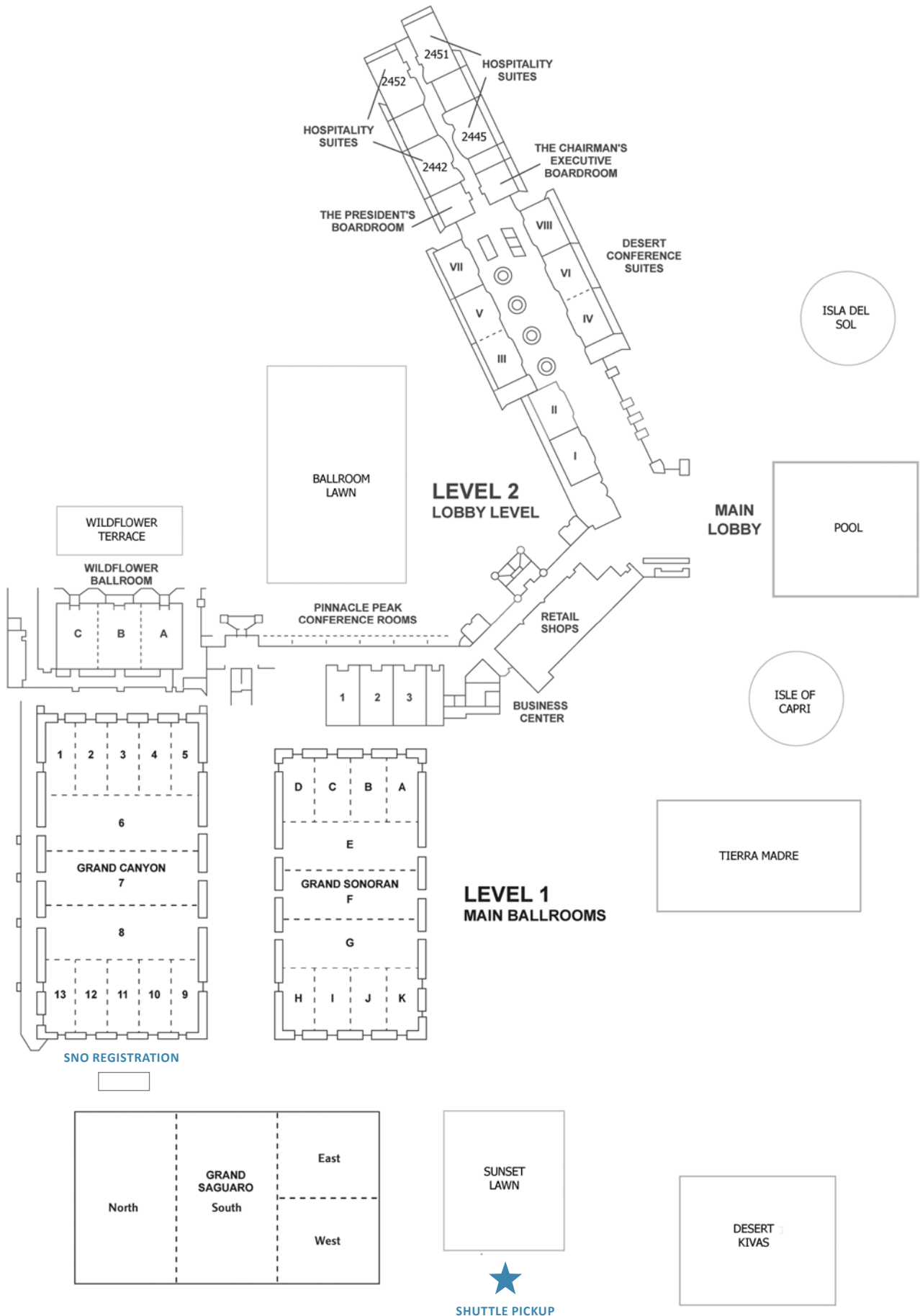
EXHIBITOR MAP



EXHIBITORS

Organization Name	Location	Organization Name	Location
American Brain Tumor Association	314	Mayo Clinic	323
Arbor Pharmaceuticals	217	Mayo Clinical Laboratory	303
AstraZeneca	205	Medtronic	309
Bayer	318	Monteris Medical	304
Blaze Bioscience	202	National Brain Tumor Society	316
Brainlab	216	Neuro-Oncology, National Cancer Institute, NIH	325
Bristol-Myers Squibb	213	NICO Corporation	317
BTG International	110	Northwest Biotherapeutics	214
Candel Therapeutics/Advantagene Inc.	321	Novocure	206/208/210
Caris Life Sciences	209	Novocure	313/315
Carl Zeiss	108	NX Development Corporation	200
Celgene	203	Orbus Therapeutics	220
CERN Foundation	319	Our Brain Bank	115
City of Hope	306	Oxford University Press	Near Registration
Datar Cancer Genetics Limited	207	Photo Corner	219
Elekta	311	Renishaw	327
Emulate Therapeutics	312	Roche Diagnostics	122
EndBrainCancer Initiative	302	SNOcares	222
Genomet	109	Sontag Foundation	215
GT Medical Technologies	201	SOPHiA GENETICS	114
Head For The Cure	308	The Brain Tumour Charity	211
Illumina	212	Tocagen	218
Integrated Oncology	305	UF Neuroscience	301
International Brain Tumour Alliance (IBTA)	204	University of California - Irvine	120
IOTA Pharmaceuticals	116	Visit Austin	113
Ivy Brain Tumor Center	112	Zap Surgical Systems	300
Karyopharm Therapeutics	307	SNO App Help Desk	111

MEETING ROOMS



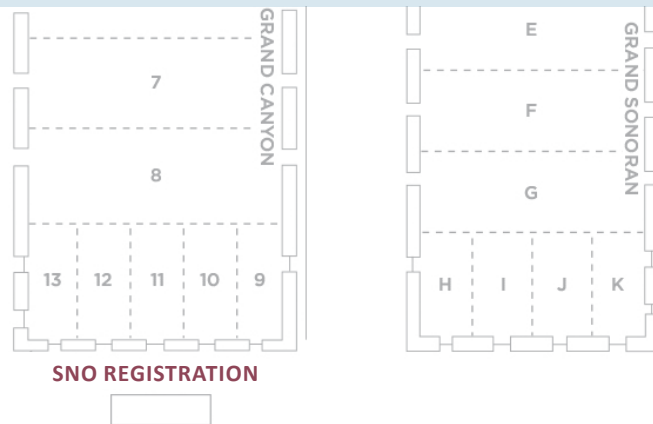
SHUTTLE SERVICE SCHEDULE

Date	Morning Shuttle	Afternoon/Evening Shuttle
Wednesday, November 20	5:30 AM – 9:30 AM	5:00 PM – 10:00 PM*
Thursday, November 21	6:00 AM – 10:00 AM	5:00 PM – 10:00 PM*
Friday, November 22	6:00 AM – 10:00 AM	5:00 PM – 10:00 PM*
Saturday, November 23	6:00 AM – 10:00 AM	5:00 PM – 11:00 PM*
Sunday, November 24	6:00 AM – 10:00 AM	10:00 AM – 1:00 PM*

*Indicates time last shuttle departs from the Marriott Desert Ridge Hotel returning to hotels. Service times may vary due to weather and traffic conditions.

SHUTTLE ROUTES

Shuttles will depart at approximately 15 minute intervals.



ROUTE A

Hilton Garden Inn Phoenix
Scottsdale Marriott at McDowell Mountains
Residence Inn Scottsdale North



ROUTE B

Residence Inn Phoenix Desert View at Mayo Clinic
Cambria Hotel Phoenix – North Scottsdale
Holiday Inn Express & Suites: Phoenix North - Scottsdale



SNO GALA SHUTTLE

For the Gala return, the shuttles will make stops at all the above routes beginning at 9:30 PM.

Shuttles supported by Celgene

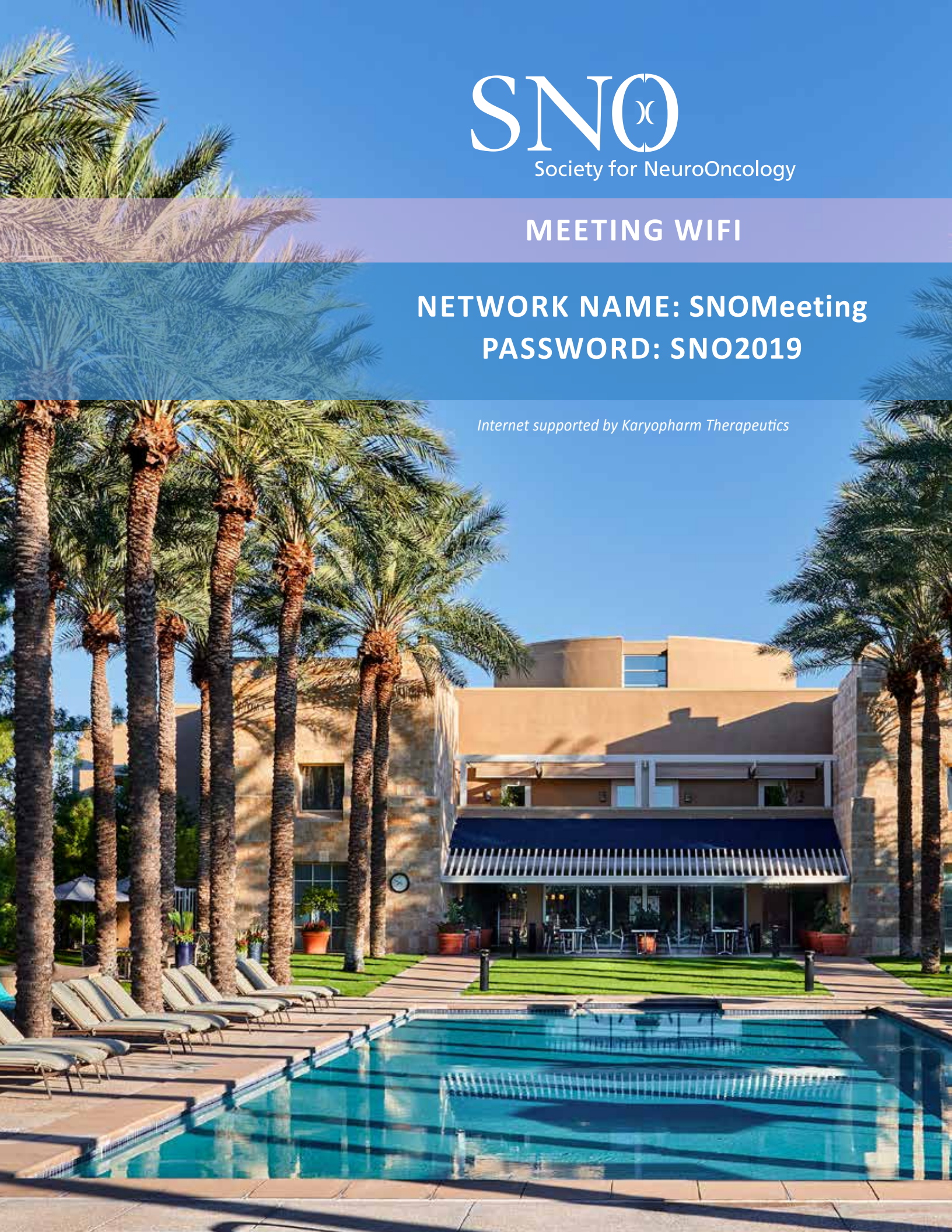


Society for NeuroOncology

MEETING WIFI

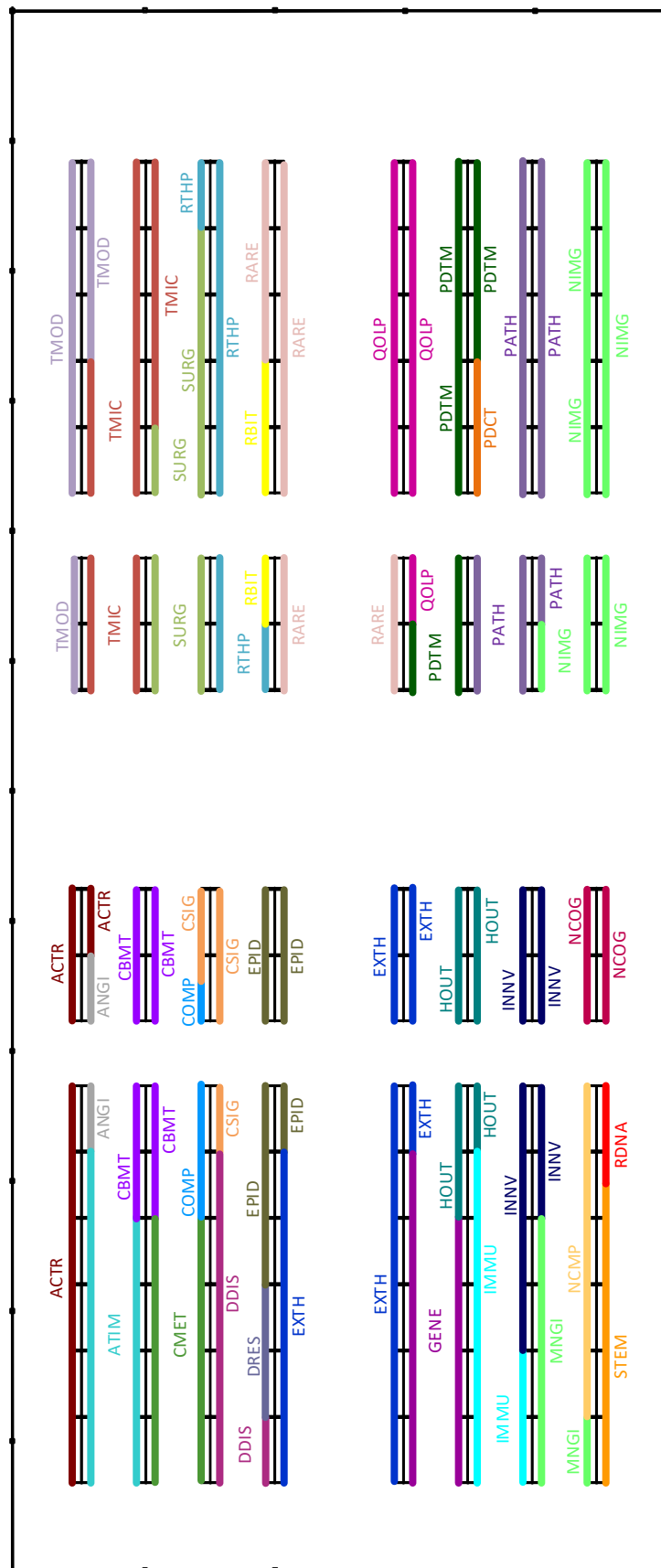
NETWORK NAME: SNOMeeting
PASSWORD: SNO2019

Internet supported by Karyopharm Therapeutics



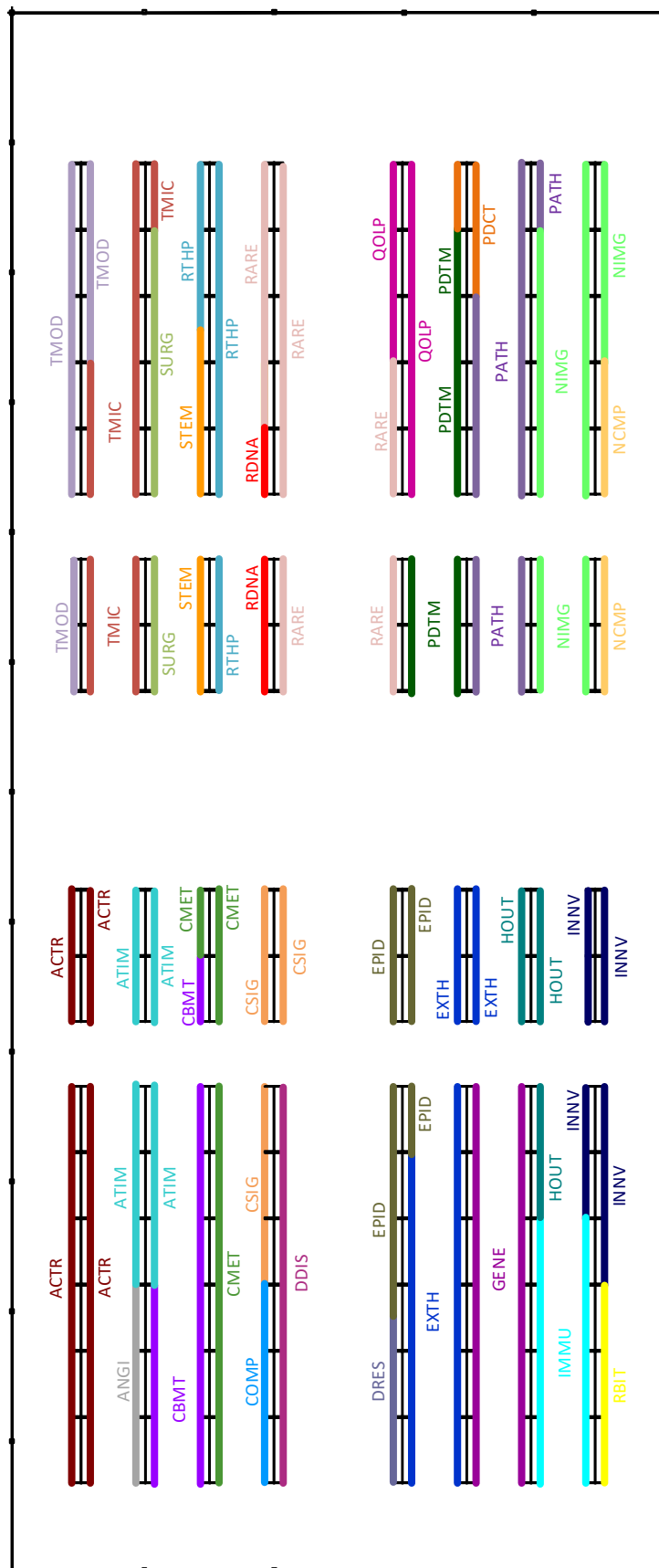
POSTERS Friday, November 22, 2019

Ballroom Lawn



ENTRANCE

- ACTR Adult Clinical Trials - Non-immunologic
- ANGI Angiogenesis and Invasion
- ATIM Adult Clinical Trials - Immunologic
- CBMT Cell Biology and Metabolism
- COMP Computational Omics
- CSIG Cell Signaling and Signaling Pathways
- DDIS Drug Discovery
- DRES Drug Resistance
- EPID Epidemiology
- EXTH Experimental Therapeutics
- GENE Genetics and Epigenetics
- HOUT Health Outcome Measures
- IMMU Immunology
- INNV Innovations in Patient Care
- MNGI Meningioma
- NCMP Neurological Complications of Cancer and Cancer Therapy
- NCOG Neuro-Cognitive Outcomes
- NIMG Neuro-Imaging
- PATH Molecular Pathology and Classification Adult and Pediatric
- PDCT Pediatric Clinical Trials
- PDM Pediatric Tumors
- QOLP Quality of Life and Palliative Care
- RARE Rare Tumors
- RBTT Randomized Brain Tumor Trials in Development
- RDNA Radiation Biology and DNA Repair
- RTHP Radiation Therapy
- STEM Stem Cells
- SURG Surgical Therapy
- TMIC Tumor Microenvironment
- TMOD Tumor Models



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- SURG Surgical Therapy
- TMIC Tumor Microenvironment
- TMOD Tumor Models



BASIC *and* TRANSLATIONAL BRAIN TUMOR RESEARCH MEETING

Pre-registration Required



6:30 - 7:25pm BUFFET DINNER AND POSTER VIEWING *Grand Canyon 8-13*

7:25 - 7:30pm Welcome and Introduction
Roger Abounader, Shwetal Mehta, Michael Platten (Co-chairs)

SESSION 1: TUMOR MICROENVIRONMENT, ANGIOGENESIS AND EPIGENETICS

7:30 - 7:40pm S100A4 is a key driver of immune suppressive microenvironment in GBM
Jian-Shiun Leu

7:40 - 7:50pm Symbiotic macrophage-glioma cell interactions reveal synthetic lethality in PTEN null glioma
Peiwen Chen

7:50 - 8:00pm Molecular mechanisms regulating Stearoyl Co-A Desaturase inhibitor sensitivity and resistance in glioblastoma
Biplab Dasgupta

8:00 - 8:10pm Promoting anti-glioblastoma immunity via leukocyte-endothelial/cancer cell crosslinking
Benjamin Purov

SESSION 2: IMMUNOTHERAPY

8:10 - 8:20pm Single cell systems neuroimmunology reveals immunosuppressive correlates with ventricular stem cell niche contact in human glioblastoma
Todd Bartkowiak

8:20 - 8:30pm Integration of multimodal immunotherapy as part of first line treatment for patients with primary GBM
Stefaan Van Gool

8:30 - 8:40pm Yap1 function in sex-biased medulloblastoma formation and anti-tumor immunity
Nourhan Abdelfattah

8:40 - 8:50pm One-Health tumor model and preliminary report of a phase 1 immunovirotherapy trial of IL-12 expressing HSV-1 (M032) in pet dogs with spontaneous high grade gliomas
D. Mitchell Self, II

8:50 - 9:00pm BREAK

SESSION 3: CANCER STEM CELLS, METABOLISM AND HETEROGENEITY; CNS METASTASES

9:00 - 9:10pm High risk glioblastoma cells identified by mass cytometry and novel computational analysis
Rebecca Ihrie

9:10 - 9:20pm The 3D evolution of glioma cell populations
Stephanie Hilz

9:20 - 9:30pm Distinct but predictable mechanisms drive genetic vs. epigenetic resistance to targeted therapy
Kyusun Yun

SESSION 4: NOVEL AGENTS AND TRANSLATIONAL APPROACHES

9:30 - 9:40pm PPM1D mutations silence NAPRT gene expression and confer exquisite NAMPT inhibitor sensitivity in glioma
Ranjit Bindra

9:40 - 9:50pm Selective targeting of dopamine receptor dysregulation in high grade glioma with ONC201
Varun Vijay Prabhu

9:50 - 10:00pm Tumor Treating Fields increase membrane permeability of glioblastoma cells
Edwin Chang

10:00pm WRAP UP AND ADJOURN

RESEARCH DINNER POSTERS

IMMUNOTHERAPY

- 03 Non-enzymatic function of IDO1 in glioblastoma immunosuppression
Lijie Zhai
- 04 Aging, immunosuppression, and malignant glioma
Erik Ladomersky
- 05 Kick-starting the cancer immunity cycle to target malignant brain tumors
Siddhartha Mitra

CNS METASTASES

- 06 Shifting treatment paradigms for metastatic melanoma with sequential administration of radiation and immunotherapy and the repurposing of benzodiazepines
Soma Sengupta
- 07 Tissue factor signaling enhances metastatic brain cancer malignancy
Dusten Unruh

TUMOR MICROENVIRONMENT, ANGIOGENESIS AND EPIGENETICS

- 09 Interaction between cytoskeleton proteins and tumor microenvironment in determining glioblastoma growth and angiogenesis
Gilberto KK Leung
- 10 Angiotensinogen promoter methylation predicts bevacizumab response in glioblastoma patients
Thomas Urup
- 11 GBP1 recruits macrophages to promote glioblastoma growth
Ming Li
- 12 Who, what, when to treat brain cancer?
Kelly McKelvey

CANCER STEM CELLS, METABOLISM AND HETEROGENEITY

- 13 Integrative transcriptome analysis reveals deterministic transcription factors for GBM invasion
Seok-Gu Kang
- 14 High mitochondrial DNA copy number is associated with longer survival in young patients with glioblastoma
Audrey Rousseau
- 15 Sex differences in metabolism reveal a unique role for glutamine in male glioblastoma
Jasmin Sponagel
- 16 Single cells transcriptome - what is missing?
Agnieszka Bronisz
- 17 Tissue factor signaling in glioblastoma tumor-initiating cells
Anh Tran
- 18 Radiation-induced phenotypic plasticity in classical glioma stem cells
Costanza Lo Cascio

PEDIATRIC TUMORS

- 20 Sonic Hedgehog signaling primes cerebellar granule neuron progenitors and medulloblastoma cells for apoptosis by inducing pro-apoptotic BIM
Abigail Cleveland

- 21 Inhibition of the mTOR and MAPK pathways with TAK228 and trametinib in pLGG
Antje Arnold

NOVEL AGENTS AND TRANSLATIONAL APPROACHES

- 24 Blockade of NRF2/glutathione metabolism as a synthetic lethality approach for IDH1-mutated glioma
Chunzhang Yang
- 25 MGMT promoter methylation in newly diagnosed LGG as a potential biomarker for TMZ-associated hypermutation at recurrence
Radhika Mathur
- 26 Interaction between DNA repair and TGFbeta competency in glioblastoma
Mary Helen Barcellos-Hoff
- 27 Triptolide, a novel therapeutic agent for IDH-1-mutated glioma
Yang Liu
- 28 Medulloblastomas respond to CDK4/6 inhibition via nanoparticle-delivered palbociclib with altered S-phase progression
Taylor Dismuke
- 29 Targeting autophagy in treatment of glioblastoma
Venkata Mahidhar Yenugonda
- 30 MLH1 promoter methylation as a biomarker for temozolomide sensitizability in MGMT-unmethylated glioblastoma
Raymund Yong
- 31 Betulinic acid suppresses glioblastoma cells growth through inhibition of unfolded protein response
Wei-Lun Lo

OTHER

- 32 Sarcopenia accurately predicts 30d morbidity & 30d, 90d, and overall mortality in glioblastoma
Hesham Zakaria
- 33 Integrated multi-scale model for clinical outcome prediction of glioma
Olivier Gevaert
- 34 Long non-coding RNAs in glioblastoma tumor recurrence and therapy resistance
Christian Stackhouse
- 35 EGFR inhibition downregulates MGMT and sensitizes GBM cells to TMZ
Amyr Habib
- 36 Pathogenic roles and therapeutic opportunity of MTAP loss in GBMs
Yiping He
- 37 Globin reduction increases the detective sensitivity of differential expressed genes in whole blood of glioblastoma patients
Ekokobe Fonkem
- 38 Identifying potential genes and mechanisms driving IDH-mutant glioma progression through RNA-sequencing
Angela Cho

EDUCATION DAY THURSDAY, NOVEMBER 21

6:00am	REGISTRATION OPENS <i>Grand Canyon Foyer</i>
6:00 - 7:00am	MORNING YOGA <i>Capri Room</i>
6:45 - 8:30am	LIGHT CONTINENTAL BREAKFAST <i>Ballroom Foyers</i>
7:00 - 8:00am	Allied Health Professional Networking Breakfast: Future Opportunities for AHPs within SNO <i>Grand Sonoran A-D</i> <i>Chris Amidei, Susan Bell</i>

Education Day Program Committee: Christina Amidei, Ranjit Bindra, Daniel Cahill, Deborah Forst, Duane Mitchell, Michelle Monje
Education Day is supported by American Brain Tumor Association

MORNING JOINT SESSION 8:10 - 9:10am *Grand Canyon 1-7*

Moderators: Ranjit Bindra, Deborah Forst

8:00 - 8:10am	Welcome and Introduction <i>Ranjit Bindra, Deborah Forst</i>
8:10 - 8:50am	Keynote Presentation: Lessons about the genomics of recurrent disease divergence from primary, <i>Michael Taylor</i>
8:50 - 9:30am	Keynote Presentation: The Conversation: A revolutionary plan for oncology care, <i>Angelo Volandes</i>
9:30 - 9:45am	BREAK <i>Ballroom Foyers</i>

CONCURRENT MORNING SESSIONS 9:45 - 11:50am

9:45 - 11:50am	Resistance to Therapy - Immunology <i>Moderator: Duane Mitchell</i> <i>Grand Canyon 1-7</i>	9:45 - 11:50am	Palliative Care in Brain Tumor Patients <i>Moderator: Christina Amidei</i> <i>Grand Canyon 8-13</i>
9:45 - 10:10am	Overcoming the blood-brain barrier, and in particular how it pertains to therapeutic resistance <i>Jann Sarkaria</i>	9:45 - 10:10am	Palliative and supportive care for neuro-oncology patients <i>Deborah Forst</i>
10:10 - 10:35am	Mismatch repair, DDR in glioma treatment resistance <i>Ranjit Bindra</i>	10:10 - 10:35am	Advance care planning and serious illness conversations <i>Tobias Walbert</i>
10:35 - 11:00am	Recurrent IDH1/2-mutant glioma <i>Daniel Cahill</i>	10:35 - 11:00am	Fertility, family planning and genetic considerations <i>Jacqueline Stone</i>
11:00 - 11:25am	State of the field of immunotherapy for brain tumors <i>Duane Mitchell</i>	11:00 - 11:25am	Survivorship issues in pediatric brain tumor patients <i>Natasha Pillay Smiley</i>
11:25 - 11:50am	Immunotherapy for brain tumors - challenges, what is working what is not <i>Hideho Okada</i>	11:25 - 11:50am	Practical approaches to cognitive rehabilitation <i>Christina Weyer-Jamora</i>
11:50 - 12:50pm	LUNCH <i>Ballroom Foyers</i> Women in Neuro-Oncology (WiN) Committee Luncheon <i>Grand Sonoran A-D</i>		

CONCURRENT AFTERNOON SESSIONS 12:50 - 2:55pm

12:50 - 2:55pm	Resistance to Therapy - Molecular Therapy <i>Moderator: Michelle Monje</i> <i>Grand Canyon 1-7</i>	12:50 - 2:55pm	Medical Complications of Therapy or Survivorship <i>Moderators: Christina Amidei, Deborah Forst</i> <i>Grand Canyon 8-13</i>
12:50 - 1:15pm	Single-cell heterogeneity of genomic alterations, and the associated mechanisms of glioma resistance <i>Keith Ligon</i>	12:50 - 1:15pm	Managing tumor-related epilepsy <i>Edward Avila</i>
1:15 - 1:40pm	Overcoming resistance to targeted therapies <i>Ronald DePinho</i>	1:15 - 1:40pm	Updates in venous thromboembolic disease in brain tumor patients <i>James Perry</i>
1:40 - 2:05pm	Extrachromosomal DNA in therapeutic resistance <i>Paul Mischel</i>	1:40 - 2:05pm	Best practices in the management of cerebral edema in primary and metastatic disease <i>Patrick Wen</i>
2:05 - 2:30pm	Stem cell biology and the mechanisms of glioma resistance <i>Luis Parada</i>	2:05 - 2:30pm	Neurologic complications of immune-based therapies <i>Sudhakar Tummala</i>
2:30 - 2:55pm	Mechanisms mediating glioma invasion of the SVZ, a reservoir for recurrent glioma <i>Michelle Monje</i>	2:30 - 2:55pm	Neurologic complications of targeted therapies <i>Eudocia Lee</i>

2:55 - 3:15pm **BREAK** *Ballroom Foyers*

AFTERNOON JOINT SESSION 3:15 - 4:55pm *Grand Canyon 1-7*

Moderators: Christina Amidei, Ranjit Bindra, Daniel Cahill, Deborah Forst, Duane Mitchell, Michelle Monje

3:15 - 3:55pm	Keynote Presentation: Neurotoxic side-effects of chemotherapy, a survivor and researcher's perspective <i>Victoria Forster</i>
3:55 - 4:25pm	Panel Discussion: Therapy resistance <i>Keith Ligon, Michael Taylor, Ranjit Bindra, Daniel Cahill, Duane Mitchell, Michelle Monje</i>
4:25 - 4:55pm	Panel Discussion: Palliative care <i>Edward Avila, Eudocia Lee, James Perry, Natasha Pillay-Smiley, Jacqueline Stone, Christina Weyer Jamora</i>
4:55pm	ADJOURN

5:30 - 7:30pm **Town Hall Meeting** Hot topics in neuro-oncology - *Light refreshments at 5:15pm* *Submit questions on mobile app*
Moderators: Omar Arnaout, Glenn Lesser, WK Alfred Yung
Grand Canyon 1-7

- Is chemo-alone initial approach justifiable in oligodendroglioma? *Roger Stupp, Martin van den Bent*
- Hippocampal avoidance WBRT: breakthrough or fad? *Vinai Gondi, Steve Braunstein*
- Immunotherapy for GBM. Should we move on? *Michael Weller, Duane Mitchell*

5:30 - 7:30pm **Industry Supported Symposia**
Not sponsored by The University of Texas MD Anderson Cancer Center

Neurofibromatosis Type 1: Exploring emerging treatment approaches *Grand Sonoran E*
Supported by Medscape through an unrestricted educational grant from AstraZeneca Pharmaceuticals LP.

Brainstorming personalized care strategies in glioblastoma: Rethinking and refining therapeutic algorithms with tumor treating fields and novel systemic approaches *Grand Saguaro North*

Supported by Medical Learning Institute, Inc.; PVI, PeerView Institute for Medical Education; and the American Brain Tumor Association through an educational grants from Bayer HealthCare Pharmaceuticals Inc. and Novocure.

7:30 - 8:30pm **Young Investigator's Career Development and Networking Session** *Pre-registration required*
Wildflower Ballroom

7:30 - 10:00pm **SNO Welcome Reception** *Sunset Lawn*
Supported by Orbus Therapeutics



Abstract Codes

ACTR	Adult Clinical Trials – Non-immunologic
ANGI	Angiogenesis and Invasion
ATIM	Adult Clinical Trials – Immunologic
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CMET	CNS Metastasis
COMP	Computational Omics
CSIG	Cell Signaling and Signaling Pathways
DDIS	Drug Discovery

DRES	Drug Resistance
EPID	Epidemiology
EXTH	Experimental Therapeutics
GENE	Genetics and Epigenetics
HOUT	Health Outcome Measures
IMMU	Immunology
INNV	Innovations in Patient Care
LTBK	Late-Breaking



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NCMP	Neurological Complications of Cancer and Cancer Therapy
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RARE	Rare Tumors
RBTT	Randomized Brain Tumor Trials in Development
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TMIC	Tumor Microenvironment
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6:00 - 7:00am	MORNING YOGA <i>Capri Room</i>
6:45 - 8:30am	LIGHT CONTINENTAL BREAKFAST <i>Ballroom Foyers</i>

SUNRISE SESSIONS 7:00 - 8:30am

Advancing Immunotherapy for Brain Tumors *Grand Canyon 1-6*

Duane Mitchell, Hideho Okada (Co-chairs)

- Introduction and cellular immunotherapy, *Duane Mitchell*
- Oncolytic virus therapy and the immune system, *Smita Nair*
- Check point blockade-biological insights we learned and future directions, *Robert Prins*
- Future directions and combination strategies. A panel discussion, *Hideho Okada*

Joint ASNO/SNO Session: BBB Disruption, Old But New? *Grand Saguaro North*

Kuo-Chen Wei (Chair)

- The relevance of the blood brain barrier in brain cancer, *Jann Sarkaria*
- Neuronavigation-Guided Focused Ultrasound (NaviFUS) for transcranial blood-brain barrier opening clinical trial in recurrent glioblastoma patients, *Kuo-Chen Wei*
- Ultrasound-sensitizing nanoparticle complex for overcoming the blood-brain barrier: An effective drug delivery system *Chae-Yong Kim*
- Bypassing blood brain barrier with convection-enhanced drug delivery, *Ryuta Saito*

Brain Tumor Epidemiology in the Post-GWAS Era *Grand Canyon 7*

Melissa Bondy, Elizabeth Claus (Co-chairs)

- Sex-specific molecular signatures of glioma causation, *Elizabeth Claus*
- Novel mutations associated with familial glioma – new findings from GLIOGENE, *Melissa Bondy*
- LDscore regression identifies novel traits associated with glioma, *Quinn Ostrom*
- Pan-cancer analysis of brain tumors and other cancer types reveals pleiotropic risk loci, *Kyle Walsh*

Noncoding Epigenomics & Genomics of Glioma *Grand Canyon 8-13*

Houtan Noushmehr (Chair)

- Noncoding epigenomics and genomics of glioma, *Antonio Iavarone*
- Serum-based DNA methylation markers to diagnose and monitor glioma progression, *Houtan Noushmehr*
- The DNA methylation landscape of glioblastoma disease progression shows extensive heterogeneity in time and space *Adelheid Woehrler*

Clinical Update on the 2019 SNO Brain Metastases Conference *Grand Saguaro East-West*

Manmeet Ahluwalia (Chair)

- Immunotherapy and targeted therapy in brain metastases and the brain metastases meeting update, *Manmeet Ahluwalia*
- RANO efforts in brain metastases - updates and future directions, *Eudocia Lee*
- Surgery for brain metastases in the era of immunotherapy, *Wenya (Linda) Bi*
- Emerging controversies in the radiotherapeutic management of metastases, *Jing Li*

Transforming Metabolism to Therapeutics in Glioma, from Bench to Clinic *Grand Saguaro South*

Chunzhang Yang, Deliang Guo (Co-chairs)

- Tissue lineage determines NAD metabolic dependencies through gene amplification and enhancer remodeling, *Paul Mischel*
- Blockade of NRF2/glutathione metabolism as a synthetic lethality approach for IDH1-mutated glioma, *Chunzhang Yang*
- Landscape of metabolic function of PTPRZ1-MET fusion in secondary glioblastoma patients, *Jiang Tao*
- Altered metabolism and response to chemotherapy in IDH mutant glioma, *Daniel Cahill*
- Targeting lipid storage, a novel strategy for glioblastoma therapy, *Deliang Guo*

8:30 - 9:00am	BREAK <i>Ballroom Foyers</i>
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INNOVATION TO OVERCOME TUMOR RESISTANCE MAIN MEETING PROGRAM

Main Meeting Program Committee: Daphne Haas-Kogan, Monika Hegi, Michael Lim, David Schiff

9:00 - 9:05am	Scientific Meeting Welcome <i>Grand Canyon Ballroom</i> <i>Daphne Haas-Kogan, Monika Hegi, Michael Lim, David Schiff</i>
9:05 - 9:30am	Keynote Speaker Introduction: <i>Monika Hegi</i> Keynote Presentation: DNA repair mechanisms, <i>Alan D'Andrea</i>
9:30 - 9:55am	Keynote Speaker Introduction: <i>David Schiff</i> Keynote Presentation: Neuronal activity drives glioma progression, <i>Michelle Monje</i>
9:55 - 10:20am	Keynote Speaker Introduction: <i>Roel Verhaak</i> Keynote Presentation: Lung cancer EGFR and issues in developing therapies for GBM and novel targets <i>Matthew Meyerson</i>
10:20 - 10:30am	Lifetime Achievement Award Introduction: <i>Eric Bouffet</i> Lifetime Achievement Award Recipient: <i>Jonathan Finlay</i>
10:30 - 10:40am	Neuro-Oncology Community Service Award Introduction: <i>Chas Haynes</i> Neuro-Oncology Community Service Award Recipient: <i>Kathy Oliver</i>
10:40 - 10:50am	Jan Esenwein Public Service Award Introduction: <i>Susan Chang</i> Jan Esenwein Public Service Award Recipient: <i>Kay Verble</i>
10:50 - 11:20am	Presidential Address: <i>Patrick Wen</i>
11:20 - 11:30am TMIC-18	Electrical circuit integration of glioma through neuron-glioma synapses and potassium currents <i>Venkatesh H, Morishita W, Geraghty A, Silverbush D, Gillespie S, Arzt M, Tam L, Ponnuswami A, Ni L, Woo P, Taylor K, Agarwal A, Regev A, Brang D, Vogel H, Hervey-Jumper S, Bergles D, Suvà M, Malenka R, Monje M</i>
11:30 - 11:40am PDCT-13	Entrectinib in children and adolescents with recurrent or refractory solid tumors including primary CNS tumors <i>Robinson G, Desai A, Gauvain K, Basu E, Dorris K, Maese L, Sabnis A, Foster J, Shusterman S, Yoon J, Weiss B, Abdelbaki M, Farid-Kapadia M, Meneses-Lorente G, Cardenas A, Hutchinson K, Bergthold G, Chow Maneval E, Fox E, Gajjar A</i> <i>Pediatric Clinical Research Abstract Award</i> <i>Supported by the Sontag Foundation</i>
11:40 - 11:50am PDTM-24	Pineoblastoma segregates into molecular subtypes with distinct clinicopathologic features: Report from the Rare Brain Tumour Consortium <i>Li B, Vasiljevic A, Dufour C, Ho B, Hwang E, Gururangan S, Hansford J, Laquerriere A, Delisle M, Fangusaro J, Forest F, Sumihito N, Toledano H, Birks D, Fan X, Fouladi M, Gajjar A, Gauchotte G, Hoffman L, Jones C, Loussouarn D, Mokhtari K, Pomeroy S, Rousseau A, Somers G, Taylor M, Ziegler D, Lu M, Hawkins C, Grundy R, Jouvet A, Bouffet E, Hill D, Huang A</i> <i>Pediatric Basic Science Abstract Award</i>
11:50 - 12:00pm LTBK-08	Toca 511 and Toca FC versus standard of care in patients with recurrent high grade glioma <i>Cloughesy T, Petrecca K, Walbert T, Butowski N, Salacz M, Perry J, Damek D, Bota D, Bettegowda C, Zhu J, Iwamoto F, Placantonakis D, Martinez N, Elder J, Kaptain G, Cachia D, Moshel Y, Brem S, Picconi D, Tran N, Nam D, Park C, Landolfi J, Tran D, Ramakrishna R, Fink K, Heros D, Zadeh G, Nicholas G, Mehta V, Robins H, Chen C, Pitz M, Heth J, Nagpal S, Pearlman M, Ahluwalia M, Mohile N, Merrell R, Schiff D, Thompson R, Davis R, Macdonald D, Kheoh T, Kabbinnavar F, Lossos A, Vogelbaum M</i>
12:00 - 1:30pm	LUNCH <i>Ballroom Foyers</i>
	LUNCHTIME TUTORIALS AND EDUCATIONAL SESSIONS
12:15 - 1:15pm	Meet the Editors <i>Grand Sanoran H-I</i> <ul style="list-style-type: none"> Editor-in-Chief, <i>Neuro-Oncology</i>, <i>Kenneth Aldape</i> Editor-in-Chief, <i>Neuro-Oncology Practice</i>, <i>Susan Chang</i> Editor-in-Chief, <i>Neuro-Oncology Advances</i>, <i>Gelareh Zadeh</i>
12:15 - 1:15pm	Insight into the Brain Metastasis Journey: Survey Results from Patients, Caregivers and Physicians <i>Desert Suites IV&V</i> <i>Manmeet Ahluwalia, Priscilla Brastianos, Ralph DeVitto, Nicole Willmarth</i>

MAIN MEETING FRIDAY, NOVEMBER 22

12:15 - 1:15pm	Big Data, Small Sample Sizes: Statistical Design and Challenges <i>Grand Saguaro South</i> <i>Annette Molinaro (Chair)</i> <ul style="list-style-type: none"> Small sample sizes in clinical studies with cancer gene panels, <i>Annette Molinaro</i> Small sample sizes in xenograft studies, <i>Jeanette Eckel-Passow</i> Small sample sizes in sequencing studies, <i>Denise Scholtens</i>
12:15 - 1:15pm	Individualized Approaches to Radiotherapy for Gliomas <i>Grand Saguaro East-West</i> <i>Michelle Kim, Kristin Redmond (Co-chairs)</i> <ul style="list-style-type: none"> Harnessing radiobiology through alternative dose fractionation schemes, <i>Kristin Redmond</i> Utilizing advanced imaging to guide patient-specific radiation therapy, <i>Michelle Kim</i> Combining alternative modalities to individualize re-irradiation therapy, <i>Scott Solty</i>
12:15 - 1:15pm	SNO Young Investigator Luncheon - Grant Writing <i>Grand Sonoran A-D</i> <i>Milan Chheda, Eudocia Lee (Co-chairs)</i> <ul style="list-style-type: none"> Pre-grant planning process, <i>Maria Castro</i> The NIH perspective, <i>Jane Fountain</i>
12:15 - 1:15pm	Overcoming Bias in Neuro-Oncology: A Call to Action for Everyone <i>Grand Sonoran E</i> <i>Alyx Porter (Chair)</i> <ul style="list-style-type: none"> Bias in neuro-oncology: Gender and beyond, <i>Priya Kumthekar</i> Overcoming bias, <i>Swapna Reddy</i> A call to action for neuro-oncology, <i>Alyx Porter</i>
12:15 - 1:15pm	Partners in Care: The Clinician and the Basic Scientist <i>Grand Saguaro North</i> <i>Krishna Bhat, Erik Sulman (Co-chairs)</i> <ul style="list-style-type: none"> Introduction, <i>Krishna Bhat, Erik Sulman</i> Interface between the lab and the operating room, <i>Dimitris Placantonakis</i> Biologic rationale for radiation modalities, <i>Erik Sulman</i> Translating a laboratory discovery into a clinical trial, <i>Nicholas Butowski</i> Discussion, <i>Krishna Bhat</i>
12:15 - 1:15pm	Industry Supported Symposia <i>Not sponsored by The University of Texas MD Anderson Cancer Center</i> <p>Chart the path, stay the course: Perspectives on managing and living with GBM <i>Grand Sonoran F</i> <i>Supported by Novocure</i></p> <p>MDNA55, an IL4-receptor targeted immunotoxin for treatment of recurrent glioblastoma <i>Grand Sonoran G</i> <i>Supported by Medicenna</i></p> <p>SRS without the bunker: Initial clinical experience with ZAP-X gyroscopic radiosurgery <i>Grand Sonoran J-K</i> <i>Supported by Zap Surgical</i></p>

CONCURRENT SESSIONS 1:30 - 5:00pm

1:30 - 3:00pm CONCURRENT SESSION 1A

	Adult Clinical Trials I/Radiation <i>Grand Canyon 1-6</i> <i>Moderators: Evanthia Galanis, Michael Weller</i>
1:30 - 1:40pm ACTR-58	Baseline requirements for novel agents being considered for brain cancer efficacy trials: Report of an ABTC Workshop <i>Grossman S, Romo C, Rudek-Renaut M, Supko J, Fisher J, Nabors B, Wen P, Peereboom D, Ellingson B, Ye X</i>
1:40 - 1:50pm ACTR-24	A randomized phase II trial of veliparib (V), radiotherapy (RT) and temozolomide (TMZ) in patients (pts) with unmethylated MGMT (uMGMT) glioblastoma (GBM): The VERTU study <i>Khasraw M, McDonald K, Rosenthal M, Lwin Z, Ashley D, Wheeler H, Barnes E, Foote M, Koh E, Sulman E, Back M, Buckland M, Sim H, Fisher L, Leonard R, Hall M, Yip S, Simes J</i>
1:50 - 2:00pm ACTR-14	A prospective randomized study of concurrent chemoradiotherapy with temozolomide versus radiotherapy alone in patients with IDH wild-type/TERT promoter mutation grade II/III gliomas <i>Chen Y, Liu Y, Shan X, Qiu X</i>

MAIN MEETING FRIDAY, NOVEMBER 22

- 2:00 - 2:10pm
ACTR-04 **BIOMARK: A phase II study of bevacizumab beyond progression for newly diagnosed glioblastoma: Safety, efficacy and prospective biomarker analysis**
Ichimura K, Nagane M, Kato M, Narita Y, Aoki T, Tanaka S, Mukasa A, Wakabayashi T, Uzuka T, Nakamura H, Arakawa Y, Suehiro S, Nakada M, Kitahara M, Hibiya Y, Narushima D, Onuki R, Morita S, Nishikawa R
- 2:10 - 2:20pm
ACTR-32 **NRG Oncology RTOG 1205: Randomized phase II trial of concurrent bevacizumab and re-irradiation vs. bevacizumab alone as treatment for recurrent glioblastoma**
Tsien C, Pugh S, Dicker A, Raizer J, Matuszak M, Lallana E, Huang J, Algan O, Taylor N, Portelance L, Villano J, Hamm J, Oh K, Ali A, Kim M, Lindhorst S, Mehta M
- 2:20 - 2:30pm
ACTR-13 **Final results with chemoradiotherapy for anaplastic oligodendrogial tumors from NRG Oncology/RTOG 9402**
Lassman A, Won M, Cairncross J, Shaw E, Ashby L, Souhami L, Laack N, Fink K, Macdonald D, Bahary J, Hartford A, Whitton A, Werner-Wasik M, Laperriere N, Suh J, Robinson C, Mehta M
- 2:30 - 2:40pm
LTBK-12 **EORTC 26951, randomized study of adjuvant PCV after 59.4 Gy radiotherapy: very long term follow-up**
van den Bent M, Hoang-Xuan K, Brandes A, Kros J, Kouwenhoven M, Taphoorn M, Delattre J, Bernsen H, Frenay M, Synhaeve N, Weller M, Enting R, French P, Dinjens W, Golfopoulos V, Gorlia T
- 2:40 - 2:45pm
ACTR-07 **Long-term outcomes from intergroup NCCTG 86-72-51 (Alliance): Final report of a phase III prospective randomized trial of high dose versus low dose radiation in adult supratentorial low-grade glioma**
Breen W, Anderson S, Carrero X, Brown P, Ballman K, O'Neill B, Curran W, Abrams R, Laack N, Levitt R, Galanis E, Buckner J, Shaw E
- 2:45 - 2:50pm
ACTR-46 **Tumor Treating Fields combined with radiotherapy and temozolomide for the treatment of newly diagnosed glioblastoma: Final results from a pilot study**
Grossman R, limon D, Bokstein F, Blumenthal D, Ben Harush C, Ram Z
- 2:50 - 2:55pm
ACTR-66 **A phase 1, open-label, perioperative study of ivosidenib (AG-120) and vorasidenib (AG-881) in recurrent IDH1 mutant, low-grade glioma: Updated results**
Mellinghoff I, Cloughesy T, Wen P, Taylor J, Maher E, Arrillaga-Romany I, Peters K, Choi C, Ellingson B, Lin A, Thakur S, Nicolay B, Lu M, Le K, Yin F, Tai F, Schoenfeld S, Pandya S, Hassan I, Steelman L, Clarke J
- 2:55 - 3:00pm **Concurrent Session 1A: Q&A** *Submit on mobile app*

3:00 - 3:15pm **BREAK** *Ballroom Foyers*

1:30 - 3:00pm CONCURRENT SESSION 1B

Practical and Applied Neuro-Oncology *Grand Canyon 8-13*

Moderators: Jaishri Blakeley, Robert Caveliere

- 1:30 - 1:40pm
EPID-25 **How many patients in a real world glioblastoma population meet eligibility criteria in clinical trials?**
Skaga E, Skretteberg M, Johannesen T, Brandal P, Vik-Mo E, Helseth E, Langmoen I
- 1:40 - 1:50pm
NCOG-07 **Cognitive sequelae of radiotherapy in low-grade glioma patients 26 years after initial diagnosis: final report**
den Otter P, Lorenz L, Reijneveld J, de Witt Hamer P, Taphoorn M, Kouwenhoven M, Snijders T, Lie S, Douw L, Klein M
- 1:50 - 2:00pm
QOLP-21 **Long-term follow-up of germ cell tumor survivors**
Matsutani T, Horiguchi K, Ikegami S, Hirono S, Murai H, Saeki N, Iwade Y
- 2:00 - 2:05pm **Concurrent Session 1B: Discussant** *Susan Chang*
- 2:05 - 2:10pm
HOUT-10 **Treatment outcome in Adolescents and Young Adults (AYAs) with glioblastoma**
An J, Chennamadhavuni A, Mott S, Garje R
- 2:10 - 2:15pm
HOUT-19 **The short-term overall survival associated with single- vs. multi-agent chemotherapeutic regimens for 1p/19q-codeleted WHO grade III anaplastic oligodendrogliomas: a national evaluation**
Touat M, Harary M, Kavouridis V, Smith T, Iorgulescu B
- 2:15 - 2:20pm
HOUT-22 **Evaluating clinical impact utilizing the RANO-PRO Collaborative's standardized priority constructs**
Vera E, Gilbert M, Aboud O, Antony R, Boris L, Bryla C, Burton E, Cordova C, Crandon S, Leggiero N, Penas-Prado M, Reyes J, Siegel C, Theeler B, Wall K, Wu J, Armstrong T

MAIN MEETING FRIDAY, NOVEMBER 22

2:20 - 2:25pm INNV-21	In newly-diagnosed glioblastoma, frailty/sarcopenia predicts 30d morbidity & 30d, 90d, and overall mortality as accurately as current standards <i>Zakaria H, Chandra A, Macki M, Robin A, Walbert T, Chang V, Kalkanis S, Lee I</i>
2:25 - 2:30pm QOLP-04	Calculating the net clinical benefit in brain tumor trials by combining survival and health-related quality of life data using two methods: quality adjusted survival effect sizes and joint modelling <i>Coomans M, Dirven L, Bottomley A, van den Bent M, Sloan J, Stupp R, Weller M, Reijneveld J, Taphoorn M, Aaronson N, Baumert B, Brandes A, Chinot O, Coens C, Gorlia T, Herrlinger U, Keime-Guibert F, Malmström A, Martinelli F, Talacchi A, Wick W</i>
2:30 - 2:35pm	Concurrent Session 1B: Q&A Group 1
2:35 - 2:40pm HOUT-11	Extensive brainstem infiltration, not mass effect, is a common feature of end-stage cerebral glioblastomas <i>Drumm M, Dixit K, Grimm S, Kumthekar P, Lukas R, Raizer J, Kam K, McCord M, Sachdev S, Kruser T, Steffens A, Javier R, McCortney K, Horbinski C</i>
2:40 - 2:45pm EPID-19	Shared genomic architecture of glioma and neuro-cognitive and neuro-psychiatric traits revealed by LD-Score regression <i>Walsh K, Ostrom Q, Zhang C, Edelson J, Shen E, Byun J, Han Y, GICC Collaborators, Amos C, Bondy M</i>
2:45 - 2:50pm QOLP-09	Impact of glioblastoma (GBM) patients' clinical and treatment characteristics on caregiver burden and quality of life (QoL) <i>Au T, Willis C, Peters K, Colman H, Cohen A, Nghiemphu P, Taylor J, Reblin M, Ormond D, Willmarth N, Menon J, Ma J, Singh P, Marshall A, Watanabe A, Korytowsky B, Stenehjem D, Brixner D</i>
2:50 - 2:55pm QOLP-25	Critical elements of neuro-oncology caregiver support <i>Page M, Woodall M, Rossi R, Taylor J, Chang S</i>
2:55 - 3:00pm	Concurrent Session 1B: Q&A Group 2 <i>Submit on mobile app</i>
3:00 - 3:15pm	BREAK <i>Ballroom Foyers</i>
1:30 - 3:00pm	CONCURRENT SESSION 1C
	Microenvironment/Angiogenesis and Invasion <i>Grand Canyon 7</i> <i>Moderators: Krishna Bhat, Simone Niclou</i>
1:30 - 1:40pm TMIC-07	Symbiotic macrophage-glioma cell interactions reveal synthetic lethality in PTEN null glioma <i>Chen P, DePinho R, Alan W</i>
1:40 - 1:50pm TMIC-27	Glutamatergic neuron-glioma synapses drive brain tumour progression <i>Venkataramani V, Tanev D, Strahle C, Studier-Fischer A, Fankhauser L, Kessler T, Losada Perez M, Körber C, Kardorff M, Ratliff M, Xie R, Horstmann H, Messer M, Paik S, Knabbe J, Sahm F, Kurz F, Acikgoez A, Herrmannsdörfer F, Agarwal A, Bergles D, Chalmers A, Miletic H, Turcan S, Mawrin C, Hänggi D, Liu H, Casas Tinto S, Wick W, Winkler F, Kuner T</i>
1:50 - 2:00pm TMIC-52	Reactive astrocytes aid the evolution of immunosuppressive environment and drive oncogenic signaling in glioblastoma <i>Heiland D, Ravi V, Behringer S, Wurm J, Beck J, Schnell O</i>
2:00 - 2:10pm TMIC-06	Myeloid populations and the effect of neoadjuvant PD-1 inhibition in the glioblastoma microenvironment: A surfaceomic and transcriptomic dissection at the single-cell level <i>Mochizuki A, Lee A, Orpilla J, Kienzler J, Galvez M, Chow F, Davidson T, Wang A, Everson R, Liao L, Cloughesy T, Prins R</i>
2:10 - 2:20pm TMIC-29	Metabolic interactions between treatment-resistant slow-cycling cells and the immune system in high-grade glioma <i>Sayour E, Yang C, Tian G, Grippin A, Dajac M, Nazareth B, Andrews M, Karachi A, Mendez-Gomez H, Stover B, Moore G, Flores-Toro J, Divita B, Kresak J, Rahman M, Flores C, Huang J, Harrison J, Mitchell D, Deleyrolle L</i>
2:20 - 2:25pm ANGI-02	Genome-wide shRNA screen identifies candidate genes driving glioblastoma invasion <i>Schuster A, Neirinckx V, Klein E, Nazarov P, Oudin A, Muller A, Azuaje F, Herold-Mende C, Klink B, Niclou S</i>
2:25 - 2:30pm ANGI-03	Pharmacological targeting of apelin/APLNR signaling blunts therapy resistance to VEGFA/VEGFR2 anti-angiogenic treatment in glioblastoma <i>Kälén R, Mastrella G, Hou M, Li M, Stoecklein V, Zdouc N, Volmar M, Miletic H, Reinhard S, Herold-Mende C, Kleber S, Eisenhut K, Gargiulo G, Synowitz M, Vescovi A, Harter P, Penninger J, Wagner E, Mittelbronn M, Bjerkvig R, Hambardzumyan D, Schüller U, Tonn J, Radke J, Glass R</i>

2:30 - 2:35pm TMIC-12	Tumor edge-destined cells in GBM cells in a cell-intrinsic mechanism <i>Yamashita D, Minata M, Yu H, Zhang S, Li C, Flanary V, Ghosh S, Lee Y, Cho H, Botta D, Guo X, Ozaki S, Yamaguchi S, Komarova S, Bastola S, Crossman D, Nabors L, Markert J, Gu Z, Skolnick J, Zamboni N, Lund F, Nam D, Nakano I</i>
2:35 - 2:40pm TMIC-25	Modification of extracellular matrix enhances oncolytic adenovirus immunotherapy in glioblastoma <i>Kiyokawa J, Kawamura Y, Martuza R, Rabkin S, Shah K, Wakimoto H</i>
2:40 - 2:45pm TMIC-37	Intercellular communication between normal and tumor cells in glioma microenvironment <i>Hossain A, Hasan I, Adachi S, Ledbetter D, McDonald M, Gumin J, Daou M, Phillips L, Parker-Kerrigan B, Lang F</i>
2:45 - 2:50pm TMIC-61	Role of CX3CR1 signaling in malignant transformation of gliomas <i>Lee S, Latha K, Rao G</i>
2:50 - 3:00pm	Concurrent Session 1C: Q&A <i>Submit on mobile app</i>
3:00 - 3:15pm	BREAK <i>Ballroom Foyers</i>
3:15 - 5:00pm	CONCURRENT SESSION 2A
	Adult Clinical Trials II/Immunology Pre-Clinical I <i>Grand Canyon 1-6</i> <i>Moderators: Benjamin Purow, Reena Thomas</i>
3:15 - 3:25pm ACTR-50	Preservation of neurocognitive function & patient-reported symptoms with hippocampal avoidance (HA) during whole-brain radiotherapy (WBRT) for brain metastases: Long-term results of NRG Oncology CC001 <i>Armstrong T, Deshmukh S, Brown P, Gondi V, Benzinger T, Gilbert M, Tome W, Wefel J, Bruner D, Roberge D, Kundapur V, Devisetty K, Shah S, Usuki K, Baschnagel A, Stea B, Yoon H, Li J, Laack N, Mehta M, Kachnic L</i>
3:25 - 3:35pm ACTR-30	Updated efficacy and safety of dabrafenib plus trametinib in patients with recurrent/refractory BRAF V600E-mutated high-grade glioma (HGG) and low-grade glioma (LGG) <i>Wen P, Stein A, van den Bent M, De Greve J, Dietrich S, De Vos F, von Bubnoff N, van Linde M, Lai A, Prager G, Campone M, Fasolo A, Lopez-Martin J, Kim T, Mason W, Hofheinz R, Blay J, Cho D, Gazzah A, Gomez-Roca C, Yachnin J, Boran A, Burgess P, Palanichamy I, Gasal E, Subbiah V</i>
3:35 - 3:45pm CMET-32	DNA methylation alterations in lung adenocarcinomas that develop brain metastases <i>Zuccato J, Mamatjan Y, Aldape K, Zadeh G</i>
3:45 - 3:55pm CMET-36	Immunotherapy versus standard of care in melanoma brain metastases with known BRAF status <i>Barnett A, Sagar S, Lauko A, Wei W, Chao S, Peereboom D, Stevens G, Angelov L, Yu J, Murphy E, Mohammadi A, Suh J, Barnett G, Ahluwalia M</i>
3:55 - 4:05pm CMET-22	Capmatinib (INC280) in METΔex14-mutated advanced non-small cell lung cancer (NSCLC): Efficacy data from the phase 2 GEOMETRY mono-1 study <i>S. Heist R, Seto T, Han J, Reguart N, B. Garon E, J. M. Groen H, S. W. Tan D, Hida T, de Jonge M, V. Orlov S, F. Smit E, Souquet P, Vansteenkiste J, Le Mouhaer S, Robeva A, Waldron-Lynch M, Giovannini M, Wolf J</i>
4:05 - 4:10pm RTHP-28	TTFields treatment affects tumor growth rates: A post-hoc analysis of the pivotal phase 3 EF-14 trial <i>Urman N, Lavy-Shahaf G, Levi S, Bomzon Z</i>
4:10 - 4:15pm RTHP-02	Intracranial basal ganglia/thalamus germ cell tumours: Clinical characteristics, treatment outcomes, and quality of life of 211 patients from a single centre <i>Li B, Wang J, Li Y, Qiu X</i>
4:15 - 4:20pm CMET-33	Phase II study of palbociclib in brain metastases harboring CDK pathway alterations <i>Brastianos P, Cohen J, Wang N, Lee E, Ligibel J, Chukwueke U, Keeley M, Oh K, White M, Gerstner E, Batchelor T, Lawrence D, Ryan D, Iafrate A, Giobbie-Hurder A, Flaherty K, Santagata S, Carter S, Cahill D, Sullivan R</i>
4:20 - 4:25pm	Concurrent Session 2A: Q&A Group 1 <i>Submit on mobile app</i>
4:25 - 4:30pm IMMU-47	RNA-nanoparticle vaccines are safe and immunologically active in client-owned canines with terminal gliomas <i>Carrera-Justiz S, Stover B, Milner R, Weidert F, Huang J, Mitchell D, Mendez-Gomez H, Sayour E</i>

MAIN MEETING FRIDAY, NOVEMBER 22

- 4:30 - 4:35pm
IMMU-07 Cellular immunotherapy to overcome temozolomide induced T cell exhaustion in glioblastoma
Karachi A, Dastmalchi F, O'Malley A, Saia M, Mitchell D, Rahman M
- 4:35 - 4:40pm
IMMU-28 Targeting immunosuppressive myeloid derived suppressor cells via MIF/CD74 signaling axis to attenuate GBM growth
Alban J, Bayik D, Otvos B, Grabowski M, Ahluwalia M, Bucala R, Vogelbaum M, Lathia J
- 4:40 - 4:45pm
IMMU-23 Targeting metastatic and CNS tumors via mannan-BAM, TLR ligands and anti-CD40 antibody
Wang H, Medina R, Caisova V, Uher O, Zenka J, Pacak K, Zhuang Z
- 4:45 - 4:50pm
IMMU-09 Combination immune treatment of a highly aggressive orthotopic murine glioblastoma with checkpoint blockade and multi-valent neoantigen vaccination
Liu C, Schaettler M, Bowman-Kirigin J, Kobayashi D, Miller C, Johanns T, Dunn G
- 4:50 - 4:55pm
IMMU-45 CAR-T treatment of novel mouse model of EGFRvIII+ GBM mirrors clinical trial outcomes and provides a syngeneic platform for the investigation of CAR-T mechanisms of action
Chuntova P, Yamamichi A, Naka R, Hou Y, Okada H
- 4:55 - 5:00pm **Concurrent Session 2A: Q&A Group 2** *Submit on mobile app*

3:15 - 5:00pm CONCURRENT SESSION 2B

Molecular Pathology *Grand Canyon 7*

Moderators: Craig Horbinski, Adriana Olar

- 3:15 - 3:25pm
PATH-15 Identification of subsets of IDH-mutant glioblastomas with distinct epigenetic and copy number alterations and stratified clinical risks
Li K, Chen H, Noushmehr H, Ng H
- 3:25 - 3:35pm
PATH-42 IDH-mutant lower-grade astrocytomas can be stratified for risk by CDKN2A, CDK4 and PDGFRA copy number alterations
Yang R, Li K, Ng H
- 3:35 - 3:45pm
GENE-22 Genome-wide methylation profiling of glioblastoma extracellular vesicle DNA allows tumor classification
Ricklefs F, Maire C, Kolbe K, Holz M, Westphal M, Schüller U, Lamszus K
- 3:45 - 3:55pm
PATH-32 Genomic landscape and biology of medulloblastoma in adults
Goschzik T, zur Mühlen A, Dörner E, Waha A, Friedrich C, Hau P, Pietsch T
- 3:55 - 4:05pm
PATH-54 Multi-dimensional molecular characterization of patient-matched medulloblastoma at diagnosis and relapse
Kumar R, Deng M, Smith K, Liu A, Rudneva V, Dhall G, Kleese L, Bowers D, Chintagumpala M, Leary S, Nazarian J, Orr B, Robinson G, Pfister S, Korshunov A, Gajjar A, Jones D, Northcott P
- 4:05 - 4:15pm
PATH-18 CSF-derived circulating tumor DNA reflects disease course and clonal evolution in medulloblastoma
Liu A, Kumar R, Smith K, Robinson G, Gajjar A, Northcott P
- 4:15 - 4:25pm
GENE-57 Comparative molecular life history of spontaneous canine and human glioma
Amin S, Anderson K, Bourdreau B, Martínez E, Kocakavuk E, Johnson K, Barthel F, Varn, Jr. F, Kassab C, Ling X, Kim H, Barther M, Ngan C, Dickinson P, Packer R, Taylor A, Rossmeisl J, Heimberger A, Levine J, Verhaak R
- 4:25 - 4:35pm **Concurrent Session 2B: Discussant** *Kenneth Aldape*
- 4:35 - 4:40pm
PATH-63 Transcriptional signatures in histologic structures within glioblastoma tumors may predict personalized treatment sensitivity and survival
Kersch C, Claunch C, Ambady P, Bucher E, Schwartz D, Barajas R, Iliff J, Heiser L, Muldoon L, Neuwelt E
- 4:40 - 4:45pm
PATH-39 DNA mismatch repair enzyme immunohistochemistry is a rapid, effective screening test for hypermutated gliomas
McCord M, Steffens A, Kam K, Javier R, McCortney K, Horbinski C
- 4:45 - 4:50pm
PATH-48 The DNA methylation landscape of core and peripheral diffuse glioma regions shows little spatial subtype heterogeneity after considering tumor purity
Verburg N, Barthel F, Anderson K, Koopman T, Yaqub M, Hoekstra O, Lammertsma A, Barkhof F, Pouwels P, Reijneveld J, Heijmans J, Rozemuller A, Costello J, Taylor M, Vandertop W, Boellaard R, Johnson K, Wesseling P, de Witt Hamer P, Verhaak R

MAIN MEETING FRIDAY, NOVEMBER 22

4:50 - 4:55pm
PATH-44 Multiple biomarker algorithm based on CXCL13, IL-10, IL-2 receptor, and β 2-microglobulin in cerebrospinal fluid to diagnose central nervous system lymphoma
Sasayama T, Tanaka K, Maeyama M, Nakamizo S, Tanaka H, Nishihara M, Hirose T, Fujita Y, Kohmura E

4:55 - 5:00pm **Concurrent Session 2B: Q&A** *Submit on mobile app*

3:15 - 5:00pm CONCURRENT SESSION 2C

Drug Discovery/Drug Resistance and Experimental Therapeutics *Grand Canyon 8-13*

Moderators: Susan Chi, William Weiss

3:15 - 3:25pm
EXTH-27 Activating the immunity within the tumor using viroimmunotherapy: Delta-24-RGD oncolytic adenovirus armed with the immunopositive regulator GITRL
Rivera-Molina Y, Fueyo J, Jiang H, Nguyen T, Shin D, Youssef G, Fan X, Gumin J, Alonso M, Phadnis S, Lang F, Gomez-Manzano C

3:25 - 3:35pm
DRES-08 Clinical significance of hypermutation in gliomas
Touat M, Li Y, Boynton A, Spurr L, Iorgulescu B, Birzu C, Pal S, Ferrer-Luna R, Geduldig J, Bellamy C, Younan N, Baldini C, Verreault M, Guillerme E, Ammari S, Beuvon F, Mokhtari K, Alentorn A, Dehais C, Houiller C, Laigle-Donadey F, Lee E, Nayak L, Carpentier A, Cornu P, Mathon B, Bi W, Chiocca E, Alexandrescu S, Chi S, Haas-Kogan D, Alexander B, Huang R, Ligon A, Coulet F, Delattre J, Hoang-Xuan K, Meredith D, Santagata S, Duval A, Sanson M, Cherniack A, Wen P, Reardon D, Marabelle A, Idbaih A, Beroukhim R, Bandopadhyay P, Bielle F, Ligon K

3:35 - 3:45pm
DDIS-28 A high throughput screening platform to identify radiosensitizers for DIPG
Clutter M, Romero M, Becher O

3:45 - 3:55pm
DDIS-32 MEK inhibitors induces neuronal differentiation in EGFR amplified glioma stem like cells
Balasubramanian V, Park S, Piao Y, Martinez E Dong J, Mittal S, Khan S, Zhang Z, Sulman E, DeGroot J

3:55 - 4:05pm
DDIS-33 Selective and complete inhibition of mTORC1 by bi-steric mTOR inhibitors drives therapeutic response in glioblastoma
Fan Q, Lorenzana E, Luo X, Lea R, Aksoy O, An Z, Ozawa T, Wassarman D, Shokat K, Aggen J, Smith J, Singh M, Butowski N, Raleigh D, Weiss W

4:05 - 4:15pm
EXTH-47 Therapeutic reversal of prenatal pontine ID1 signaling in DIPG
Harris M, Yadav V, Stallard S, Woo R, Siddaway R, Qin T, Mullan B, Miklja Z, Siada R, Ravindran R, Cao X, Pasternak A, Castro M, Lowenstein P, Mody R, Chinnaiyan A, Hawkins C, McAllister S, Desprez P, Venneti S, Koschmann C

4:15 - 4:25pm **Concurrent Session 2C: Discussant** *David Reardon*

4:25 - 4:30pm
DDIS-03 Development of a novel class of cGAS agonists to trigger STING pathway-dependent innate immune responses against glioblastoma
Stegh A

4:30 - 4:35pm
DDIS-23 CMV-based plasmid DNA vaccine for GBM using the UNITE platform
Adhikari A, Toll B, Johnson Y, Marketon A, Wilson G, Macauley J, Heiland T

4:35 - 4:40pm
EXTH-11 Treatment with Delta-24-RGDOX of subcutaneous tumors results in abscopal effect eradicating intracranial melanomas
Jiang H, Shin D, Nguyen T, Alonso M, Lang F, Gomez-Manzano C, Fueyo J

4:40 - 4:45pm
EXTH-32 Development of EphA3 directed chimeric antigen receptor T cell therapy for the treatment of glioblastoma multiforme
Ruff M, Sakemura R, Cox M, Hefazi Torghabeh M, Roman Moreno P, Schick K, Sarkaria J, Kenderian S

4:45 - 4:50pm
DRES-09 Regulatory effects of the ciliary GTPase ARL13B on purine metabolism in GBM
Saathoff M, Shireman J, Ali E, Park C, Ben-Sahra I, Ahmed A

4:50 - 4:55pm
EXTH-58 Inhibition of DNA topoisomerase 1 and poly(ADP-ribose) polymerase synergistically induces cell death in glioblastoma with PTEN loss
Butler M, Su Y, Hwang L, Marzi L, Gilbert M, Pommier Y, Wu J

4:55 - 5:00pm **Concurrent Session 2C: Q&A** *Submit on mobile app*

5:30 - 7:30pm	Industry Supported Symposia <i>Not sponsored by The University of Texas MD Anderson Cancer Center</i> Novalis Circle symposium: Technological and clinical innovations in the treatment of intracranial metastases <i>Grand Sonoran E</i> <i>Supported by Brainlab</i> Tyrosine kinase inhibitors in glioblastoma: Refining precision medicine <i>Grand Saguaro South</i> <i>Supported by Clinical Cares Option through an unrestricted medical education grant from Bayer Healthcare Pharmaceuticals.</i>
7:30 - 8:34pm	E-Talks <i>Supported by Novocure</i> <i>Interactive electronic 4 minute presentations followed by traditional poster viewing and discussion</i> Group 1: Health Outcomes/Neurological Complications of Cancer and Cancer Therapy Quality of Life/ Radiotherapy/Surgical Therapy/CNS Metastases <i>Wildflower A</i> Group 2: Drug Resistance/Drug Discovery/Experimental Therapeutics <i>Wildflower B</i> Group 3: Imaging/Pediatric Tumor Models/Pediatric Clinical Trials/Molecular Pathology/Health Outcomes <i>Wildflower C</i>
7:30 - 9:30pm	Poster Session Traditional poster viewing <i>Ballroom Lawn</i>

E-TALKS

GROUP 1: Health Outcomes/Neurological Complications of Cancer and Cancer Therapy/ Quality of Life/Radiotherapy/Surgical Therapy/CNS Metastases *Wildflower A*

Moderators: Isabel Arrillaga-Romany, Jennie Taylor

7:30 - 7:34pm RTHP-20	Multi-institutional analysis of high-risk WHO grade II oligodendroglioma treated with adjuvant radiotherapy plus temozolomide (TMZ) versus procarbazine, lomustine, and vincristine (PCV) <i>Tom M, Routman D, Laack N, Frechette K, Park D, Wei W, Leyrer M, Peereboom D, Ahluwalia M, Chao S, Suh J, Murphy E</i>
7:34 - 7:38pm RTHP-13	Efficacy of fractionated gamma knife radiosurgery for orbital cavernous hemangioma: 10-year experience at a single institution <i>Kim K, Kim S, Lee J, Kong D, Seol H, Nam D</i>
7:38 - 7:42pm RTHP-34	Improved survival in CNS lymphoma with salvage low-dose whole-brain radiotherapy with focal boost and concurrent temozolomide <i>Selwa K, Laucis A, Lawrence T, Junck L, Cuneo K, Kim M, Wahl D, Umemura Y</i>
7:42 - 7:46pm CMET-27	Evaluation of dynamin 2 (DNM2) as a therapeutic target in leptomeningeal metastatic disease <i>Chernikova S, Polyak D, Deng J, Tsau S, Casey K, Johnson E, Bhambhani H, Khoeur L, Stanley G, Tran K, Connolly I, Joyce A, Li Y, von Eyben R, Nagpal S, Hayden Gephart M</i>
7:46 - 7:50pm QOLP-35	Outcomes and correlations between legacy quality of life measures (EORTC-C30/EORTC-BN20) and the electronic quality of life measuring system NIH-PROMIS in glioblastoma patients <i>Walbert T, Schultz L, Snyder J, Suneja A</i>
7:50 - 7:54pm QOLP-24	Patients'/parents' experiences of receiving Optune delivered tumor treatment fields: A Pediatric Brain Tumor Consortium Study: PBTC-048 <i>Lai J, Goldman S, Hwang E, Kocak M, Lulla R, Dhall G, Robison N, Onar-Thomas A, Dunkel I</i>
7:54 - 7:58pm QOLP-33	Acceptability randomized controlled trial a couples-based mind-body intervention for patients with high grade glioma and their partners <i>Milbury K, Weathers S, Durrani S, Li Y, Carmack C, Bruera E</i>
7:58 - 8:02pm QOLP-30	Clinical predictive model for the development of venous thromboembolism in glioblastoma <i>Yust-Katz S, Donthireddy V, Mandel J, Abunafeesa H, Patil N, Yadav D, Jabbour-Aida H, Wu J, Yuan Y, Tsavachidis S, Walbert T, Bondy M, Armstrong T</i>
8:02 - 8:06pm QOLP-06	Existential distress: Unaddressed concerns for adult neuro-oncology patients <i>Loughan A, Braun S, Husain M, Aslanzadeh F, Boutte R, Lanoye A</i>

E-TALKS

- 8:06 - 8:10pm
QOLP-36 The importance of sleep disturbance in primary brain tumor (PBT) patients: Clinical characteristics & co-occurrence with tumor-related & psychological symptoms
King A, Shuboni-Mulligan D, Vera E, Crandon S, Aboud O, Antony R, Boris L, Bryla C, Burton E, Cordova C, Gartland C, Grajkowska E, Penas-Prado M, Reyes J, Leggiero N, Siegel C, Theeler B, Wall K, Wu J, Gilbert M, Armstrong T
- 8:10 - 8:14pm
SURG-13 Day-case image-guided biopsy for brain tumours: A decade of experience from a single neurosurgical unit in the United Kingdom
Wykes V, McElligott S, Roach J, Duffill J, Weidmann C, Grundy P
- 8:14 - 8:18pm
NCMP-05 The incidence and impact of post-operative stroke in surgery for LGG
Berger A, Tzarfaty G, Costa M, Serafimova M, Korn A, Alfassi T, Aviram D, Kashinian A, Ram Z, Grossman R
- 8:18 - 8:22pm
NCOG-10 Relationship between cognitive function, mood, and functioning in glioma survivors
Van Dyk K, Heimberg B, Choi J, Raymond C, Wang C, Lai A, Cloughesy T, Ellingson B, Nghiemphu P
- 8:22 - 8:26pm
NCOG-09 Treatment decision making in the setting of advanced cancer
Triebel K, Maulhauser K, Fiveash J, Marrotta D, Gammon M, Vance D, Nabors L
- 8:26 - 8:30pm
NCOG-08 Cognitive deficits as a predictor of the course of treatment in diffuse glioma
Ijpelaar S, Van Kessel E, Van Zandvoort M, De Vos F, Verhoeff J, Robe P, Snijders T

GROUP 2: Drug Resistance/Drug Discovery/Experimental Therapeutics *Wildflower B*

Moderators: Mariella Filbin, Antonio Iavarone

- 7:30 - 7:34pm
DDIS-29 Brain-penetrant microtubule-targeting agent, ST-401, kills glioblastoma through a novel mechanism
Horne E, Xu C, Vicente J, Cimino P, Wagenbach M, Hamel E, Gussio R, Diaz P, Uhlenbruck B, Deckwerth T, Wordeman L, Holland E, Stella N
- 7:34 - 7:38pm
DRES-04 Long non-coding RNAs in glioblastoma tumor recurrence and therapy resistance
Stackhouse C, Gillespie G, Willey C
- 7:38 - 7:42pm
EXTH-33 Receptor pharmacology of ONC201: The first bitopic DRD2 antagonist for clinical neuro-oncology
Free R, Cuoco C, Prabhu V, Willette B, Day M, Anantharaman L, Sulli C, Davidson E, Deacon S, Rucker J, Charter N, Doranz B, Oster W, Stogniew M, Lane J, Sibley D, Allen J
- 7:42 - 7:46pm
EXTH-62 Stem cell delivery of oncolytic adenovirus DNX-2401 following surgical resection for the treatment of glioblastoma
Gopakumar S, Gumin J, Daou M, Ledbetter D, McDonald M, Hossain A, Hingtgen S, Ewend M, Lang F
- 7:46 - 7:50pm
TMIC-46 Glioma-induced synaptogenesis is enriched within functional connectivity network hubs and influences language processing in adult IDH WT glioblastoma
Krishna S, Kakaizada S, Valdivia C, Seo K, Raleigh D, Findlay A, Almeida N, Sudharshan R, Choudhury A, Brang D, Nagarajan S, Berger M, Monje M, Hervey-Jumper S
- 7:50 - 7:54pm
TMIC-40 YKL-40 as modulator of cancer stem cell phenotypic transitions in human glioblastomas
Guetta-Terrier C, Akosman B, Kamle S, Fajardo E, Fiser A, Lee C, Toms S, Elias J, Tapinos N
- 7:54 - 7:58pm
EXTH-39 Bench to Bedside Neuro-Oncology: Advocating For a Clinically Relevant Strategy
Zammar S, Madden D, Schreck K, Berens M, Dietrich J, Glantz M
- 7:58 - 8:02pm
EXTH-49 Therapeutic efficacy of engineered, hydrogel encapsulated bimodal MSC in glioblastoma stratified on cell surface receptor expression
Bhere D, Choi S, van de Donk P, Khalsa J, Hope D, Gortzak K, Kunnummal A, Reinshagen C, Ling H, Vasdev N, Ibn Essayed W, Golby A, Bi W, Lowe A, Wakimoto H, Revai Lechtich E, Shah K
- 8:02 - 8:06pm
ATIM-16 Validation of response to neoadjuvant anti-PD-1 immunotherapy in recurrent glioblastoma
Chow F, Mochizuki A, Lee A, Galvez M, Orpilla J, Everson R, Liao L, Cloughesy T, Prins R

E-TALKS

- 8:06 - 8:10pm
DRES-02 PARylation of MGMT by PARP is required for MGMT mediated Temozolomide-induced O6-methylguanine repair: A novel mechanism of MGMT action
Wu S, Gao F, Koul D, Yung A
- 8:10 - 8:14pm
TMIC-15 Hyperactivating the Hippo pathway effector TAZ differentially distorts the tumor microenvironment, promotes tumor-associated neutrophil infiltration, and phenocopies mesenchymal-glioblastoma
Yee P, Wei Y, Liu Z, Guo H, Vekariya U, Anderson B, Li W
- 8:14 - 8:18pm
TMIC-19 H⁺ extrusion protein Na/H exchanger in metabolic polarization of glioma-associated microglia/macrophages and tumor immunity
Hasan M, Guan X, Ahuja A, Castro M, Kohanbash G, Sun D
- 8:18 - 8:22pm
TMIC-60 Comprehensive spatial characterization of immune cells in the CNS brain tumor microenvironment
Kassab C, Zamler D, Gupta P, Srinivasan V, Rao G, Prabhu S, Huse J, Fuller G, Bruner J, Langford L, McCutcheon I, Ferguson S, Weinberg J, Wistuba I, Lang F, Bhat K, Heimberger A
- 8:22 - 8:26pm
EXTH-14 Pulsed electric fields for the treatment of brain tumors
Sharabi S, Last D, Daniels D, Cooper I, Bresler Y, Mardor Y
- 8:26 - 8:30pm
EXTH-12 Radiation enhances melanoma response to immunotherapy and synergizes with benzodiazepines to promote anti-tumor activity
Pomeranz Krummel D, Nasti T, Izar B, Xu M, Lowder L, Press R, Kaluzova M, Kallay L, Rupji M, Burnham A, Li G, Ahmed T, Rosen H, Connolly E, Keskin H, Ben Thomas M, Curran W, Kudchadkar R, Weinberg B, Olson J, Schniederjan M, Neil S, Su J, Lawson D, Cook J, Jenkins A, Kowalski J, Khan M, Sengupta S
- 8:30 - 8:34pm
TMIC-01 The dystroglycan receptor maintains glioma stem cells in the vascular niche
Day B, Lathia J, Bruce Z, Ensbeys K, Lim Y, Jamieson P, D'Souza R, Akgul S, Offenhauser C, Baumgartner U, Smith F, Li Y, Jurd C, Stringer B, Robertson T, Jeffree R, Johns T, Bhat K, Rich J, Campbell K, Boyd A

GROUP 3: Imaging/Pediatric Tumor Models/Pediatric Clinical Trials/Molecular Pathology/Health Outcomes *Wildflower C*

Moderators: Kristina Cole, Keith Ligon

- 7:30 - 7:34pm
PATH-12 Identifying molecular prognostic markers in IDHwt glioblastoma
Alnahhas J, Giglio P, Gonzalez J, Puduvalli V
- 7:34 - 7:38pm
PDTM-45 Mechanism of neural stem cell transformation by C11orf95-RELA translocations
Kupp R
- 7:38 - 7:42pm
HOUT-13 Clinical trials in glioblastoma: Learning from previous experiences towards optimal development of trial design
Balasubramanian A, Gunjur A, Parakh S, Cher L, Gan H
- 7:42 - 7:46pm
PDTM-27 The CRISPR-Cas9 system-mediated endogenous gene-rearrangement induced C11orf95-RELA fusion in vitro and in vivo that led to development of brain tumors
Takadera M, Ozawa T, Yamamoto T, Ichimura K
- 7:46 - 7:50pm
NIMG-66 Long-term follow-up of neurofibromatosis type 1 patients using whole-body MRI demonstrates dynamic changes in internal neurofibroma size
Ly J, Thalheimer R, Cai W, Bredella M, Merker V, Plotkin S, Jordan J
- 7:50 - 7:54pm
NIMG-73 Neurological Assessment in Neuro-Oncology (NANO) correlates with integrated Predictive Radiographic biOMarkers of Progressed high grade astrocytic Tumors (iPROMPT): a proposed supplement to RANO
Gatson N, Bross S, Lockard L, Leese E, Manikowski J, Mahadevan A, Conger A, Mongelluzzo G
- 7:54 - 7:58pm
PATH-05 Rapid Simultaneous IDH Mutation and MGMT Methylation Status Assessment in Glioma Patients using CRISPR-Cas9-targeted Nanopore Sequencing
Wongsurawat T, Jejaroenpun P, DeLoose A, Ussery D, Alkam D, Day J, Nookaew I, Rodriguez A

E-TALKS

- 7:58 - 8:02pm
PATH-13 Sex-linked tumoral MGMT status and outcomes in newly diagnosed glioblastoma
Barnett A, Saeed Bamashmos A, Ali A, Li H, Bosler D, Lathia J, Yeane G, Sagar S, Yu J, Murphy E, Chao S, Suh J, Mohammadi A, Stevens G, Angelov L, Peereboom D, Barnett G, Ahluwalia M
- 8:02 - 8:06pm
PATH-53 Immunological profiling of mutational and transcriptional subgroups in pediatric and adult high-grade gliomas
Bockmayr M, Klauschen F, Maire C, Rutkowski S, Westphal M, Lamszus K, Schüller U, Mohme M
- 8:06 - 8:10pm
PATH-55 Mutations of H3.3 and H3.1 in a large cohort of gliomas
Sumrall A, Mittal S, Phuphanich S, Heimberger A, Eschbacher J, Korn M, Gatalica Z, Pandey M, Xiu J
- 8:10 - 8:14pm
PDTM-29 Structure function and cell type determinants of C11orf95-RELA driven tumors in mice
Dunnack J, Randazzo E, Caines J, He J, LoTurco J
- 8:14 - 8:18pm
PDTM-15 Embryonic stem cell signature drives atypical teratoid/rhabdoid tumor development in human pluripotent stem cell-derived tumor model
Arakawa Y, Terada Y, Mineharu Y, Miyamoto S, Yamada Y
- 8:18 - 8:22pm
PDTM-16 Pediatric high grade glioma resources from the Children's Brain Tumor Tissue Consortium (CBTTC) and Pediatric Brain Tumor Atlas (PBTA)
Ijaz H, Koptyra M, Gaonkar K, Rokita J, Baubet V, Tauhid L, Zhu Y, Brown M, Lopez G, Zhang B, Diskin S, Vaksman Z, Mason J, Appert E, Lilly J, Lulla R, De Raedt T, Heath A, Felmeister A, Raman P, Nazarian J, Santi M, Storm P, Resnick A, Waanders A, Cole K
- 8:22 - 8:26pm
PDTM-28 An OTX2-PAX3 signalling axis regulates group 3 medulloblastoma cell fate
Zagozewski J, Shahriary G, Morrison L, Stromecki M, Fresnoza A, Palidwor G, Porter C, Forget A, Ayrault O, Hawkins C, Chan J, Saulnier O, Vladoiu M, Taylor M, Ramaswamy V, Werbowetski-Ogilvie T
- 8:26 - 8:30pm
PDTM-32 Resolving medulloblastoma cellular architecture by single-cell genomics
Bihannic L, Hovestadt V, Smith K, Filbin M, Shaw M, Baumgartner A, DeWitt J, Groves A, Mayr L, Weisman H, Richman A, Shore M, Goumnerova L, Rosencrance C, Carter R, Phoenix T, Hadley J, Tong Y, Houston J, Ashmun R, DeCuypere M, Sharma T, Ligon K, Pomeroy S, Rivera M, Rozenblatt-Rosen O, Ruser J, Wechsler-Reya R, Li X, Peyrl A, Gojo J, Kirchhofer D, Lötsch D, Czech T, Dorfer C, Haberler C, Geyeregger R, Halfmann A, Gawad C, Easton J, Pfister S, Regev A, Gajjar A, Orr B, Slavic I, Robinson G, Bernstein B, Suvà M, Northcott P

6:00am	REGISTRATION OPENS <i>Grand Canyon Foyer</i>
6:00 - 7:00am	MORNING YOGA <i>Capri Room</i>
6:45 - 8:30am	LIGHT CONTINENTAL BREAKFAST <i>Ballroom Foyers</i>

SUNRISE SESSIONS 7:00 - 8:30am

Challenges in Targeting Oncogenic Signaling Pathways in GBM *Grand Saguaro East-West*
Donald O'Rourke, Monika Hegi (Co-chairs)

- Challenges of targeting the EGFR, *Donald O'Rourke*
- Mechanisms of evading targeted treatments, *David Nathanson*
- Endpoints for translational clinical trials to improve success rates for targeted drugs, *Timothy Cloughesy*
- Successful targeting of oncogenic signaling pathways - what can we learn from the pan cancer experience, *Matthew Meyerson*

Clinical Trials in Meningiomas: Updates, Ongoing and New Proposed Trials *Grand Saguaro North*
Gelareh Zadeh (Chair)

- Update on ongoing trials - NRG, *Leland Rogers*
- Update on ongoing trials - ROAM, *Michael Jenkinson*
- Update on ongoing trials - Alliance, *Priscilla Brastianos*
- Update on ongoing trials - EORTC, *Michael Weller*
- Overview of ABTA meningioma survey results, *Farshad Nassiri*
- New proposals on quality of life: Outline of proposals: Quality of life studies, *Michael Jenkinson*
- New proposals on quality of life: Outline of Proposals: Quality of Life Studies, *Michael McDermott*
- ICOM clinical trials: Epigenetic modifiers in meningiomas, *Gelareh Zadeh*
- Diagnostic methylation validation, *Kenneth Aldape*

EAONO/SNO Status Update: New Developments in Diagnostics and Treatments *Grand Canyon 8-13*
Martin van den Bent, Tracy Batchelor (Co-chairs)

- Neoadjuvant pembrolizumab in recurrent glioblastoma, *Robert Prins*
- ONC 201 for H3K27M mutated GBM, *Isabel Arrillaga-Romany*
- Automated response assessment in recurrent glioblastoma, *Philipp Kickingereder*
- Use of methylation arrays in daily glioma and meningioma diagnostics, *Felix Sahm*
- The CATNON trial: what more to expect? *Martin van den Bent*

Neuro-Oncology of Women (N.O.W.): Considerations in Gender Affirmation, Sex Differences, Oncofertility, and Reproductive Choice
Na Tosha Gatson (Chair) Grand Saguaro South

- Introductions: Issues in N.O.W., session overview, faculty presenters, and an opening clinical case evaluation, *Na Tosha Gatson*
- Sex differences in CNS tumors: A focus on the science, epidemiology, and research considerations, *Joshua Rubin*
- Oncofertility and reproductive choice for women with brain tumors: Preserving fertility and navigating options for elective abortion, *Terri Woodard*
- Cancer in transgender people: Overview of risks, care challenges, and neuro-oncologic considerations, *Michael Goodman*
- Summary panel discussion and audience questions, *Na Tosha Gatson*

Next Generation Brain Tumor Models as the Basis for Therapeutic Discovery *Grand Canyon 7*
Frank Furnari (Chair)

- Glioblastomas derived from genetically modified pluripotent stem cells recapitulate pathobiology, *Frank Furnari*
- Genetically engineered and PDX models of pediatric high-grade glioma for mechanistic discovery and preclinical testing
Suzanne Baker
- Modeling complexity: Patient-specific glioma in cerebral organoids, *Howard Fine*
- A patient-derived glioblastoma organoid model and biobank recapitulates inter- and intra-tumoral heterogeneity, *Hongjun Song*

Targeting Molecular Alterations in High-Grade Brain Tumor *Grand Canyon 1-6*
Peter Hau, Carl Koschmann, Chris Jones (Co-chairs)

- Medulloblastoma in adults - An update, *Peter Hau*
- Targeting SHH MB PDX models with SMO inhibitors and mechanisms of resistance, *Marcel Kool*
- Precision medicine therapy selection and adaptive trial design in high-grade glioma, *Carl Koschmann*
- ACVR1 in DIPG - The right target? *Chris Jones*

8:30 - 9:00am	BREAK <i>Ballroom Foyers</i>
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MAIN MEETING PROGRAM

9:00 - 9:05am	Welcome <i>Grand Canyon Ballroom</i> <i>Daphne Haas-Kogan, Monika Hegi, Michael Lim, David Schiff</i>
9:05 - 9:28am	Keynote Speaker Introduction: <i>Michael Lim</i> Keynote Presentation: Creativity in the mind, <i>Charles Limb</i>
9:28 - 9:51am	Keynote Speaker Introduction: <i>Michael Lim</i> Keynote Presentation: Mechanisms of cold tumors and strategies to overcome them, <i>Thomas Gajewski</i>
9:51 - 10:14am	Keynote Speaker Introduction: <i>Daphne Haas-Kogan</i> Keynote Presentation: Structural approach to novel agents to overcome resistance, <i>Kevan Shokat</i>
10:14 - 10:47am	Victor Levin Award Introduction: <i>Victor Levin</i> Victor Levin Award Lecture: <i>Patrick Wen</i>
10:47 - 11:02am	BREAK <i>Ballroom Foyers</i>
11:02 - 11:12am NCOG-01	Neurocognitive function (NCF) and quality of life (QOL) results from a phase II study of temozolomide-based chemoradiotherapy regimen for high risk low-grade gliomas <i>Wefel J, Pugh S, Choucair A, Fisher B, Fox S, Meyers C, Ashby L, Mikkelsen T, Glass J, Yu M, Howard S, Movsas B, Mehta M</i>
11:12 - 11:22am ACTR-11	Second interim and 1st molecular analysis of the EORTC randomized phase III intergroup CATNON trial on concurrent and adjuvant temozolomide in anaplastic glioma without 1p/19q codeletion <i>van den Bent M, Erridge S, Vogelbaum M, Nowak A, Sanson M, Brandes A, Wick W, Clement P, Baurain J, Mason W, Wheeler H, Weller M, Aldape K, Wesseling P, Kros J, Tesileanu M, Golfinopoulos V, Gorlia T, Baumert B, French P</i>
11:22 - 11:30am	Abstract Discussion <i>David Schiff</i>
11:30 - 11:40am TMIC-20	Elimination of senescent astrocytes in the brain tumor microenvironment attenuates glioblastoma recurrence after radiotherapy <i>Fletcher-Sananikone E, Mukherjee B, Burma S</i> <i>Adult Basic Science Abstract Award</i> <i>Supported by the National Brain Tumor Society</i>
11:40 - 11:50am IMMU-40	Cancer immunoediting shapes the immune escape signature and clonal architecture in gliomas <i>Lamszus K, Mohme M, Maire C, Riecken K, Alawi M, Fehse B, Westphal M</i> <i>Adult Basic Science Abstract Award</i>
11:50 - 12:00pm ACTR-21	A randomized, double-blind, placebo-controlled phase 3 trial of depatuxizumab mafodotin (ABT-414) in Epidermal Growth Factor Receptor (EGFR) amplified (amp) newly diagnosed glioblastoma (nGBM) <i>Lassman A, Pugh S, Wang T, Aldape K, Gan H, Preusser M, Vogelbaum M, Sulman E, Won M, Zhang P, Moazami G, Macsai M, Gilbert M, Bain E, Blot V, Ansell P, Samanta S, Kundu M, Seidel C, De Vos F, Hsu S, Cardona A, Lombardi G, Bentsion D, Peterson R, Gedye C, Lebrun-Frénay C, Wick A, Curran W, Mehta M</i> <i>Adult Clinical Research Abstract Award</i> <i>Supported by the American Brain Tumor Association</i>
12:00 - 1:30pm	LUNCH <i>Ballroom Foyers</i>
	LUNCHTIME TUTORIALS AND EDUCATIONAL SESSIONS
12:15 - 1:15pm	Basic Science for the Practicing Neuro-Oncologist <i>Grand Sonoran E</i> <i>Vinay Puduvalli (Chair)</i> <ul style="list-style-type: none"> Stress response and protein processing in gliomas, <i>Vinay Puduvalli</i> Principles of viral therapies against gliomas - oncolytic and immunological aspects, <i>Frederick F Lang</i> Principles of cell and peptide vaccine therapies against gliomas, <i>Hideho Okada</i>
12:15 - 1:15pm	International Outreach Luncheon <i>Desert Suites III&V</i> <i>Jason Huse, Mustafa Khasraw (Co-chairs)</i> <ul style="list-style-type: none"> Tissue banking for cancer research in Sub-Saharan Africa, <i>Ernest Adjei</i> Recap of SNOSSA Cape Town Conference, <i>James Balogun, Edjah Nduom</i> International mentorship initiative, <i>Rimas Lukas, Carlos Romo</i> Travel scholarship award introductions & posters

12:15 - 1:15pm	Neuro-Oncology Trainee Forum <i>Grand Sonoran A-D</i> <i>Sylvia Kurz (Chair)</i> <ul style="list-style-type: none"> How to successfully launch an academic neuro-oncology career, <i>Sylvia Kurz</i> Understanding the promotion process and various pathways, <i>Jennifer Clarke</i> Early career development - do's and don'ts, <i>Isabel Arrillaga-Romany</i> Panel discussion, <i>Stephen Bagley, Maciej M. Mrugala, Jennifer Clarke, Isabel Arrillaga-Romany</i>
12:15 - 1:15pm	Challenging Conversation Made Easier - The Art and Science to Connect with Patients and Families in Difficult Situations <i>Grand Saguaro North</i> <i>Tobias Walbert (Chair)</i> <ul style="list-style-type: none"> "Talking about the white elephant in the room: We all will die one day" How to approach prognosis and how to introduce advance care planning and hospice without undermining hope, <i>Tobias Walbert</i> "Difficult conversations made easier" A primer on how to approach and to succeed having challenging conversations. Yes, it can be learned. <i>Alan Carver</i>
12:15 - 1:15pm	Computational Neuro-Oncology <i>Grand Saguaro East-West</i> <i>Spyridon Bakas (Chair)</i> <ul style="list-style-type: none"> Brain tumors analyses in the macroscopic scale, <i>Rivka Colen</i> Computational neuro-pathology: Brain tumors analyses in the microscopic scale, <i>Lee Cooper</i> Estimating oncogenic parameters via biophysical brain tumor growth modeling, <i>Andreas Mang</i>
12:15 - 1:15pm	High Yield Management of Common Tumors in Neurofibromatosis 1 and 2 <i>Desert Suites IV&VI</i> <i>Jaishri Blakeley, Scott Plotkin (Co-chairs)</i> <ul style="list-style-type: none"> Introduction and how I manage plexiform neurofibroma in people with NF1, <i>Jaishri Blakeley</i> How I manage optic pathway glioma in people with NF1, <i>Michael Fisher</i> How I manage vestibular schwannoma in people with NF2, <i>Scott Plotkin</i>
12:15 - 1:15pm	Self-renewal and Stemness in CNS Tumors <i>Grand Saguaro South</i> <i>Claudia Petritsch (Chair)</i> <ul style="list-style-type: none"> Modeling patient-specific gliomas with cerebral organoids, <i>Howard Fine</i> Stem cell hierarchies versus plasticity in BRAF mutant glioma, <i>Claudia Petritsch</i> Cancer stem cells in primary and metastatic CNS tumors, <i>Sheila Singh</i>
12:15 - 1:15pm	Industry Supported Symposia <i>Not sponsored by The University of Texas MD Anderson Cancer Center</i> Pushing and pulling immunotherapy with the use of radiation therapy <i>Grand Sonoran G</i> <i>Supported by Elekta</i> Consensus or controversy? The integration of novel therapies into the interdisciplinary management of non-small cell lung cancer with CNS metastases <i>Grand Sonoran F</i> <i>Supported by Research to Practice through an educational grant from AstraZeneca LP.</i> Overview of amino acid PET imaging for primary and secondary brain tumors <i>Grand Sonoran JK</i> <i>Supported by Blue Earth Diagnostics</i> GammaTile Therapy: Surgically targeted radiation therapy for recurrent high grade gliomas, meningiomas and brain metastases <i>Grand Sonoran HI</i> <i>Supported by GT Medical Technologies</i>

CONCURRENT SESSIONS 1:30 - 5:00pm

1:30 - 3:00pm	CONCURRENT SESSION 3A Meningioma/Benign Tumors <i>Grand Canyon 1-6</i> <i>Moderators: Gelareh Zadeh, Jennifer Gunel</i>
1:30 - 1:40pm TMOD-27	A neural crest cell subpopulation underlies intratumor heterogeneity in meningioma <i>Magill S, Vasudevan H, Seo K, Liu S, Hilz S, Villanueva-Meyer J, Choudhury A, Demaree B, Lim D, Braunstein S, Oberheim-Bush N, Ullian E, Aghi M, Theodosopoulos P, Sneed P, Abate A, Berger M, McDermott M, Costello J, Raleigh D</i>

MAIN MEETING SATURDAY, NOVEMBER 23

1:40 - 1:45pm MNGI-09	Meningioma with multiple drivers: Genomic landscape and clinical correlations <i>Li C, Tyrtova E, Youngblood M, Miyagishima D, Duran D, Montejo J, Özdoğan K, Sheth A, Zhao A, Fomchenko E, Clark V, Sohrabi S, Koljaka S, Li X, Pamir M, Avşar T, Kilic T, Zhu H, Gong Y, Bayri Y, Amankulor N, Bilgüvar K, Omay S, Huttner A, Simon M, Krischek B, Kalamarides M, Moliterno J, Erson-Omay E, Günel M</i>
1:45 - 1:50pm ACTR-09	A phase 0 pharmacodynamic and pharmacokinetic study of everolimus in vestibular schwannoma (VS) and meningioma patients <i>Karajannis M, Karajannis M, Goldberg J, Roland J, Sen C, Placantonakis D, Golfinos J, Allen J, Dunbar E, Plotkin S, Akshintala S, Schneider R, Deng J, Neubert T, Giancotti F, Zagzag D, Blakeley J</i>
1:50 - 1:55pm MNGI-01	A phase 0 trial of ribociclib in aggressive meningioma patients incorporating a tumor pharmacodynamic- and pharmacokinetic-guided expansion cohort <i>Tien A, Li J, Bao X, DeRogatis A, Fujita Y, Pennington-Krygier C, Kim S, Mehta S, Sanai N</i>
1:55 - 2:00pm MNGI-13	Dynamic imaging of meningioma with 3'-deoxy-3'-[18F]-fluorothymidine using positron emission tomography: a possible predictor of tumor growth <i>Bashir A, Bitsch Vestergaard M, Marner L, Larsen V, Ziebell M, Fugleholm K, Law I</i>
2:00 - 2:05pm MNGI-03	Estrogen hormone replacement therapy in incidental meningioma - a growth rate analysis <i>Kamson D, Yuen C, Castillo Saavedra L, Jenkins Vogel T, Merrell R, Walker M</i>
2:05 - 2:10pm	Concurrent Session 3A: Q&A Group 1 <i>Submit on mobile app</i>
2:10 - 2:15pm MNGI-12	Pleiotropic MLT10 variation confers risk of meningioma, breast, and ovarian cancers <i>Walsh K, Zhang C, Calvocoressi L, Hansen H, Berchuck A, Schildkraut J, Bondy M, Wiemels J, Claus E</i>
2:15 - 2:20pm CBMT-25	The KLF4K409Q mutation in meningioma impairs Hif-1 α degradation and can be harnessed for targeted therapy <i>von Spreckelsen N, Waldt N, Poetschke R, Kessler C, Dohmen H, Jiao H, Nemeth A, Deckert M, Angenstein F, Krischek B, Stavrinou P, Timmer M, Remke M, Kirches E, Goldbrunner R, Chiocca E, Huettelmaier S, Acker T, Mawrin C</i>
2:20 - 2:25pm GENE-01	The mutational landscape of primary chordomas and their sensitive detection in plasma ctDNA by multiple next generation sequencing technologies <i>Mattox A, Jiao Y, Blair C, Papadopoulos N, Bettegowda C</i>
2:25 - 2:30pm	Concurrent Session 3A: Q&A Group 2 <i>Submit on mobile app</i>
2:30 - 2:40pm	Invited Speaker: Clinical Utility of H3K27me3: the Tubigen Experience, <i>Ghazaleh Tabatabai</i>
2:40 - 2:50pm	Invited Speaker: Clinical Utility of H3K27me3: the Heidelberg Experience, <i>Felix Sahm</i>
2:50 - 3:00pm	Invited Speaker: ChipSeq analysis of correlates of histone marks with outcome in meningiomas, <i>Houtan Noushmehr</i>
3:00 - 3:15pm	BREAK <i>Ballroom Foyers</i>

1:30 - 3:00pm CONCURRENT SESSION 3B

Surgery/Radiation Therapy/CNS Metastasis *Grand Canyon 7*

Moderators: Chae-Yong Kim, Lawrence Kleinberg, Gordon Li

Supported by the American Brain Tumor Association

1:30 - 1:40pm ACTR-57	A phase 1/2 study to evaluate the safety and efficacy of blood-brain barrier (BBB) opening with a nine-emitter implantable ultrasound device in recurrent glioblastoma patients prior to carboplatin <i>Idbaih A, Ducray F, DeGroot J, Stupp R, Guyotat J, Lesniak M, Sonabend A, Weinberg J, Desseaux C, Canney M, Schmitt C, Carpentier A</i>
1:40 - 1:50pm ATIM-06	Treatment of recurrent/refractory (R/R) anaplastic astrocytoma (AA, WHO grade 3) patients with anti-TGF β 2 RNA therapeutic OT-101 versus temozolomide is associated with improved overall survival <i>Uckun F, Qazi S, Nam D, Hwang L, Trieu V</i>
1:50 - 2:00pm SURG-04	Intraoperative hand-held line-scanned dual-axis confocal microscopy for visualizing low-grade gliomas <i>Fujita Y, Wei L, Liu J, Sanai N</i>

MAIN MEETING SATURDAY, NOVEMBER 23

2:00 - 2:10pm SURG-07	Stereotactic laser ablation as a therapeutic option for recurrent glioblastoma: a large single institutional experience <i>Hwang L, Barnett G, Mohammadi A</i>
2:10 - 2:20pm SURG-19	Reorganization of language enables safe resection of tumors in and around Broca's Area <i>Holmes E, Kerr K, Kadipasaoglu C, Tandon N</i>
2:20 - 2:30pm SURG-33	Immuno-stimulation through surgically administered mechanical high intensity focused ultrasound <i>Wang J, Huang C, Echeagaray O, Amirfakhri S, Blair S, Trogler W, Kummel A, Chen C</i>
2:30 - 2:35pm RTHP-32	First experience with GammaTile permanent implants for recurrent brain tumors <i>Ferreira C, Alaei P, Chen C, Reynolds M, Sterling D, Dusenbery K</i>
2:35 - 2:40pm CMET-20	Analysis of nano-sized particle in human cerebrospinal fluid: a measurement of extracellular vesicle concentration change with miR-21 expression after chemotherapy for leptomeningeal carcinomatosis <i>Lee K, Lin W, Gwak H, Kim J, Yoo B, Kim T, Park J, Park H, Kim H, Kwon J, Shin S, Yoo H</i>
2:40 - 2:45pm CMET-21	A phase IB study of proton craniospinal irradiation for the treatment of solid tumor leptomeningeal metastases <i>Yang T, Wolden S, Yamada J, Mehallow M, Skakodub A, Young R, Gavrilovic I, Lin A, Santomasso B, Grommes C, Piotrowski A, Schaff L, Stone J, Boire A, Pentsova E</i>
2:45 - 2:50pm CMET-29	Detecting tumor mutations in cerebrospinal fluid: Liquid biopsy for the diagnosis of central nervous system metastases <i>Shah M, Zorofchian S, Lan C, Duose D, Hu P, Zhu J, Luthra R, Esquenazi Y, Y. Ballester L</i>
2:50 - 2:55pm CMET-30	Comprehensive methylome analysis of EGFR-mutant primary lung adenocarcinoma and matched brain metastasis <i>Mamatjan Y, Cabanero M, Zuccato J, Weiss J, Karimi S, Sorotsky H, Tsao M, Aldape K, Shepherd F, Zadeh G</i>
2:55 - 3:00pm	Concurrent Session 3B: Q&A <i>Submit on mobile app</i>

3:00 - 3:15pm BREAK *Ballroom Foyers*

1:30 - 3:00pm CONCURRENT SESSION 3C

Cell Biology and Metabolism *Grand Canyon 8-13*

Moderators: Santosh Kesari, Katrin Lamszus

1:30 - 1:40pm CBMT-19	The alternative lengthening of telomere (ALT) mechanism provides collateral sensitivity to lethal telomeric fusion induced by trapping PARP inhibitors <i>Mukherjee J, Dalle-Ore C, Johannesssen T, Pandita A, Ohba S, Cahill D, Pieper R</i>
1:40 - 1:50pm CBMT-27	Aberrant amino acid metabolism expose novel functional vulnerabilities in glioblastoma <i>Prabhu A, Guastella A, Kant S, Kesarwani P, Nakano I, Chinnaiyan P</i>
1:50 - 2:00pm CBMT-28	Fatty acid oxidation provides metabolic plasticity to maintain growth in the dynamic microenvironment of glioblastoma <i>Kant S, Kesarwani P, Prabhu A, Graham S, Buelow K, Nakano I, Chinnaiyan P</i>
2:00 - 2:10pm CBMT-29	Promoting fatty acid storage by diacylglycerol-acyltransferase 1 protects glioblastoma against oxidative stress and maintains lipid homeostasis for rapid tumor growth <i>Cheng X, Geng F, Zhong Y, Tian Z, Pan M, Cheng C, Horbinski C, Mo X, Han X, Guo D</i>
2:10 - 2:20pm CBMT-42	A genome-wide CRISPR-Cas9 screen for genes regulating quiescent-like states in glioblastoma <i>Feldman H, Mihalas A, Plaisier C, Patel A, Paddison P</i>
2:20 - 2:30pm CBMT-15	MET inhibition drives PGC1a dependent metabolic reprogramming and elicits unique metabolic vulnerabilities in glioblastoma <i>Zhang Y, Nguyen T, Zhao J, Shang E, Torrini C, Canoll P, Karpel-Massler G, Siegelin M</i>
2:30 - 2:35pm CBMT-43	Integrated lipidomic and molecular analysis reveals a subset of glioblastoma vulnerable to ferroptosis <i>Morrow D, Bayley N, Williams K, Muranaka H, Prins R, Liao L, Cloughesy T, Bensinger S, Nathanson D</i>
2:35 - 2:40pm CBMT-09	Therapeutic effect of induction of polyglutamylation in high-dose methotrexate therapy to primary central nervous system lymphoma <i>Fujimoto K, Shinojima N, Makino K, Ichimura K, Mukasa A</i>

MAIN MEETING SATURDAY, NOVEMBER 23

2:40 - 2:45pm CBMT-47 Modulation of NAD pathways as a therapeutic strategy for targeting IDH mutant glioma
Miller J, Nagashima H, Fink A, Tateishi K, Wakimoto H, Banagis J, Cahill D

2:45 - 2:50pm CBMT-32 EGFR suppresses p53 function through DNA-PKcs binding to p53: novel crosstalk between EGFR and TP53 in glioblastoma
Ding J, Li X, Zhang C, Gao F, Wu S, Wasylshen A, Baggerly K, Lozano G, Koul D, Yung A

2:50 - 2:55pm CBMT-45 Sex-specific metabolic adaptations in glioblastoma
Sponagel J, Zhang S, Chinnaiyan P, Rubin J, Ippolito J

2:55 - 3:00pm **Concurrent Session 3C: Q&A** *Submit on mobile app*

3:00 - 3:15pm **BREAK** *Ballroom Foyers*

3:15 - 5:00pm CONCURRENT SESSION 4A

Pediatrics: Clinical and Basic *Grand Canyon 1-6*

Moderators: Eric Bouffet, Kenneth Cohen

3:15 - 3:25pm PDTM-36 Whole exome sequencing (WES) of DIPG patients from the BIOMEDE trial reveals new prognostic subgroups with specific oncogenic programmes
Debily M, Kergrohen T, Varlet P, Le Teuff G, Nysom K, Blomgren K, Leblond P, Bertozzi A, De Carli E, Chappé C, Ghermaoui S, Barret E, Picot S, Tauziède-Espariat A, Puget S, Castel D, Vassal G, Grill J
Pediatric Basic Science Abstract Award

3:25 - 3:35pm PDTM-41 Inhibition of DNA double strand break repair pathways as a promising therapeutic target in diffuse intrinsic pontine gliomas (DIPGs)
Pal S, Bian J, Price B, Chowdhury D, Haas-Kogan D

3:35 - 3:45pm PDCT-01 Biological medicine for diffuse intrinsic pontine gliomas eradication (BIOMEDE): results of the three-arm biomarker-driven randomized trial in the first 230 patients from Europe and Australia
Grill J, Le Teuff G, Nysom K, Blomgren K, Hargrave D, McCowage G, Bautista F, van Vuurden D, Dangouloff-Ros V, Puget S, Varlet P, Debily M, Vassal G, Le Deley M

3:45 - 3:55pm PDCT-12 Clinical efficacy of ONC201 in thalamic H3 K27M-mutant glioma
Kawakibi A, Gardner S, Chi A, Kurz S, Wen P, Arrillaga-Romany I, Batchelor T, Butowski N, Sumrall A, Shonka N, Harrison R, DeGroot J, Mehta M, Odia Y, Hall M, Daghistani D, Cloughesy T, Ellingson B, Umemura Y, Schwartz J, Yadav V, Cartaxo R, Miklja Z, Bruzek A, Siada R, Mullan B, Stallard S, Muruganand A, Wierzbicki K, Paul A, Wolfe I, Kumar-Sinha C, Marini B, Leonard M, Garton H, Mody R, Robertson P, Merdinger K, Tarapore R, Oster W, Allen J, Koschmann C

3:55 - 4:05pm PDTM-26 Novel shared and distinct epigenomic mechanisms of G34R and K27M mutations in childhood glioma
Chen M, Bush K, Lewis N, Cervantes V, Knoepfler P

4:05 - 4:15pm PDCT-08 Superior outcome for BRAF V600E pediatric gliomas treated with targeted BRAF inhibition
Nobre L, Zapotocky M, Ramaswamy V, Ryall S, Bennett J, Balaguer Guill J, Baroni L, Bartels U, Bornhorst M, Boue` D, Chintagumpala M, Cruz O, Dahiya S, Dirks P, Dunkel I, Eisenstat D, Finch E, Finlay J, Frappaz D, Garre M, Gauvain K, Bechensteen A, Hansford J, Hauser P, Huang A, Karajannis M, Kaur G, Larouche V, Lassaletta A, Leary S, Lin F, McKeown T, Milde T, Morales La Madrid A, Morse H, Mushtaq N, Osorio D, Packer R, Pavelka Z, Salgado D, Sabel M, Solano P, Su J, Sumerauer D, Toledano H, van Tilburg C, Wilson B, Bouffet E, Hawkins C, Tabori U

4:15 - 4:25pm RARE-45 Activity of larotrectinib in TRK fusion cancer patients with primary central nervous system tumors
Doz F, Geoerger B, DuBois S, Grilley-Olson J, van Tilburg C, Italiano A, Lissat A, Kang H, Tahara M, Boni V, Perreault S, Capra M, Nanda S, Brega N, Holynskij A, Ziegler D, Hong D, Hyman D, Drilon A

4:25 - 4:35pm **Concurrent Session 4A: Discussant** *Sabine Mueller*

4:35 - 4:40pm PDTM-38 Histone H3.3 Ser31 phosphorylation regulates chromosome segregation and cell cycle checkpoint control and is impaired in pediatric gliomas
Day C, Langfald A, Fadness S, Zykova T, Sepaniac L, Stumpff J, Dong Z, Vaughan K, Robinson J, Hinchcliffe E

4:40 - 4:45pm PDCT-09 Phase I clinical trial of ONC201 in pediatric H3 K27M-mutant glioma or newly diagnosed DIPG
Gardner S, Tarapore R, Allen J, Zaky W, Odia Y, Hall M, Daghistani D, Khatib Z, Koschmann C, Aguilera D, MacDonald T, Fouladi M, McGovern S, Merdinger K, Oster W, Allen J, Khatua S
Women in Neuro-Oncology Clinical Research Abstract Award

MAIN MEETING SATURDAY, NOVEMBER 23

4:45 - 4:50pm PDCT-05 Final results of the VINILO open-label phase II randomized trial for pediatric low-grade gliomas (pLGG) comparing the combination vinblastine-nilotinib with vinblastine alone
Grill J, Brard C, Picton S, Cruz O, Schouten-vanMetteren A, Sehested A, Gerber N, Entz-Werle N, Le Deley M, Dangouloff-Ros V, Varlet P

4:50 - 4:55pm PDTM-07 Defining the mechanisms underlying NF1 optic glioma penetrance
Brossier N, Cobb O, Gutmann D

4:55 - 5:00pm **Concurrent Session 4A: Q&A** *Submit on mobile app*

3:15 - 5:00pm CONCURRENT SESSION 4B

Neuro-Imaging *Grand Canyon 8-13*

Moderators: Benjamin Ellingson, Raymond Huang, Sohil Patel

3:15 - 3:25 PM NIMG-34 Multi-parametric MR-PET imaging predicts pharmacokinetics and clinical response to GDC-0084 in human recurrent high-grade glioma
Ellingson B, Yao J, Raymond C, Nathanson D, Simpson J, Garner J, Olivero A, Mueller L, Rodon J, Gerstner E, Cloughesy T, Wen P
Neuro-Imaging Abstract Award

3:25 - 3:35pm NIMG-02 Non-invasive detection of IDH mutant 1p19q non-codeleted gliomas using the T2-FLAIR mismatch sign
Foltyn M, Nieto Taborda K, Neuberger U, Reinhardt A, Brugnara G, Unterberg A, Debus J, Herold-Mende C, von Deimling A, Wick W, Bendszus M, Kickingereeder P

3:35 - 3:45pm NIMG-65 Predicting prognosis and cancer hotspot mutations using qualitative MR imaging analysis in glioblastoma
Verduin M, Compter I, Primakov S, van Kuijk S, te Dorsthorst M, Revenich E, ter Laan M, Pegge S, Meijer A, Beckervordersandforth J, Speel E, Jochems A, de Leng W, Anten M, Broen M, Ackermans L, Schijns O, Vooijs M, Tjan-Heijnen V, Lambin P, Eekers D, Jacobi-Postma L, Hoebein A

3:45 - 3:55pm NIMG-03 Prospective phase II randomized trial comparing proton therapy vs. photon IMRT for GBM: Secondary analysis comparison of progression free survival between RANO vs. clinical and radiological assessment
Al Feghali K, Randall J, Wefel J, Guha-Thakurta N, Grosshans D, Dibaj S, McAvoy S, Li J, McGovern S, McAleer M, Ghia A, Paulino A, Sulman E, Penas-Prado M, Wang J, DeGroot J, Heimberger A, Armstrong T, Gilbert M, Mahajan, MD A, Brown P, Chung C

3:55 - 4:05pm CBMT-41 Imaging a hallmark of cancer: hyperpolarized ¹³C-magnetic resonance spectroscopy can non-invasively monitor TERT expression in low-grade gliomas in vivo
Viswanath P, Batsios G, Gillespie A, Pieper R, Ronen S
Women In Neuro-Oncology Basic/Translational Science Research Abstract Award

4:05 - 4:15pm CBMT-02 Up-regulation of γ-glutamyl-transferase can be used to image glioblastoma using hyperpolarized γ-glutamyl-[1-¹³C]glycine MRS
Batsios G, Najac C, Cao P, Viswanath P, Subramani E, Saito Y, Gillespie A, Yoshihara H, Larson P, Sando S, Ronen S

4:15 - 4:25pm **Concurrent Session 4B: Discussant** *Whitney Pope*

4:25 - 4:30pm NIMG-44 Non-invasive advanced imaging metrics provide potential biomarkers for GBM biological heterogeneity and immune landscape variance
Kersch C, Muldoon L, Fu R, Claunch C, Neuwelt E, Barajas R

4:30 - 4:35pm NIMG-42 Recurrent tumor and treatment-induced effects have different MR signatures in contrast enhancing and non-enhancing lesions of high-grade gliomas
Cluceru J, Nelson S, Molinaro A, Alcaide-Leon P, Olson M, Berger M, Chang S, Phillips J, Nair D, Wen Q, Villanueva-Meyer J, Chunduru P, Cha S, Lupo J

4:35 - 4:40pm NIMG-09 Noninvasive perfusion imaging biomarker of malignant genotype in isocitrate dehydrogenase mutant gliomas
Mureb M, Jain R, Poisson L, Aguiar Littig I, Nunes Neto L, Wu C, Ng V, Patel S, Patel S, Serrano J, Kurz S, Cahill D, Bendszus M, von Deimling A, Placantonakis D, Golfinos J, Kickingereeder P, Snuderl M, Chi A

4:40 - 4:45pm NIMG-23 Brain Tumor Reporting and Data System (BT-RADS) and quantitative tools to guide its implementation
Weinberg B, Ramesh K, Gurbani S, Schreibmann E, Kleinberg L, Shu H, Shim H

MAIN MEETING SATURDAY, NOVEMBER 23

- 4:45 - 4:50pm
NIMG-68 Federated learning in neuro-oncology for multi-institutional collaborations without sharing patient data
Sheller M, Edwards B, Reina G, Martin J, Bakas S
- 4:50 - 4:55pm
NIMG-69 Rapid intraoperative diagnosis of glioma recurrence using stimulated Raman histology and deep neural networks
Hollon T, Urias E, Adapa A, Jairath N, Save A, Canoll P, Lee H, Freudiger C, Orringer D

4:55 - 5:00pm **Concurrent Session 4B: Q&A** *Submit on mobile app*

3:15 - 5:00pm CONCURRENT SESSION 4C

RANO Update *Grand Canyon 7*

Susan Chang, David Macdonald, Martin van den Bent, Michael Vogelbaum, Patrick Wen (Co-chairs)

- 3:15 - 3:20pm Introduction
- 3:20 - 3:28pm Pediatrics/RAPNO, *Katherine Warren*
- 3:28 - 3:34pm RANO, RECIST and Brain Mets, *Eudocia Lee*
- 3:34 - 3:40pm Leptomeningeal disease – new RANO response grid, *Emilie Le Rhun*
- 3:40 - 3:46pm Liquid biopsies in glioma, *Riccardo Soffietti*
- 3:46 - 3:54pm Seizures: Evaluating the scale, *Edward Avila*
- 3:54 - 4:02pm RANO PRO: Report from NIH meeting plus the Long Horizon Project, *Terri Armstrong*
- 4:02 - 4:10pm Recurrent GBM definition, *Jason Huse*
- 4:10 - 4:18pm PET imaging and standardization, *Norbert Galldiks*
- 4:18 - 4:26pm LGG update, *Raymond Huang*
- 4:26 - 4:32pm Radiomics, *Raymond Huang*
- 4:32 - 4:40pm Phase 0, *Michael Vogelbaum*
- 4:40 - 4:50pm Increasing trial participation and updating eligibility criteria, *Eudocia Lee*
- 4:50 - 5:00pm Discussion and Wrap-Up - RANO: Where next?

5:00 - 6:00pm **E-Talks** *Supported by Novocure*

Interactive electronic 4 minute presentations followed by traditional poster viewing and discussion

Group 1: Adult Therapeutics/Immunology/Rare Tumors *Wildflower A*

Group 2: Angiogenesis and Invasion/Radiation Biology and DNA Repair/Tumor Models/Stem Cells/
Epidemiology *Wildflower B*

Group 3: Cell Signaling/Cell Biology/Metabolism/Genetics/Epigenetics/Computational Omics *Wildflower C*

5:00 - 7:00pm **Poster Session** Traditional poster viewing *Ballroom Lawn*

5:00 - 7:00pm **Industry Supported Symposium**

Not sponsored by The University of Texas MD Anderson Cancer Center

Modern tumor board – translating molecular pathology into practice *Grand Sonoran E*

Supported by Illumina

7:00 - 10:00pm **SNO Gala** *Held at Desert Kivas at the JW Marriott (separate ticket required)*

E-TALKS

GROUP 1: Adult Therapeutics/Immunology/Rare Tumors *Wildflower A*

Moderators: Matthias Holdhoff, Solmaz Sahebjam

- 5:00 - 5:04pm
ACTR-18 A phase Ib/II clinical trial of dodecafluoropentane emulsion (DDFPe) as a radiosensitizer in glioblastoma
Lickliter J, Ruben J, Jennens R, Kichenadasse G, Gzell C, Mason R, Carmody R, Becker J, Stea B, Zhou H, Sellenger M, Longacre O, Graham K, Unger E
- 5:04 - 5:08pm
ACTR-61 A randomized Phase 2 trial of cediranib in combination with olaparib versus bevacizumab in patients with recurrent glioblastoma
Arrillaga-Romany J, Sahebjam S, Picconi D, Campian J, Giglio P, Drappatz J, Aiken R, Villano J, Lee E, Welch M, Ellingson B, Ney D, Becker K, Muzikansky A, Das B, Swisher E, Nixon A, Karlovich C, Williams P, Ivy S, Batchelor T, Gerstner E
- 5:08 - 5:12pm
ACTR-53 MGMT promoter methylation analysis for allocating combined CCNU/TMZ chemotherapy: lessons learned from the CeTeG/NOA-09 trial
Tzaridis T, Schäfer N, Weller J, Steinbach J, Seidel S, Schlegel U, Sabel M, Hau P, Seidel C, Krex D, Goldbrunner R, Tonn J, Grauer O, Schaub C, Coch C, Glas M, Pietsch T, Fimmers R, Reifenberger G, Felsberg J, Herrlinger U,
- 5:12 - 5:16pm
ACTR-63 Phase I dose escalation study of procaspase activating compound-1 (PAC-1) in combination with temozolomide in patients with recurrent anaplastic astrocytoma or glioblastoma
Holdhoff M, Nicholas M, Peterson R, Danciu O, Maraka S, Hergenrother P, Tarasow T, Dudek A
- 5:16 - 5:20pm
ACTR-62 Phase I trial of TG02 plus dose-dense or metronomic temozolomide for recurrent high-grade astrocytoma in adults
Wu J, Bryla C, Su Y, Grajkowska E, McCoy A, Boris L, Antony R, Garren N, Siegel C, Cordova C, Aboud O, Vera E, Lawhon T, Penas-Prado M, Theeler B, Mendoza T, Armstrong T, Yuan Y, Gilbert M
- 5:20 - 5:24pm
ACTR-52 Phase 1 study of FT-2102, an inhibitor of mutant IDH1, in patients with relapsed/refractory IDH1 mutant gliomas: preliminary safety and clinical activity
De la Fuente M, Colman H, Rosenthal M, Van Tine B, Fonkem E, Walbert T, Milhem M, Lipford K, Forsyth S, Guichard S, Brevard J, Mikhailov Y, Thomson B, Monga V
- 5:24 - 5:28pm
ACTR-70 A multisite clinical trial of spectroscopic MRI-guided radiation dose escalation in glioblastoma patients
Mellon E, Gurbani S, Ramesh K, Weinberg B, Kleinberg L, Schreiber E, Barker P, Maudsley A, Shim H, Shu H
- 5:28 - 5:32pm
RARE-40 Outcomes after proton therapy for skull-base chordoma: A prospective study
Holtzman A, Rotondo R, Rutenberg M, Indelicato D, Rao D, Louis D, Morris C, Mendenhall W
- 5:32 - 5:36pm
ACTR-25 Rethinking the dogma: How important is treatment of the CSF in patients with primary CNS lymphoma (PCNSL)?
Aregawi D, Korfel A, Schlegel U, Glantz M
- 5:36 - 5:40pm
RARE-42 Incidence and behavior of central nervous system involvement in patients with Hodgkin's Lymphoma
Silva Correia C, Malani R, DeAngelis L, Moskowitz A
- 5:40 - 5:44pm
IMMU-05 Disruption of the CCR2 chemokine receptor pathway overcomes therapeutic resistance to PD-1 blockade in malignant glioma
Flores-Toro J, Luo D, Campbell J, Charo I, Singh R, Schall T, Datta M, Jain R, Mitchell D, Harrison J
- 5:44 - 5:48pm
IMMU-12 IL13Ra2-CAR T cells stimulate endogenous immune responses against murine glioblastomas
Alizadeh D, Wong R, Pecoraro J, Yang X, Forman S, E. Brown C
- 5:48 - 5:52pm
IMMU-14 Oncolytic virus expressing a positive immune checkpoint modulator as a therapeutic approach for DIPG
Laspidea V, Puigdelloses M, Iñigo-Marco I, Garcia-Moure M, Ausejo I, Gallego J, Fueyo J, Gomez-Manzano C, Alonso M
- 5:52 - 5:56pm
IMMU-34 ATRX mutations predict response to innate based therapy in glioma
Bowie M, Hariharan S, Hostettler J, Roso K, He Y, Pirozzi C, Roskoski M, Keir S, Brown M, Zhang G, Gromeier M, Yan H, Ashley D
- 5:56 - 6:00pm
IMMU-39 RNA loaded lipid-nanoparticles function as customizable immunotherapeutic vehicles against malignant gliomas
Grippin A, Wummer B, Mendez-Gomez H, Stover B, Huang J, Rinaldi C, Mitchell D, Dobson J, Saviour E

E-TALKS

GROUP 2: Angiogenesis and Invasion/Radiation Biology and DNA Repair/Tumor Models/ Stem Cells/Epidemiology *Wildflower B*

Moderators: *Ranjit Bindra, Pin-Yuan Chen, Melanie Hayden*

- | | |
|--------------------------|--|
| 5:00 - 5:04pm
ANGI-05 | Origin of microvascular proliferation in pilocytic astrocytoma - MVP in pilocytic astrocytoma might partially comprise tumor-derived cells
<i>Yamashita S, Takeshima H, Watanabe T, Yokogami K</i> |
| 5:04 - 5:08pm
ANGI-10 | Chemotherapeutic stress induces transdifferentiation of glioblastoma cells to promote vascular mimicry
<i>Baisiwal S, Auffinger B, Caragher S, Shireman J, Ahsan R, Park C, Ahmed A</i> |
| 5:08 - 5:12pm
EPID-06 | Immune-related plasma biomarkers in glioblastoma
<i>Bjørnbak Holst C, Christensen I, Skjoeth-Rasmussen J, Skovgaard Poulsen H, Hamerlik P, Johansen J</i> |
| 5:12 - 5:16pm
EPID-16 | Comparative analysis of overall survival and adverse events by adjuvant treatment modalities in elderly patients with glioblastoma using the SEER-medicare database
<i>Zhu P, Du X, Zhu J</i> |
| 5:16 - 5:20pm
NIMG-77 | Response assessment using multiparametric MRI during chemoradiation predicts overall survival in patients with newly diagnosed glioblastoma
<i>Kim M, Aryal M, Parmar H, Li P, Schipper M, Wahl D, Lawrence T, Cao Y</i> |
| 5:20 - 5:24pm
EXTH-54 | Multivalent targeted proteins for glioblastoma treatment
<i>Sharma P, Herpai D, Rossmeisl J, Tatter S, Debinski W</i> |
| 5:24 - 5:28pm
EXTH-15 | Increasing the trafficking of dendritic cells via CXCL12 chemokine signaling pathway leads to improved anti-tumor efficacy of dendritic cell vaccines
<i>Dastmalchi F, Karachi A, Yang C, Azari H, Vlasak A, Saia M, Mitchell D, Rahman M</i> |
| 5:28 - 5:32pm
STEM-06 | Tissue factor signaling in glioblastoma tumor-initiating cells
<i>Tran A, Unruh D, Mirkov S, Horbinski C</i> |
| 5:32 - 5:36pm
STEM-08 | Gene therapy using IL-24-expressing umbilical cord-derived mesenchymal stem cells against glioma
<i>Fan S, Gao Y</i> |
| 5:36 - 5:40pm
STEM-09 | Intrinsic tumor plasticity in Glioblastoma allows for recreation of stem like-states and efficient tumor cell adaptation to new microenvironments
<i>Golebiewska A, Dirkse A, Buder T, Yabo Y, Muller A, Nazarov P, Bjerkvig R, Skupin A, Poovathingal S, Herold-Mende C, Voss A, Deutsch A, Niclou S</i> |
| 5:40 - 5:44pm
STEM-10 | Bidirectional interaction between tumor-associated platelets and glioma stem cells in glioblastoma multiforme
<i>Raghavan A, Lee-Poturalski C, Willis J, Kerstetter-Fogle A, Harris P, Rich J, Vogelbaum M, Jankowsky E, Sloan A</i> |
| 5:44 - 5:48pm
TMOD-02 | A model of the initiation and genomic landscape of glioblastoma (GBM)
<i>Bohm A, DePetro J, Binding C, Grisdale C, Ware M, Lawn S, Chahley N, Bukhari S, Chen C, Gerber A, Thomas K, Pedersen H, Omairi H, Blough M, Cairncross J</i> |
| 5:48 - 5:52pm
TMOD-14 | Radiographic, stimulated raman histologic, and multiplexed RNA-sequencing analysis of post-treatment recurrent high-grade gliomas
<i>Save A, Hollon T, Farooq Z, Boyett D, Hawkins-Daarud A, Yoon H, Singleton K, Clark-Swanson K, Li J, Swanson K, Freudiger C, Orringer D, Lassman A, Sims P, Grinband J, Canoll P, Bruce J</i> |
| 5:52 - 5:56pm
TMOD-15 | Identifying the spatial and temporal dynamics of glioblastoma subpopulations within individual patients
<i>Morris B, Curtin L, Hawkins-Daarud A, Bendok B, Mrugala M, Li J, Tran N, Hu L, Rahman R, Smith S, Auer D, Hubbard M, Owen M, Swanson K</i> |
| 5:56 - 6:00pm
TMOD-19 | Elucidating the resistance to immunotherapy in brain tumors using a humanized microbiome mouse model
<i>Dees K, Koo H, Hakim J, Humphreys J, Crossman D, Crowley M, Nabors L, Benveniste E, Morrow C, McFarland B</i> |

E-TALKS

GROUP 3: Cell Signaling/Cell Biology/Metabolism/Genetics/Epigenetics/Computational Omics

Moderators: Maria Castro, Shiyuan Cheng *Wildflower C*

- 5:00 - 5:04pm
COMP-17 Large-scale transcriptomic characterization of primary and recurrent glioblastoma identifies gene expression signature of tumor response to standard therapy
Dhawan A, Lathia J, Peereboom D, Barnett G, Yeaney G, Ahluwalia M,
- 5:04 - 5:08pm
GENE-55 Gene expression signature associated with aggressive glioblastoma growth is enriched in chromatin modification and stemness transcriptional regulation programs
Berezovsky A, Nuga O, Meng Y, Poisson L, Noushmehr H, deCarvalho A
- 5:08 - 5:12pm
GENE-25 GWAS by Molecular Subtype Identified Novel Risk Loci for Adult Diffuse Glioma
Eckel-Passow J, Decker P, Kosel M, Kollmeyer T, Molinaro A, Rice T, Drucker K, Hansen H, McCoy L, Bracci P, Wiemels J, Wiencke J, Lachance D, Wrensch M, Jenkins R
- 5:12 - 5:16pm
CSIG-28 Role of alternative splicing in conferring spatial heterogeneity signatures in GBM
Ghosh S, Pavlyukov M, Bastola S, Li C, Yamaguchi S, Komarova S, Yamashita D, Nakano I
- 5:16 - 5:20pm
CBMT-17 Defective QKI-dependent lipid metabolism induces genomic instability and sensitizes glioblastoma to immunotherapy
Shingu T, Hu J
- 5:20 - 5:24pm
CSIG-31 Alternative receptor tyrosine kinase signaling as a resistance mechanism to ERK inhibition in high-grade gliomas
Stanton A, Koncar R, Golbourn B, Wassell M, Agrawal N, Dey B, Myers M, Mack S, Pollack I, Agnihotri S
- 5:24 - 5:28pm
CBMT-22 Reversing the Warburg effect by targeting Nicotinamide Phosphoribosyltransferase (NAMPT), the rate-limiting enzyme of NAD⁺ salvage pathway increases, chemosensitivity to temozolomide in glioma cells
Sharma P, Senapedis W, Sampath D, Puduvalli V
- 5:28 - 5:32pm
CBMT-23 Non-canonical functions of TERT in glioblastoma
Ferdosi S, Taylor B, Bollam S, Gokhale V, Hurley L, Dhruv H, Berens M
- 5:32 - 5:36pm
GENE-56 Meningioma genomic subgroup as a predictor of post-operative patient outcomes: Implications for treatment and follow-up
Youngblood M, Sheth A, Zhao A, Montejó J, Duran D, Li C, Tyrtova E, Özdoğan K, Peyre M, Boetto J, Omay S, Kalamarides M, Erson-Omay E, Günel M, Moliterno J
- 5:36 - 5:40pm
GENE-62 Identification of FGFR4 p.G388R variant in cerebellar hemangioblastomas
Snuderl M, Kannan K, Gagner J, Mashiach E, Karajannis M, Heguy A, Zagzag D
- 5:40 - 5:44pm
CBMT-20 Single-cell transcriptomics resolves cellular heterogeneity and oncogenic networks during malignant transformation of peripheral nerve sheath tumors
Wu L, Zhang F, Tian W, Lu R
- 5:44 - 5:48pm
GENE-04 The oncogenic functions of YAP1-gene fusions can be inhibited by disruption of YAP1-TEAD interaction
Szulzewsky F, Hoellerbauer P, Wu H, Cimino P, Michor F, Paddison P, Vasioukhin V, Holland E
- 5:48 - 5:52pm
CBMT-26 Serial characterization of hyperpolarized [1-¹³C]pyruvate metabolism in patients with glioma and the influence of bevacizumab
Autry A, Gordon J, Chen H, Lafontaine M, Villanueva-Meyer J, Chang S, Xu D, Larson P, Vigneron D, Li Y
- 5:52 - 5:56pm
CBMT-40 The relationship between glioma and the gut-brain axis
Patrizz A, Zorofchain S, Hines G, Takayasu T, Otani Y, Swanner J, Honarpisheh P, Tandon N, Putluri V, Putluri N, Priya Ganesh B, Kaur B, McCullough L, Y. Ballester L, Esquenazi Y
- 5:56 - 6:00pm
GENE-44 Brd4 deletion leads to cerebellar deficits and ataxia
Ayad N



6:30am	REGISTRATION OPENS <i>Grand Canyon Foyer</i>
6:45 - 8:30am	LIGHT CONTINENTAL BREAKFAST <i>Ballroom Foyers</i>

SUNRISE SESSIONS 7:00 - 8:30am

AAN/SNO: Cognitive Impairment in Glioma Patients: Current Understanding and Future Directions *Grand Saguaro North*
Jennie Taylor, Jeffrey Wefel (Co-chairs)

- Pathophysiology of cognitive impairment in gliomas, *Martin Klein*
- Neuropsychology for neuro-oncologists. What test is best? And when? *Michael Parsons*
- Cognitive outcomes from glioma trials, *Jennie Taylor*
- Novel interventions and strategies for cognitive rehabilitation, *Christina Weyer-Jamora*

Consortium to Inform Molecular and Practical Approaches to CNS Tumor Taxonomy (cIMPACT) Update on Classification and Grading of Diffuse Gliomas *Grand Canyon 1-6*
Daniel Brat (Chair)

- cIMPACT working group overview and neuropathology implications of molecular classification and grading in IDH wild-type gliomas, *Daniel Brat*
- Neuropathology implications of molecular classification and grading in IDH mutant gliomas, *Kenneth Aldape*
- Clinical and clinical trial impact of cIMPACT recommendations, *Howard Colman*

Liquid Biopsy - Strategies for Diagnosing and Monitoring CNS Tumors *Grand Saguaro South*
Chetan Bettegowda, Bob Carter (Co-chairs)

- Serial therapeutic monitoring of CSF tDNA in pediatric high-grade glioma, *Carl Koschmann*
- Current state of exosome based diagnostics, *Johan Skog*
- Considerations in liquid biopsy for glioblastoma, *Leonora Balaj*
- Released tumor DNA for the management of CNS tumors, *Chetan Bettegowda*

Mechanisms of Tumor Evolution and Drug Resistance *Grand Saguaro East-West*
Antonio Iavarone, Uri Tabori (Co-chairs)

- Longitudinal mapping of medulloblastoma progression and recurrence with genomics, *Paul Northcott*
- The sequencing revolution has taught us about glioma evolution, *Joseph Costello*
- Molecular mechanisms associated with clonal evolution and recurrence of glioblastoma, *Guido Reifenberger*
- Biological pathway-based evolution of glioma to inform pharmacological vulnerability, *Antonio Iavarone*

Role of Surgeons in Clinical Trials *Grand Canyon 7*
Frederick Lang, Michael Lim (Co-chairs)

- Trials of oncolytic viruses: The impact of the neurosurgeon, *Frederick Lang*
- Journey of 5-ALA for GBM, *Constantinos Hadjipanayis*
- Getting started on clinical trials as a young surgeon, *Rohan Ramakrishna*
- Phase 0 immunotherapy clinical trials, *Michael Lim*

Tumor Immune Microenvironment & Immunosuppression; Beyond Adaptive Immune Checkpoint Immunotherapy *Grand Canyon 8-13*
Peter Fecci, Siddhartha Mitra, Gavin Dunn (Co-chairs)

- Immunogenomics approaches in glioblastoma, *Gavin Dunn*
- T-cell dysfunction in GBM: Shifting the paradigm, *Peter Fecci*
- Myeloid checkpoint immunotherapy against brain tumors, *Siddhartha Mitra*
- The ins and outs of CNS immunity, *Anthony Filiano*

8:30 - 8:45am	BREAK <i>Ballroom Foyers</i>
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CONCURRENT SESSIONS 8:45 - 10:15am

8:45 - 10:15am CONCURRENT SESSION 5A

Immunology Pre-Clinical and Clinical II *Grand Canyon 1-6*

Moderators: Christel Herold-Mende, Pedro Lowenstein

- 8:45 - 8:55am
ATIM-14 Results of phase II clinical trial of oncolytic herpes virus G47Δ in patients with glioblastoma
Todo T
- 8:55 - 9:05am
ATIM-33 Interim results of a phase II multi-center study of oncolytic adenovirus DNX-2401 with pembrolizumab for recurrent glioblastoma; CAPTIVE study (KEYNOTE-192)
Aiken R, Chen C, Cloughesy T, Colman H, Daras M, Groves M, Khagi S, Kumthekar P, Lang F, Nassiri F, Ong S, Ramakrishna R, Sonabend A, Vogelbaum M, Zadeh G, Agensky L, Bidwell C, Watkins B, Tufaro F, Peterkin J
- 9:05 - 9:15am
ATIM-47 Nivolumab vs bevacizumab in patients with recurrent glioblastoma: exploratory analysis of MGMT methylation status and baseline corticosteroid use
Weller M, Reardon D, Brandes A, Sampson J, Mulholland P, Wick A, Baehring J, Ahluwalia M, Roth P, Bähr O, Phuphanich S, Sepulveda J, de Souza P, Sahebjam S, Potter V, Tatsuoka K, Taitt C, Zwirter R, Omuro A, Lim M
- 9:15 - 9:25am
DRES-10 Temozolomide-associated hypermutation detected with a gene panel signature improves immune response in glioblastoma
Daniel P, Meehan B, Sabri S, Sarkaria J, Rak J, Abdulkarim B
- 9:25 - 9:35am
ATIM-42 Double-blinded, placebo controlled phase 2 study of ERC1671 in recurrent glioblastoma: OS correlations with initial and maximum CD4+T lymphocyte count in the peripheral blood
Bota D, Taylor T, Kong X, Fu B, Alsharif M, Pretto C, Strik A, Schijns V, Stathopoulos A
- 9:35 - 9:45am
ATIM-38 GLITIPNI: a phase 1b clinical trial combining surgical resection with direct intracerebral injection of immune checkpoint inhibitors in patients with recurrent glioblastoma
Duerinck J, Awada G, Schwarze J, Dufait I, Peeters S, Seynave L, Van Binst A, Everaert H, Michotte A, Rogiers A, Van Velthoven V, Neyns B
EAANO-SNO Travel Award
- 9:45 - 9:50am
ATIM-30 Combating recurrent glioblastoma with MDNA55, an interleukin-4 receptor targeted immunotherapy, through MRI-guided convective delivery
Sampson J, Achrol A, Aghi M, Bankiewicz K, Brem S, Brenner A, Butowski N, Chandhasin C, Chowdhary S, Coello M, Floyd J, Kesari S, Merchant F, Merchant N, Randazzo D, Vogelbaum M, Vrionis F, Zabek M, Bexon M
- 9:50 - 9:55am
ATIM-31 Safety of tumor-specific peptide vaccine targeting isocitrate dehydrogenase 1 mutation in recurrent resectable low grade glioma patients
Peters K, Congdon K, Archer G, Woodring S, Jagers D, Lipp E, Healy P, Herndon J, Soher B, Vlahovic G, Johnson M, Randazzo D, Desjardins A, Friedman H, Friedman A, Ashley D, Yan H, Sampson J
- 9:55 - 10:00am
IMMU-18 Immunogenomic responder phenotype from a phase I trial of anti-LAG3 or anti-CD137 alone and in combination with anti-PD-1 in patients with recurrent GBM
Jackson C, Choi J, Zhang J, Piotrowski A, Walbert T, Desai A, Ahluwalia M, Nabors B, Ye X, Desideri S, Fisher J, Wen P, Grossman S, Smith K, Pardoll D, Lim M
- 10:00 - 10:05am
ATIM-40 Circulating myeloid-derived suppressor cells predict favorable response to immune checkpoint therapy in a randomized trial of nivolumab and bevacizumab in recurrent GBM
Ahluwalia M, Grabowski M, Alban T, Otvos B, Bayik D, Saeed Bamashmos A, Rayman P, Diaz-Montero M, Reardon D, Wen P, Peereboom D, Lathia J
- 10:05 - 10:10am
ATIM-45 Long term follow-up of a phase I/II study testing the toxicities and efficacy of pembrolizumab in combination with MRI-guided laser interstitial thermal therapy (LITT) in recurrent malignant gliomas
Campian J, Ghiaseddin A, Rahman M, Huang J, Ansstas G, Kim A, Leuthardt E, Tran D
- 10:10 - 10:15am **Concurrent Session 5A: Q&A** *Submit on mobile app*
- 10:15 - 10:30am BREAK *Ballroom Foyers*

MAIN MEETING SUNDAY, NOVEMBER 24

8:45 - 10:15am CONCURRENT SESSION 5B

Genetics and Epigenetics *Grand Canyon 8-13*

Moderators: Houtan Noushmehr, Pascal Zinn

- 8:45 - 8:55am
GENE-02 Establishing personalized treatment options for recurrent high-grade gliomas
Hau A, Houben L, Klein E, Oudin A, Stieber D, Flies B, Kaoma T, Azuaje F, Fritah S, Bjerkvig R, Mittelbronn M, Hertel F, Golebiewska A, Niclou S
Andrew Parsa Young Investigator Award
- 8:55 - 9:05am
GENE-28 Longitudinal molecular trajectories of diffuse glioma in adults
Barthel F, Johnson K, Varn, Jr. F, Moskalik A, Tanner G, Kocakavuk E, Anderson K, Abiola O, Consortium G, Huse J, DeGroot J, Stead L, Verhaak R
- 9:05 - 9:15am
GENE-17 ATRX loss in glioma results in epigenetic dysregulation of the G2/M checkpoint and sensitivity to ATM inhibition
Mullan B, Qin T, Siada R, Ravindran R, Garcia T, Muruganand A, Harris M, Danussi C, Brosnan-Cashman J, Pratt D, Zhao X, Rehemtulla A, Sartor M, Venneti S, Meeker A, Huse J, Morgan M, Lowenstein P, Castro M, Yadav V, Koschmann C
- 9:15 - 9:25am
TMOD-35 Prediction of overall survival, and molecular markers in gliomas via analysis of digital pathology images using deep learning
Rathore S, Iftikhar M, Nasrallah M, Gurcan M, Rajpoot N, Mourelatos Z
- 9:25 - 9:35am
GENE-15 Targeting of ependymoma as informed by oncogenic 3D genome organization
Okonechnikov K, Hübner J, Chapman O, Chakraborty A, Bump R, Chandran S, Kraft K, Acuna Hidalgo R, Mundlos S, Coufal N, Levy M, Crawford J, Ay F, Mesirov J, Pajtlar K, Dixon J, Pfister S, Kool M, Chavez L
- 9:35 - 9:40am
GENE-26 Host genetic variations in macrophage migration inhibitor factor confer worse prognosis in glioblastoma
Otvos B, Grabowski M, Alban T, Golubovsky J, Neumann C, Rabjlenovic A, Bayik D, Lauko A, Bucala R, Vogelbaum M, Lathia J
- 9:40 - 9:45am
GENE-36 Integrating transcriptomics and kinomics identifies synergistic drug combinations for glioblastoma treatment
Jermakowicz A, Stathias V, Suter R, Duncan J, Schürer S, Ayad N
- 9:45 - 9:50am
GENE-39 CRISPRi-based radiation modifier screen identifies long non-coding RNA therapeutic targets in glioma
Liu S, Malatesta M, Seo K, Lien B, Hong S, Koontz M, Raleigh D, Ullian E, Lim D
- 9:50 - 9:55am
GENE-41 Understanding the differences in adolescent and young adult (AYA) gliomas and older adult (OA) gliomas based on functional molecular subgroups
Bi C, Subramaniam A, Xiu J, Heimberger A, Michelhaugh S, Mittal S, Sumrall A, Subramaniam D
- 9:55 - 10:00am
GENE-47 A 3D Atlas to evaluate the spatial patterning of genetic alterations and tumor cell states in glioma
Hilz S, Hong C, Jalbert L, Mazar T, Martin M, Kumar A, Shelton S, Wong K, Hayes J, Yu Y, Zhang M, Luks T, Olson M, Lafontaine M, Shai A, Bengtsson H, Olshen A, Molinaro A, McDermott M, Chang E, Hervey-Jumper S, Berger M, Lim D, Diaz A, Lupo J, Phillips J, Chang S, Nelson S, Oldham M, Costello J
- 10:00 - 10:05am
RARE-32 Polymorphous low-grade neuroepithelial tumor of the young (PLNTY): genetic analysis confirms frequent MAPK pathway activation
Ida C, Johnson D, Kollmeyer T, Kim D, Kaufmann T, Kipp B, Jenkins R, Giannini C
- 10:05 - 10:10am
GENE-50 SWI/SNF complex heterogeneity relates with polyphenotypic differentiation, prognosis and immune response in rhabdoid tumors
Venneti S, Panwalkar P, Pratt D, Chung C, Dang D, Lee P, Martinez D, Bayliss J, Smith K, Adam M, Potter S, Northcott P, Mascarenhas L, Shows J, Pawel B, Margol A, Huang A, Judkins A
- 10:10 - 10:15am **Concurrent Session 5B: Q&A** *Submit on mobile app*
- 10:15 - 10:30am **BREAK** *Ballroom Foyers*

MAIN MEETING SUNDAY, NOVEMBER 24

8:45 - 10:15am CONCURRENT SESSION 5C

Cell Signaling/Radiobiology and DNA Repair *Grand Canyon 7*

Moderators: Steve Braunstein, Tania Kaprealian

- 8:45 - 8:55am CSIG-06 Depatuxizumab mafodotin (ABT-414)-induced glioblastoma cell death requires EGFR overexpression, but not phosphorylation
von Achenbach C, Blot V, Weiss W, Weller M
- 8:55 - 9:05am CSIG-08 Extracellular domain mutations in EGFR result in a hypersensitive receptor
French P, de Wit M, de Heer I, van Royen M, Vallentgoed W, Hoogstrate Y, Sillevs Smitt P
- 9:05 - 9:15am CSIG-17 Signaling pathway-based clustering of mass cytometry data uncovers cells associated with clinical progression in glioblastoma
Alvarado A, Alban T, Nakano I, Lathia J, Goldman S, Kornblum H
- 9:15 - 9:25am CSIG-22 Regulation of glioma stem cell self-renewal and tumorigenesis by carbohydrate binding proteins
Sharaneek A, Fatakawala I, Jahani-Asl A
- 9:25 - 9:35am CSIG-25 MTAP loss compromises DNA damage response in GBM cells
Du C, Hansen L, Singh S, Roso K, Greer P, He Y
- 9:35 - 9:45am **Concurrent Session 5C: Discussant** *Jann Sarkaria*
- 9:45 - 9:50am RDNA-03 Autophagy as a novel therapeutic target in mutant IDH1 gliomas
Nunez F, Garcia-Fabiani M, Kadiyala P, Hong H, Comba A, Lyssiotis C, Cheng S, Lowenstein P, Castro M
- 9:50 - 9:55am RARE-12 Early focal radiotherapy and temozolomide following complete resection appear superior to intensive chemotherapy in children with embryonal tumors with multilayered rosettes (ETMR)
Slavc J, Mayr L, Gojo J, Peyrl A, Azizi A, Dieckmann K, Haberler C, Czech T
- 9:55 - 10:00am RDNA-12 The Fanconi anaemia (FA) pathway and glioblastoma: a new foundation for DNA damage response targeted combinations
Rominyi O, Myers K, Gomez-Roman N, Lad N, Dar D, Jellinek D, Chalmers A, Carroll T, Chen B, Al-Tamimi Y, Collis S,
- 10:00 - 10:05am CSIG-05 TRPM7 induces mechanistic target of Rap1b through downregulation of miR-28-5p in glioma proliferation and invasion
Wan J, Guo A, Liu M
- 10:05 - 10:10am RDNA-14 Radiation-induced miR-4516 contributes to radio-resistance and promotes aggressive phenotype in glioblastoma
Sebastian E, Cui T, Bell E, McElroy J, Johnson B, Gulati P, Geurts M, Becker A, Fleming J, Haque S, Robe P, Chakravarti A
- 10:10 - 10:15am **Concurrent Session 5C: Q&A** *Submit on mobile app*

10:15 - 10:30am BREAK *Ballroom Foyers*

10:30 - 12:15pm CONCURRENT SESSION 6A

Stem Cells/Tumor Models/Molecular Pathology *Grand Canyon 1-6*

Moderators: Tomas Garzon-Muvdi, Ian Parney

- 10:30 - 10:40am TMOD-29 A mouse model of FGFR3-TACC3 uncovers mechanisms of gliomagenesis and maintenance
Fnu T, Shi P, Zhang J, Iavarone A, Lasorella A
- 10:40 - 10:50am TMOD-13 Modeling the genetic, transcriptomic, and cellular heterogeneity of glioblastoma using tumor organoids
Zhang D, Jacob F, Salinas R, Nguyen P, Ming G, Song H
- 10:50 - 11:00am STEM-21 Investigating DOT1L as an epigenetic vulnerability in brain tumor stem cells
Bozek D, MacLeod G, Hao X, Rajakulendran N, Ahmadi M, Dirks P, Angers S, Luchman A, Weiss S

MAIN MEETING SUNDAY, NOVEMBER 24

- 11:00 - 11:10am Leveraging functional genetic dependencies in treatment-refractory glioblastoma
STEM-27 *Chokshi C, Tieu D, Brown K, Venugopal C, Kuhlmann L, Ignatchenko V, Tong A, Chan K, Savage N, Subapanditha M, McKenna D, Lazo J, Kislinger T, Moffat J, Singh S*
- 11:10 - 11:20am Glioblastoma cancer stem cells utilize asymmetric cell division to promote therapeutic resistance
STEM-02 *Hitomi M, Chumakova A, Silver D, Knudsen A, Kristensen B, Lathia J*
- 11:20 - 11:30am The genomic landscape of spinal cord ependymoma
PATH-66 *Ramani B, Villanueva-Meyer J, Glastonbury C, Meram E, Walsh K, Taylor J, van Ziffle J, Onodera C, Grenert J, Bollen A, Perry A, Tihan T, Solomon D, Pekmezci M*
- 11:30 - 11:40am **Concurrent Session 6A: Discussant** Justin Lathia
- 11:40 - 11:45am Neural G0: a novel quiescent-like state in proliferating human neural stem and glioblastoma tumor cells
STEM-05 *Feldman H, Arora S, Hoellerbauer P, Pollard S, Patel A, Plaisier C, Paddison P*
- 11:45 - 11:50am The atypical metalloproteinase ADAMDEC1 maintains a novel FGF mediated signalling network in glioblastoma cancer stem cells
STEM-07 *Jimenez-Pascual A, Hale J, Bayik D, Silver D, Roversi G, Alban T, McIntyre T, Colombo G, Taraboletti G, Holmberg K, Forsberg-Nilsson K, Lathia J, Siebzehnrbul F*
- 11:50 - 11:55am Low grade astrocytoma mutations cooperate to disrupt SOX2 genomic architecture and block differentiation via previously unidentified enhancer elements
STEM-17 *Bready D, Modrek A, Guerrero A, Frenster J, Skok J, Placantonakis D*
- 11:55 - 12:00pm HDAC1 is essential for glioma stem cell survival
STEM-25 *Lo Cascio C, McNamara J, Luna Melendez E, Mehta S*
- 12:00 - 12:05pm Resistance is futile: understanding and targeting the CDK5-CREB1-MCL1 axis to prevent radiation resistance in glioma stem cells
STEM-19 *Mukherjee S, Olson C, Dunder B, Sharma N, Markwell S, Brat D*
- 12:05 - 12:10pm In vivo reprogramming of postmitotic neurons induces medulloblastoma
TMOD-05 *Aiello G, Tiberi L*
- 12:10 - 12:15pm **Concurrent Session 6A: Q&A** Submit on mobile app
- 10:30 - 12:15pm **CONCURRENT SESSION 6B**
- Genetics and Epigenetics II** Grand Canyon 8-13
Moderators: Pim French, Bart Westerman
- 10:30 - 10:40am Comprehensive transcriptomic analysis of single cells from recurrent and primary glioblastoma to predict cell-type specific therapeutics
COMP-16 *Suter R, Stathias V, Jermakowicz A, Semonche A, Ivan M, Komotar R, Schürer S, Ayad N*
- 10:40 - 10:50am Single cell mass cytometry signaling profiles and a novel computational tool identify high risk glioblastoma cells
COMP-11 *Leelatian N, Sinnaeve J, Mistry A, Barone S, Diggins K, Greenplate A, Bartkowiak T, Roe C, Weaver K, Thompson R, Chambless L, Mobley B, Irish J, Ihrie R*
- 10:50 - 11:00am Characterizing epigenetic intratumoral heterogeneity in glioma using single-cell bisulfite sequencing
GENE-40 *Johnson K, Anderson K, Courtois E, Barthel F, Samuels M, Robson P, Bulsara K, Das S, Verhaak R*
- 11:00 - 11:10am Vestibular schwannoma is comprised of neural crest and immune subgroups
GENE-37 *Liu S, Vasudevan H, Pekmezci M, Choudhury A, Lien B, Breshears J, Swaney D, Magill S, Lang U, Chen W, Gopinath C, Castro M, Villanueva-Meyer J, Braunstein S, Sneed P, Lim D, Perry A, Krogan N, McDermott M, Berger M, Theodosopoulos P, Raleigh D*
- 11:10 - 11:20am Dissecting the drivers of adult H3K27M-gliomas at the single-cell level
GENE-45 *Liu J, Avihai B, Gojo J, Ligon K, Czech T, Slavic I, Kleinman C, Jabado N, Filbin M*
- 11:20 - 11:30am Synthetic lethal interactions with IDH1R132H in glioma stem-like cells
GENE-32 *Ventosa M, Kadiyala P, Carney S, Castro M, Lowenstein P*

MAIN MEETING SUNDAY, NOVEMBER 24

- 11:30 - 11:40am Therapeutically targeting epigenomic and transcriptional dysfunction in ATRX-deficient glioma
GENE-34 *Danussi C, Singh A, Pinnamaneni P, Fisher G, Picketts D, Kannan K, Rao A, Rai K, Huse J*
- 11:40 - 11:50am **Concurrent Session 6B: Discussant** *Simone Niclou*
- 11:50 - 11:55am A cancer drug atlas enables prediction of parallel drug vulnerabilities of glioblastoma
COMP-09 *Narayan R, Molenaar P, Cornelissen F, Wurdinger T, Koster J, Westerman B*
- 11:55 - 12:00pm Single-cell transcriptome profiling of GBM tissue acute slice cultures for personalized drug screening
COMP-12 *Zhao W, Spinazzi E, Dovas A, Upadhyayula P, Marie T, Sisti M, Bruce J, Canoll P, Sims P*
- 12:00 - 12:05pm Targeting GABPb1L inhibits in vivo growth of TERT promoter mutant glioblastoma
GENE-43 *Amen A, Lew R, Ren S, McKinney A, Mancini A, Doudna J, Fellmann C, Costello J*
- 12:05 - 12:10pm Modeling precision oncology for glioblastoma through integration of descriptive, functional, and network-based genomics
COMP-04 *Hoellerbauer P, Kufeld M, Arora S, Girard E, Olson J, Biery M, Chambwe N, Paddison P*
- 12:10 - 12:15pm **Concurrent Session 6B: Q&A** *Submit on mobile app*
- 10:30 - 12:15pm CONCURRENT SESSION 6C**
- Immunology Pre-Clinical and Clinical III** *Grand Canyon 7*
Moderators: Robert Prins, Maryam Rahman
- 10:30 - 10:40am Myeloid-derived suppressor cell heterogeneity drives glioblastoma progression in a sex-dependent manner
IMMU-01 *Bayik D, Silver D, Park C, Watson D, Sorensen M, Roversi G, Lauko A, Alban T, Lo A, Sims P, Barnholtz-Sloan J, Kristensen B, Hwang T, Khalil A, Iavarone A, Cheng F, Lathia J*
- 10:40 - 10:50am Neoantigens arising from alternative splicing events may be targeted by tumor infiltrating lymphocytes in glioblastomas
IMMU-02 *Lee A, Pan Y, Mochizuki A, Galvez M, Chow F, Nathanson D, Wang A, Everson R, Liao L, Xing Y, Prins R*
- 10:50 - 11:00am Spatiotemporal immunogenomic analysis of the T-cell repertoire in IDH-mutant lower grade gliomas
IMMU-11 *Zhang M, Hilz S, Martin M, Hong C, Yu Y, Bollam S, Grimmer M, Looney T, Lowman G, Ganpule G, Phillips J, Shai A, Chang S, Clarke J, Taylor J, Butowski N, Oberheim-Bush N, Berger M, Aghi M, Hervey-Jumper S, McDermott M, Theodosopoulos P, Okada H, Costello J*
- 11:00 - 11:10am Mechanisms of immunological escape during adoptive cellular therapy in high grade glioma
IMMU-13 *Wildes T, Dyson K, Francis C, Wummer B, Yang C, Yegorov O, Shin D, Grippin A, Divita B, Mitchell D, Flores C*
- 11:10 - 11:20am Advanced aging increases immunosuppressive IDO1 levels that are uninhibited by IDO1 enzyme inhibitor treatment in models of glioblastoma
IMMU-20 *Ladomersky E, Zhai L, Lauing K, Qian J, Otto-Meyer S, Savoor R, Wainwright D*
- 11:20 - 11:30am Driver gene mutations dictate the composition of the immune landscape of glioblastoma and confer selective response to immunotherapy
IMMU-31 *Yeo A, Delcuze B, Strauss L, Boussiotis V, Charest A*
- 11:30 - 11:40am **Concurrent Session 6C: Discussant** *Derek Wainwright*
- 11:40 - 11:45am Quinolate-induced immune suppression in glioblastoma
IMMU-19 *Kesarwani P, Kant S, Prabhu A, Chinnaiyan P*
- 11:45 - 11:50am Sequential two-receptor priming CAR system to overcome heterogeneous antigen expression
IMMU-21 *Watchmaker P, Choe J, Carrera D, Gilbert R, Yu W, Downey K, Roybal K, Lim W, Okada H*
- 11:50 - 11:55am Utilizing a novel mass cytometry-based immunomonitoring platform for the characterization of vaccine-reactive, epitope-specific CD8+T-cells in HLA-A*0201+ patients with K27M+diffuse midline gliomas
IMMU-30 *Tait J, Watchmaker P, Nejo T, Almeida N, Okada K, Shahin M, Gilbert R, Mueller S, Okada H*

MAIN MEETING SUNDAY, NOVEMBER 24

- 11:55 - 12:00pm IMMU-33 Immune profiling reveals inhibitory macrophages and a distinct spatial distribution of immune cells in different types of brain metastases
Kienzler J, Reynoso J, Owens G, Orpilla J, Lee A, Mochizuki A, Yong W, Liao L, Prins R
- 12:00 - 12:05pm IMMU-49 The selective enrichment of T cells targeting unknown brain cancer antigens via trogocytosis
Moore G, Divita B, Flores C, Mitchell D
- 12:05 - 12:10pm IMMU-50 Systemic adoptive transfer immunotherapy with TCR-transduced T-Cells targeting NY-ESO-1 for meningioma
Sun M, Orpilla J, Contreras E, Treger J, Molaie D, Tsang J, Antonios J, Wang A, Liao L, Prins R, Everson R
- 12:10 - 12:15pm **Concurrent Session 6C: Q&A** *Submit on mobile app*
- 12:15 - 12:30pm **Highlights of SNO** *Grand Canyon 1-6*
- 12:30pm **ADJOURN**

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NOTES

The image features a background of a large, multi-story building with a prominent red dome and classical architectural elements like columns and pediments. Several tall palm trees are in the foreground, and a green lamppost is visible on the right. A semi-transparent blue banner is positioned across the top of the image, containing the SNO logo and the organization's name.

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A large saguaro cactus stands prominently in the foreground, its arms reaching out. Behind it, three flagpoles hold the American flag, a black flag, and a blue flag with a red and yellow stripe. In the background, a classical building with columns and a dome is visible under a blue sky with scattered clouds. Palm trees are also present on the left and right sides of the frame.

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