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.

Selected 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.

Optune 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.

The updated NCCN Clinical Practice Guidelines In Oncology (NCCN Guidelines®) now include alternating electric field therapy (Optune) in combination with temozolomide (TMZ) following maximal safe resection and standard brain radiation therapy with concurrent TMZ as Category 1 recommended treatment option for patients with newly diagnosed supratentorial glioblastoma (GBM) and good performance status.*

There is uniform NCCN consensus for this recommendation based on high-level evidence (Category 1).

*The NCCN defines good performance as Karnofsky Performance Score (KPS) ≥60. The trial for which the IFU is based used an eligibility criteria of KPS ≥70.

The National Comprehensive Cancer Network makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

OPTUNE® + TMZ HAS BEEN PROVEN TO PROVIDE LONG-TERM QUALITY SURVIVAL TO PATIENTS WITH NEWLY DIAGNOSED GBM

Part of a National Comprehensive Cancer Network® (NCCN®) Category 1 recommendation for newly diagnosed GBM

Please visit Optune.com/IFU for Optune Instructions For Use (IFU) for complete information regarding the device’s indications, contraindications, warnings, and precautions.
Survival with Optune® + TMZ vs TMZ alone was significantly better at the 2- and 5-year landmark analyses\(^1\)

- Median OS was significantly extended with Optune—by nearly 5 months (P<0.001)\(^2\)
- Optune + TMZ also significantly improved PFS vs TMZ alone (median PFS: 6.7 months vs 4.0 months, P<0.001)\(^1\)

Patients treated with Optune + TMZ maintained QoL over time\(^3,4\)

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 months\(^8\)
- Patient-reported Global Health Status\(^1\) was approximately 70 at baseline and 12 months\(^2\)

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**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 (≥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.

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**References:**


3. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Central Nervous System Cancers. V.1.2018 © 2018 National Comprehensive Cancer Network, Inc. All rights reserved. Accessed March 20, 2018. To view the most recent and complete version of the NCCN Guidelines, go online to NCCN.org.


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Go to Optune.com to learn even more about putting GBM on pause and life on play

Please visit Optune.com/IFU for Optune IFU for complete information regarding the device’s indications, contraindications, warnings, and precautions.

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Dear Colleagues,

We are pleased to welcome you to the 2020 SNO Virtual Annual Meeting! While we are all of course disappointed to not to be together in Austin this year, we hope you will agree that the virtual program offers a varied and stimulating selection of invited lectures and peer-reviewed talks on the cutting edge of CNS tumor research.

COVID notwithstanding, the SNO Annual Meeting serves as the nexus for scientific research and clinical progress in neuro-oncology and we are so glad that you have chosen to be a part of it!

The theme of this year’s meeting is 2020 Vision for the Future. Correspondingly, the virtual conference will focus on cutting-edge topics that will shape the future of neuro-oncology, including single-cell sequencing, big data and predictive analytics, biomarkers and liquid biopsy diagnostics, and the role of AI in neuro-oncology research. To view the list of our outstanding keynote and invited lectures, click here.

After the Thursday plenary on Biomarkers, conference participants will have the opportunity to engage in two Thursday evening Town Hall sessions; the first addressing Clinical Trial Design, followed by a discussion of how COVID-19 has impacted our field. After the Friday plenary featuring invited lectures and top scoring abstracts, participants will have the option of viewing concurrent Roundtables, one focusing on Tumor Microenvironment and the other on Artificial Intelligence. Saturday begins with a special Friends of SNO session, in which members of sister societies share updates from their organizations. This is followed by a plenary session with invited lectures and top scoring abstracts, followed by two final Roundtables on Single Cell Sequencing, Liquid Biopsies, and Pediatric Neuro-Oncology.

SNO Annual Meetings have always provided opportunities for members to interact, so we have endeavored to integrate a number of opportunities for participants to connect with one another in our virtual environment. This includes scheduled chats with senior members, electronic Q&A sessions, and other ways to connect directly with presenters and other attendees. We also encourage you to participate in the SNO Quest, and to engage with our virtual exhibitors and compete for the chance to win prizes or complimentary registrations to next year’s meeting in Boston!

New this year, all of the sessions will be available for on-demand viewing post-meeting, and you will be able to claim CME credit for these at any time for one year.

We hope you enjoy the virtual meeting!

Sincerely,

Monika Hegi
Michael Lim
Farshad Nassiri
David Schiff
2020 Scientific Program Committee
1. Download SNO Scientific Meeting App

Scan the QR Code or go to the Apple App Store or Google Play and search for “SNO Scientific Meeting”

INSTALL and OPEN the SNO Container app, then look for your event icon or Click the icon for your this year’s app “2020 SNO”

CLICK to launch the 2020 event app.

The SNO icon will appear on your device once it’s been downloaded from your app store. Click on the eventScribe icon to launch and then locate the “SNO 2020” event app.

2. Login to the 2020 SNO Event App

To start using your event app, select “Login” and wait for the Sign In page to appear. You must be a registered attendee to have access to the mobile app.

In the new window, enter your Registration Username and your Registration Password, then press Sign in. This should automatically log you into the mobile app.

3. Use the app and engage with the event!

Locate the schedule, add sessions to your personal schedule and search for your favorite session. Learn about our speakers, network and message other attendees (be sure to agree to “share” your information when you log in).

Our exhibitors challenge you to participate in the virtual scavenger hunt - The SNO Quest! Complete as many scavenger hunt questions as possible and see your name rise to the top of the Leaderboard!

You can also view the live program without downloading the app by visiting the conference website at

www.eventscribe.net/2020/SNO

Enjoy the conference!

*Download the app before your virtual event starts to make sure you login properly.
LIVE STREAM CONTENT

THURSDAY, NOVEMBER 19, 2020

Education Day: Liquid Biomarkers in Neuro-Oncology Part 1

_Education Day Program Committee and Moderators: Daniel de Carvalho, Houtan Noushmehr, Susan Short_

- **11:00 AM - 11:05 AM** Welcome
  Susan Short, HoutanNoushmehr H, Daniel de Carvalho, Gelareh Zadeh
- **11:05 AM - 11:12 AM** Setting the Stage
  Short S
- **11:12 AM - 11:32 AM** Considerations in Liquid Biopsy for Glioblastoma
  Balaj L
- **11:32 AM - 11:52 AM** Decoding Circulating Nucleic Acids Biology
  Mouliere F
- **11:52 AM - 12:12 PM** Application of Non-Invasive Epigenetics to Monitor Glioma Progression
  Noushmehr H

_Stand and Stretch (12:12 PM - 12:15 PM)_

Education Day: Liquid Biomarkers in Neuro-Oncology Part 2

- **12:15 PM - 12:35 PM** Advances in Molecular Biomarkers and Liquid Biopsy in Brain Cancer
  Phallen J
- **12:35 PM - 12:38 PM** Introduction to Part 2
  Short S
- **12:38 PM - 12:48 PM** Isolation and Analysis of Tumour-Educated Platelets in Patients with Glioma
  Würdinger T

_Stand and Stretch (12:48 PM - 12:51 PM)_

Education Day: Liquid Biomarkers in Neuro-Oncology Part 3

- **12:51 PM - 1:01 PM** Extracellular Vesicles and Circulating Tumour Cells
  Lamszus K
- **1:01 PM - 1:11 PM** Spectroscopy and Liquid Biopsies
  Brennan P
- **1:11 PM - 1:36 PM** Panel Discussion
  Short S, Noushmehr H, de Carvalho D, Bettegowda C

_Break (1:36 PM - 1:45 PM)_

Town Hall: Clinical Trial Designs in 2020 and Beyond

_Moderators: Timothy Cloughesy, David Schiff, Gelareh Zadeh_

- **1:45 PM - 1:50 PM** Introduction
  Zadeh G, Schiff D, Cloughesy T
- **1:50 PM - 2:45 PM** Panel Discussion
  Galanis E, Mehta M, Vogelbaum M, Batchelor T, Chang S, Gilbert M
Town Hall: COVID-19 and Neuro-Oncology

Moderators: Monika Hegi, Michael Lim, Farshad Nassiri, David Schiff

2:45 PM - 2:50 PM  Introduction
Schiff D, Lim M, Hegi M, Nassiri F

2:50 PM - 3:05 PM  SNO Survey: The State of Neuro-Oncology During the COVID-19 Pandemic: A Worldwide Assessment
Chheda M

3:05 PM - 3:20 PM  IBTA Survey: Brain tumours and COVID-19: the patient and caregiver experience
Oliver K, Voisin M

3:20 PM - 3:30 PM  Planned-use glucarpidase for outpatient high dose methotrexate (HD-MTX) administration in patients with CNS lymphoma (CNSL) during the COVID-19 pandemic
Schaff L, Lobbous M, Bozza A, Carlow D, Nabors L, Grommes C


3:40 PM - 4:00 PM  Panel Discussion
Oliver K, Mrugala M, Lassman A, Arrillaga-Romany I, Voisin M

FRIDAY, NOVEMBER 20, 2020

Plenary 1A: Keynotes & Top Scoring Abstracts

Main Meeting Program Committee: Monika Hegi, Michael Lim, Farshad Nassiri, David Schiff

11:00 AM - 11:05 AM  Welcome
Michael Lim

11:05 AM - 11:10 AM  Esenwein Award Presentation and Presidential Introduction
Chas Haynes

11:10 AM - 11:35 AM  Presidential Address
Gelareh Zadeh

11:35 AM - 11:45 AM  INO-5401 and INO-9012 delivered intramuscularly (IM) with electroporation (EP) in combination with cemiplimab (REGN2810) in newly diagnosed glioblastoma

11:45 AM - 11:55 AM  Phase 2 multicenter study of the oncolytic adenovirus DNX-2401 (tasadenoturev) in combination with pembrolizumab for recurrent glioblastoma; CAPTIVE Study (KEYNOTE-192)
Zadeh G

11:55 AM - 12:05 PM  IDH1/2wt anaplastic gliomas of the EORTC randomized phase III intergroup CATNON trial: overall survival related to treatment, MGMT status and molecular features of glioblastoma (Abstract Award for Excellence in Adult Clinical Research)
12:05 PM - 12:07 PM  Keynote Introduction  
David Schiff

12:07 PM - 12:45 PM  Keynote: Benefit from Genome-Driven Oncology  
Vinay Prasad

12:45 PM - 12:55 PM  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)  
Lassman A

12:55 PM - 1:15 PM  Panel Discussion  
Schiff D, Zadeh G, Stupp R, Prasad V, Schiff D, Lassman A

Break (1:15 PM - 1:45 PM)

Plenary 1B: Keynotes & Top Scoring Abstracts  
Moderators: Michael Lim, David Schiff

1:45 PM - 1:47 PM  Keynote Introduction  
David Schiff

1:47 PM - 2:15 PM  Keynote: Harnessing Big Data for Clinical Use  
Daniel Orringer

2:15 PM - 2:17 PM  Abhijit Guha Award & Lecture Introduction  
Michael Lim

2:17 PM - 2:45 PM  Abhijit Guha Award Lecture: The Immune Landscape of CNS tumors: Implications for Immunotherapy  
Amy Heimberger

2:45 PM - 2:55 PM  Neoadjuvant PD-1 antibody blockade remodels the immune microenvironment of metastatic brain tumors  

2:55 PM - 3:05 PM  Sex differences in redox state underlie glutamine dependency in male glioblastoma  
(Women in Neuro-Oncology Abstract Award for Basic Science/Translational Research)  
(Sponagel J, Zhang S, Jones J, Chinnaiyan P, Rubin J, Ippolito J)

3:05 PM - 3:07 PM  Keynote Introduction  
Monika Heg

3:07 PM - 3:35 PM  Keynote: Tumor Microenvironment  
Johanna Joyce

3:35 PM - 3:45 PM  Closing Remarks and Introduction of Roundtables  
David Schiff

Break (3:45 PM - 4:00 PM)

Roundtable 1: What's New in the Tumor Microenvironment?  
Moderators: Frank Furnari, Michael Lim

4:00 PM - 4:05 PM  Introduction  
Frank Furnari, Michael Lim

4:05 PM - 4:15 PM  High-throughput retrieval of therapeutic T cell receptors from glioma  

4:15 PM - 4:25 PM  Landscape of glioblastoma-associated immunity by integration of scRNA-seq and spatial transcriptomics  
Ravi V, Neidert N, Joseph K, Beck J, Schnell O, Heiland D

4:25 PM - 4:35 PM  Single-cell RNA-seq of tumor infiltrating immune cells from neoadjuvant anti-PD1 treated GBM patients reveals global transcriptional changes and immunosuppressive adaptive responses by myeloid cells
**Roundtable 2: Using Artificial Intelligence in the Clinic Setting**

_Moderators: Raymond Huang, Whitney Pope, Erik Sulman_

- **4:00 PM - 4:05 PM**  
  **Introduction**  
  Pope W, Huang R

- **4:05 PM - 4:15 PM**  
  **Prediction of lower-grade glioma molecular subtypes using deep learning**  

- **4:15 PM - 4:25 PM**  
  **Deep Learning Survival Analysis for Multiple Brain Metastases (Abstract Award for Excellence in Neuro-Imaging)**  

- **4:25 PM - 4:35 PM**  
  **Deep learning enabled prediction of isocitrate dehydrogenase mutation status from digital histopathology data in glioblastoma**  

- **4:35 PM - 5:00 PM**  
  **Panel Discussion**  
  Orringer D, Huang R, Pope W, Sulman E

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**Saturday, November 21, 2020**

**Friends of SNO (8:25 AM - 10:30 AM)**

_Moderators: Chas Haynes, Roy Nishikawa, Matthias Preusser, Gelareh Zadeh_

- **8:25 AM - 8:30 AM**  
  **Welcome and Introduction**  
  Zadeh G

- **8:30 AM - 8:45 AM**  
  **(EANO) Overview of new EANO meningioma guidelines**  
  Goldbrunner R

- **8:45 AM - 9:00 AM**  
  **(EANO) Molecular pathology of meningiomas**  
  Sahm F

- **9:00 AM - 9:15 AM**  
  **(EANO) Systemic therapy of meningiomas**  
  Preusser M

- **9:15 AM - 9:20 AM**  
  **(ASNO) Strengthening Neuro-Oncology in India and South Asia**  
  Jalali R

- **9:20 AM - 9:25 AM**  
  **(ASNO) Strength and Weakness of Neuro-Oncology Service in Indonesia**  
  Malueka R

- **9:25 AM - 9:35 AM**  
  **(ASNO) Outreach and Collaboration**  
  Lwin Z

- **9:35 AM - 9:40 AM**  
  **(ASNO) Perspectives of the WFNOS**  
  Hong Y

- **9:40 AM - 9:45 AM**  
  **(ASNO) Discussion**  
  Jalali R, Malueka R, Lwin Z, Hong Y, Nishikawa R

- **9:45 AM - 10:00 AM**  
  **(SNOLA) Update on the Society for Neuro-Oncology Latin America**  
  Maldaun M
10:00AM - 10:15 AM  [SNOS] Contemporary Neuro-Oncology in Sub-Saharan Africa: Mapping a Pathway and Building Synergy
Balogun J

10:15 AM - 10:30 AM  ISPNO2020 Hybrid Meeting Preview
Ichimura K

What's New at SNO

10:30 AM - 10:55 AM  Update on SNO Actives for 2020 and 2021
Haynes C, Zadeh G

Break 10:55 AM - 11:00 AM

Plenary 2A: Keynotes & Top Scoring Abstracts
Moderator: Monika Hegi, Farshad Nassiri

11:00 AM - 11:05 AM  Welcome and Introduction
Hegi M

11:05 AM - 11:35 AM  Keynote: Liquid Biopsies in Cancer
de Carvalho D

11:35 AM - 11:45 AM  Calcium communication in glioma: crucial pacemaker cells govern tumor progression
Hausmann D, Jung E, Azorin D, Ratliff M, Osswald M, Wick W, Winkler F

11:45 AM - 11:55 AM  Malignant gliomas remodel functional neural circuits through paracrine signaling which confers a negative prognosis

11:55 AM - 12:05 PM  Prognostic validation of the EANO ESMO classification of leptomeningeal metastasis (Abstract Award for Excellence in Practical and Applied Research)

12:05 PM - 12:07 PM  Keynote Introduction
Nassiri F

12:07 PM - 12:35 PM  Keynote: Landscape of Pediatric Brain Tumors
Northcott P

12:35 PM - 12:45 PM  Suppression of histone H3.3 mitotic phosphorylation drives development of H3K27M-mutant diffuse midline gliomas (Marit Mary Swenson Award for Pediatric DMG/DIPG)

12:45 PM - 12:55 PM  A multi-institutional comparative analysis of the clinical, genomic, and survival characteristics of pediatric, young adult and older adult patients with IDH-mutant glioma (Abstract Award for Excellence in Adult Clinical Research)

Break (12:55 PM - 1:15 PM)

Plenary 2B: Keynotes & Top Scoring Abstracts
Moderators: Monika Hegi, Farshad Nassiri

1:15 PM - 1:17 PM  Keynote Introduction
Nassiri F
1:17 PM - 1:45 PM  **Keynote: The Power and Future of Single Cell Technologies**  Lein E

1:45 PM - 1:55 PM  **Epigenomic intratumoral heterogeneity of glioblastoma in three-dimensional space**  *Andrew Parsa Young Investigator Award*  

1:55 PM - 2:05 PM  **Deciphering differentiation hierarchies, heritability and plasticity in human gliomas via single-cell multi-omics**  

2:05 PM - 2:15 PM  **A single-cell atlas of glioblastoma evolution under therapy**  *Abstract Award for Excellence in Adult Basic Science*  

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**Plenary 2C: Keynotes & Top Scoring Abstracts**

*Moderators: Monika Hegi, Farshad Nassiri*

2:15 PM - 2:25 PM  **Single cell RNA-sequencing identifies novel bone marrow derived myeloid cells in glioblastoma associated with tumor aggression**  

2:25 PM - 2:35 PM  **Sensitive Detection and Discrimination of Intracranial Tumors by Blood**  

2:35 PM - 2:45 PM  **Metabolic Regulation of the Epigenome Drives Lethal Infantile Ependymoma**  

2:45 PM - 2:55 PM  **Identifying New Drivers of Group 3 Medulloblastoma**  

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**Plenary 2D: Keynotes & Top Scoring Abstracts**

*Moderators: Monika Hegi, Farshad Nassiri*

2:58 PM - 3:00 PM  **Keynote Introduction**  
Hegi M

3:20 PM - 3:28 PM  **Keynote: Harnessing Big Data for Science**  
Suva M

3:28 PM - 3:38 PM  **Closing Remarks and Introduction of Roundtables**  
Nassiri F

*Break (3:38 PM - 3:45 PM)*

**Roundtable 2A: What's New in Pediatric Neuro-Oncology?**

*Moderators: Annie Huang, Robert Wechsler-Reya*

3:45 PM - 3:50 PM  **Introduction**  
Huang A, Wechsler-Reya R

3:50 PM - 4:00 PM  **Mutational Analysis of the C11orf95 Domain and Single Cell RNAseq Profile of a Mouse model of Supratentorial Ependymoma**  
Truong K, He J, Randazzo E, Dunnack J, LoTurco J

4:00 PM - 4:10 PM  **Single-cell RNA-seq of pediatric ependymoma reveals prognostic impact of impaired neuronal-glia fate specification**  
Roundtable 1: Single Cell Sequencing of Brain Tumors

**Moderator: Joe Costello, Monika Hegi**

3:45 PM - 3:50 PM  **Introduction**
Costello J, Hegi M

3:50 PM - 4:00 PM  **An epigenetic single-cell atlas of IDH-mutant glioma reveals the role of ATRX in shaping tumor composition**

4:00 PM - 4:10 PM  **Integrated analysis of intra-tumoral heterogeneity in glioblastomas through single nuclei ATAC-Seq and RNA-Seq**
Raviram R, Raman A, Preissl S, Ning J, Wu S, Deynke K, Chen C, Ren B

4:10 PM - 4:20 PM  **Stereotactic image-guided epigenome profiling reveals diverse evolutionary growth routes in diffuse gliomas**

4:20 PM - 4:30 PM  **Relating glioblastoma heterogeneity to human fetal glial development through high resolution single nuclei transcriptomics**

4:30 PM - 4:40 PM  **Glioma single cell multi-omic analyses reveals regulators of plasticity and adaptive stress response**

4:40 PM - 4:55 PM  **Panel Discussion**
Lein E, Suva M, Costello J, Hegi M

Break (4:50 PM - 5:00 PM)

Roundtable 2B: Liquid Biopsies in Neuro-Oncology

**Moderator: Farshad Nassiri**

5:00 PM - 5:05 PM  **Introduction**
Nassiri F

5:05 PM - 5:15 PM  **The integration of a liquid biopsy program into the care of pediatric brain tumor patients**

5:15 PM - 5:25 PM  **Serum microRNA is a prognostic and post-operative monitoring biomarker in glioma**
Jones J, Morokoff A, Drummond K

5:25 PM - 5:35 PM  **Circulating tumor cells (CTC) in cerebrospinal fluid (CSF) as a predictor of survival in CNS metastases**

5:35 PM - 5:45 PM  **Multi Analyte Assay for Non-Invasive Diagnosis of Brain Tumors**

5:45 PM - 6:00 PM  **Panel Discussion**
Short S, Noushmehr H, de Carvalho D, Brennan P, Nassiri F

LIVE STREAM CONCLUDES (All content will be recorded and available post-meeting)
ON-DEMAND CONTENT

Clinical Trials Session I

A Prospective Trial of Resection and Surgically Targeted Radiation Therapy for Initial or Salvage Treatment of Aggressive Meningioma

Clinical efficacy and predictive biomarkers of ONC201 in H3 K27M-mutant diffuse midline glioma

CODEL: Phase III trial of RT alone, RT plus TMZ, or TMZ alone for newly-diagnosed, 1p/19q codeleted anaplastic oligodendroglioma. Analysis from the initial study design (NCCTG N0577, Alliance)

Delivery and activity of SN-38 by Sacituzumab Govitecan in CNS Tumors

EF-19, a post-approval registry study of Tumor Treating Fields (TTFields) in recurrent glioblastoma (rGBM)
Zhu J, O'Donnell R, Goldlust S, Ram Z

Efficacy of ONC201 in patients with ONC201 for recurrent H3 K27M-mutant diffuse midline glioma (Women in Neuro-Oncology Abstract Award for Clinical Research)

Interim results of a phase I/IIa study to evaluate the safety and efficacy of BBB opening with the SonoCloud-9 implantable ultrasound device in recurrent glioblastoma patients prior to IV carboplatin

Low-Risk Meningioma: Outcomes from NRG Oncology/RT0G 0539

Maintenance chemotherapy using bevacizumab for neurofibromatosis 2 patients with hearing loss and progressive vestibular schwannomas: an NF Clinical Trials Consortium study (NF104)

Neurocognitive function (NCF) of the Photon Cohort in NRG-BN001

Neurocognitive function (NCF) outcomes of RTOG Foundation 3508: A Phase 3 trial of ABT-414 with concurrent chemoradiation and adjuvant temozolomide in patients with EGFR-amplified newly diagnosed GBM
NRG Oncology / RTOG 1119: Phase II randomized study of whole brain radiotherapy / stereotactic radiosurgery with concurrent lapatinib in patients with brain metastases from HER2-positive breast cancer

Clinical Trials Session II

CC-115 in newly diagnosed MGMT unmethylated glioblastoma in the Individualized Screening Trial of Innovative Glioblastoma Therapy (INSIGHt): a phase II randomized Bayesian adaptive platform trial

Clinical efficacy of MDNA55, an interleukin-4 receptor targeted immunotherapy, in recurrent GBM delivered by convection enhanced delivery (CED)

Combination of Controlled Interleukin-12 Gene Therapy with Immune Checkpoint Blockade in Recurrent Glioblastoma: Updated Results of a Multi-Institutional, Open Label Phase 1 Trial

Crucial application of single cell gene expression for monitoring changes in glioblastoma patients with sustained radiographic response to CMV pp65-LAMP RNA-pulsed dendritic cell-based vaccines
Yegorov O, Yang C, Dekhovskaya A, Rahman M, Ghiaseddin A, Mitchell D

Dendritic cell vaccine study for recurrent, high-grade glioma: tissue-based RNA sequencing and serum cytokine levels as potential biomarkers

Final Results of a Phase 2 Study of Efficacy, Safety and Intratumoral Pharmacokinetics (PK) of Selinexor Monotherapy in Recurrent Glioblastoma (rGBM)

Pelareorep and granulocyte-macrophage colony-stimulating factor (GM-CSF) with standard chemoradiotherapy/adjuvant temozolomide for glioblastoma multiforme (GBM) patients: ReoGlio phase I trial results

Phase 2 Trial of Controlled IL-12 in Combination with PD-1 Inhibitor in Adult Subjects with Recurrent Glioblastoma (rGBM)

Phase I Study of MGMT-P140K Transfected Hematopoetic Progenitor Cells Combined with TMZ/O6BG Dose Escalation for Newly Diagnosed, unmethylated Glioblastoma: Tolerance and Evidence of Survival Benefit
Sloan A, Fung H, Reese J, Rgers L, Murphy C, Lazarus H, Drolpulic B, Gerson S

Phase II and biomarker study of pembrolizumab or pembrolizumab plus bevacizumab for recurrent glioblastoma patients
Phase II study of abemaciclib in recurrent GBM patients with CDKN2A/B loss and intact RB

Preliminary results of the abemaciclib arm in the Individualized Screening Trial of Innovative Glioblastoma Therapy (INSiGhT): a phase II platform trial using Bayesian adaptive randomization.

Randomized Phase 2 Study of Nivolumab (nivo) plus Either Standard or Reduced Dose Bevacizumab (bev) in Recurrent Glioblastoma (rGBM)

Experimental and Translational Sciences Session I

Astrocyte senescence contributes to sex differences in glioblastoma incidence and outcome.
Broestl L, Rhee G, Grandison L, Sponagel J, Kfours Y, Hill C, Rubin J

Identifying A Network of Essential & Tumorigenic Genes In Glioblastoma Using Whole-Genome CRISPR Cas9 Screening

Targeting brain metastasis-initiating cells: a preventative approach
Kielszek A, Venugopal C, Bassey-archibong B, Lam F, Singh S, Aghaei N

Discussant
Lathia J

Identification of a novel CSC signaling axis containing JAM-A/SerpinB3/TGF-beta
Lauko A, Turaga S, Volovetz J, Bayik D, Naik U, Lathia J

IGF1/N-cadherin/b-catenin/Clusterin signaling axis mediates adaptive radioresistance in glioblastoma

Integrated molecular and BH3 profiling of the intrinsic apoptotic machinery identifies therapeutic vulnerabilities in glioblastoma

Lipid metabolic reprogramming sensitizes a molecularly-defined subset of glioblastomas to ferroptosis

Mutation-specific non-canonical pathway of PTEN as a distinct therapeutic target for glioblastoma

Nanoparticles encapsulating a connexin43 mimetic peptide limit glioma stem cell survival and glioblastoma progression.

p53 gain-of-function mutations drive sex specific effects on glioma tumorigenesis
Rockwell N, Warrington N, Rubin J

Reduced iron export functions in a cell intrinsic manner to drive glioblastoma growth
Troike K, Mulkearns-Hubert E, Silver D, Connor J, Lathia J

The histone variant macroH2A2 orchestrates an actionable chromatin program of stemness in glioblastoma
The roles of IncRNAs in GBM radiation resistance and tumor recurrence

Therapeutic implications of conditional vulnerabilities caused by TTFields exposure in novel combination therapies for non-small cell lung cancer and brain metastases from non-small cell lung cancer
Karanam N, Story M

Experimental and Translational Sciences Session II

In Vitro & In Vivo Culture of Patient Derived (PD) CSF-CTCs in Leptomeningeal Disease (LMD) From Melanoma to Identify Novel Treatment Strategies

A novel adenoviral-permissive, immunocompetent hamster glioma model to evaluate oncolytic adenoviral therapy

A novel BRAF V600E low-grade glioma mouse model highlights exomic and tumor immune alterations and differing therapeutic responses in low- and high-grade gliomas

Akaluc bioluminescence offers superior sensitivity to track in vivo GBM expansion

c-Src phosphorylates and inactivates the CIC tumor suppressor protein in glioblastoma

Developing clinically relevant brain metastatic tumor models for targeted stem cell therapeutics
Kitamura Y, Moleirinho S, Kanaya N, Franco A, Shah K

Discussant
Hashizume R

Human diffuse midline glioma avatars as a platform to search for novel therapeutic targets

Individual specific human gut microbiome communities influence response to immunotherapy in a humanized microbiome mouse model of glioma

Inhibition of melanoma brain metastasis by targeting miR146a
Wang J, Lunavat T, Zhou W, Feng Z, Hoang T, Thorsen F

Patient-derived xenograft and cell line models facilitate novel treatment discovery in central nervous system lymphomas

R-Ras Subfamily Proteins Elicit Distinct Physiologic Effects and Phosphoproteome Alterations in Neurofibromin-Null MPNST Cells

Targeting ion transport-regulatory kinases as a novel treatment for Glioblastoma

The deubiquitinate BRCC3 links ALT telomeres to suppression of innate immunity in IDH1-mutant glioma.
Mukherjee J, Tang Y, Johanesen T, Pandita A, Ohba S, Cahill D, Pieper R
Experimental and Translation Sciences Session III

Engineered Exosomes as Gene Delivery Tools for the Treatment of Glioblastoma

A novel long-acting interleukin-7 agonist, NT-I7, increases cytotoxic CD8 cells and enhances survival in mouse glioma models

Acquired resistance to targeted inhibitors in EGFR-driven glioblastoma: identification of dual kinase targets

Cellular stress response in DIPG therapy

Combination of epigenetic enzyme inhibitors, GSK-J4 and Belinostat, reveals high efficacy in IDH1 mutant gliomas

Deconvoluting mechanisms of resistance to BRAF inhibitors in BRAF V600E human glioma

IND-enabling characterization of dual DRD2- and ClpP-targeting agent ONC206 as the next imipridone for clinical neuro-oncology

Inhibition of 2-HG leads to upregulation of a pro-inflammatory gene signature in a novel HLA-A2/HLA-DR1 transgenic mouse model of IDH1R132H-expressing glioma

Inhibition of DNA-PKcs by M3814 potentiates efficacy of ionizing radiation in Patient-derived xenografts of melanoma brain metastases

Intrathecal (IT) Delivery of Type I Polarized Dendritic Cell Vaccine (DC1) Eradicates Tumor Growth in Breast Cancer (BC) Xenograft Model with Brain Metastases (BM) and Leptomeningeal Disease (LMD)
Law V, Kodumudi K, Snyder C, Czerniecki B, Forsyth P

Iodine Nanoparticle Radiotherapy of Human Breast Cancer Growing in the Brains of Athymic Mice
Hainfeld J, Ridwan S, Stanishevsky Y, Smilowitz H

Local delivery of cytokines and synthetic immunomodulators increases T cell infiltration and significantly improves survival in a poorly immunogenic model of glioblastoma

Minipig models of Neurofibromatosis Type 1 for therapeutic development

Phase I trial of convection-enhanced delivery of IL13RA2 and EPHA2 receptor targeted cytotoxins in dogs with spontaneous intracranial gliomas

Potent, selective, and brain penetrant inhibitors of extracellular domain EGFR oncogenic mutants expressed in GBM demonstrate efficacy in an intracranial patient derived xenograft model
Targeted STAT3 inhibition impairs MDSC mobilization and recruitment in glioblastoma
von Roemeling C, Li C, Mitchell D

YAP/TAZ transcriptional co-activators create therapeutic vulnerability to verteporfin in EGFR mutant glioblastoma

Experimental and Translation Sciences Session IV

A tale of two telomere maintenance mechanisms: TERT expression and the ALT pathway induce unique MRS-detectable metabolic reprogramming in low-grade gliomas

Delta-24-RGDOX activation of the IDO-Kyn-AhR cascade in glioblastoma: old targets for a new therapy.

Development of EGFRvIII and EGFR Directed Chimeric Antigen Receptor T Cell Therapy for the Treatment of Glioblastoma Multiforme

Differential migration mechanics and immune responses of glioma subtypes

Discussant
Li G

Generation of a High-Affinity EGFR/EGFRvIII-targeted D2C7 CAR-T Cell
Ryan K, Wilkinson D, Landi D, Fecci P

Metabolic interactions between tumor cells and the immune system in GBM: A potential Achilles heel of GBM for novel therapeutics

Modeling upfront glioblastoma surgical resection and steroid use reveals immunosuppressive changes and suggests that peripheral lymphocyte counts are associated with tumor volume and prognosis

PI3K-gamma inhibition suppresses accumulation of glioblastoma-associated microglia to recapitulate the microenvironment of exceptional responders

Poly(ADP-ribose) glycohydrolase inhibition sequesters NAD+ to potentiate the metabolic lethality of alkylating chemotherapy in IDH mutant tumor cells

Preclinical validation and manufacture of IL-8 receptor-modified CD70 CAR T cells for clinical trial

Syngeneic B7-H3-specific CAR T-cells have potent anti-brain tumor activity via local or systemic delivery
Haydar D, Yi Z, Houke H, Roussel M, DeRenzo C, Gottschalk S, Krenznite G

The immune microenvironment in lower grade gliomas
The oncometabolite D-2HG induce inflammatory astrogliosis causing neurotoxicity and seizures in IDH mutated glioma
Behringer S, Ravi V, Joseph K, Beck J, Schnell O, Heiland D

Tumor-Associated Macrophages Are Independent Prognostic Markers in Meningiomas

Two distinct subsets of natural killer cells are enriched in the tumor microenvironment and correlate with survival outcome in human glioblastoma.

Zika Virus Targets Glioblastoma Stem Cells through a SOX2-Integrin αvβ5 Axis
Chen C, Dhawan S, Zhu Z, Mesci P, Rich J

Experimental and Translation Sciences Session V

Multi-modal and multi-tissue profiling of GBM patients treated with CAR T cell therapy to elucidate molecular mechanisms of variation in treatment response

Tumor stroma–targeting antibody-cytokine conjugates to convert the immunologically cold glioma microenvironment into a hot one
Weiss T, Puca E, Silgner M, Hemmerle T, Pazahr S, Bink A, Weller M, Neri D, Roth P

AURKA Inhibition Reprograms Metabolism and is Synthetically Lethal with Fatty Acid Oxidation Inhibition in Glioblastoma

Characterization of the genomic and immunological diversity of malignant brain tumors through multi-sector analysis
Schaettler M, Richters M, Griffith M, Dunn G

Discerning the Different Bone Marrow Immune Landscapes

Discussant
Jackson C

Dissecting the dynamic responses of glioblastoma to CAR T cell therapy using patient-derived tumor organoids and single-cell multi-omics analyses
Zhang D, Salinas R, O'Rourke D, Ming G, Song H

Early release of type I interferon drives brain cancer immunogenicity and response to immunotherapy

High affinity chimeric antigen receptor with cross-reactivity to clinically-relevant EGFR mutated proteins
Thokala R, Binder Z, Yin Y, Milone M, O'Rourke D

High-throughput retrieval of therapeutic T cell receptors from glioma

Hypoxia-driven necrosis drives dynamic tumor progression in glioblastoma
Markwell S, Olson C, Ross J, Nunez-Santana F, Brat D

Improving Outcomes in Older Adults with Glioblastoma By Reversing Age-Related Changes of the Central Nervous System
Ladomersky E, Zhai L, Bollu L, Bell A, Lauing K, Lukas R, Wainwright D

Landscape of glioblastoma-associated immunity by integration of scRNA-seq and spatial transcriptomics
Ravi V, Neidert N, Joseph K, Beck J, Schnell O, Heiland D
**Genomics and Molecular Pathology Session I**

**BRAF mutation is an early event in the evolution of a subset of glioblastomas and is associated with increased PD-L1 expression**

**An epigenetic single-cell atlas of IDH-mutant glioma reveals the role of ATRX in shaping tumor composition**

**An immunomethylomic platform integrating systemic immune profiles and epigenetic age in neuro-oncology**

**Circulating tumor cells (CTC) in cerebrospinal fluid (CSF) as a predictor of survival in CNS metastases**

**Clinical and mutational profiles of adult medulloblastoma groups**

**Clinical utility of combined next generation sequencing and chromosomal microarray analysis for the diagnosis and management of adult gliomas**

**Establishment of a connectivity signature for gliomas**

**Genetic predisposition to longer telomere length and risk of childhood, adolescent and adult-onset ependymoma**

**Integrated molecular and clinical analysis of BRAF-mutated glioma in adults**
Schreck K, Langat P, Li T, Bi W

**Lung adenocarcinoma brain metastasis prediction, prevention, and non-invasive diagnosis using methylation signatures within tissue and circulating tumour DNA**

**Prevalence of NF1 missense mutations and candidate modifier genes in spinal neurofibromatosis patients**
Relating glioblastoma heterogeneity to human fetal glial development through high resolution single nuclei transcriptomics

Serum microRNA is a prognostic and post-operative monitoring biomarker in glioma
Jones J, Morokoff A, Drummond K

Stereotactic image-guided epigenome profiling reveals diverse evolutionary growth routes in diffuse gliomas

Tumor treatment with ionizing radiation is associated with a clinically relevant deletion signature
Kocakavuk E, Anderson K, Johnson K, Varn F, Amin S, Barthel F, Verhaak R

**Genomics and Molecular Pathology Session II**

A scalable molecularly Integrated Classifier for Meningioma outperforms WHO classification

A Rapid Genotyping Panel for Sensitive and Specific Segregation of CNS Pathologies

Artificial intelligence in glioma pathology image analysis for risk prediction
Chunduru P, Phillips J, Molinaro A

Clinical utility of next generation sequencing in IDH-wildtype glioblastoma: the Dana-Farber Cancer Institute experience

Comprehensive analysis of diverse low-grade neuroepithelial tumors with FGFR1 alterations reveals a distinct molecular signature of rosette-forming glioneuronal tumor

Deep learning enabled prediction of isocitrate dehydrogenase mutation status from digital histopathology data in glioblastoma

DNA methylation marks glucocorticoid pathway response in dexamethasone-treated brain tumor patients

Epigenomics of the Glioma Longitudinal AnalySIS (GLASS) consortium

Experience with an RNA fusion transcript panel for detection of potential therapeutic targets in gliomas
Kothari S, Bagley S, Desai A, Morrisette J, Sussman R, MacLean N

Genomic instability and transcriptomic signatures underlying epigenetic meningioma subgroups reveals mechanisms of immune infiltration and therapeutic vulnerabilities
Genomic landscape of *IDH*-mutant primary glioblastomas shows distinct clinical and molecular features and that *CDKN2A* should be supplemented with *MGMT*p and G-CIMP for precise prognostication

Genomic predictors of adverse events in newly diagnosed *IDH*-wildtype glioblastoma

Gloma single cell multi-omic analyses reveals regulators of plasticity and adaptive stress response

Integrated analysis of intra-tumoral heterogeneity in glioblastomas through single nuclei ATAC-Seq and RNA-Seq
Raviram R, Raman A, Preissl S, Ning J, Wu S, Deynne K, Chen C, Ren B

Prognostic significance of epigenetic subtypes and CpGs associated with progression to G-CIMP low in the EORTC randomized phase III intergroup CATNON

Subventricular zone involvement is associated with worse outcome in glioma WHO grade II independent of molecular markers

Temozolomide-induced hypermutation is associated with high-grade transformation, distant recurrence and reduced survival in initially low grade *IDH*-mutant gliomas

Patient Care & Survivorship Session I

A call to action: Death anxiety in neuro-oncology
Loughan A, Husain M, Willis K, Braun S, Brechbiel J, Aslazadeh F, Kovalchick L

Access to Glioblastoma Clinical Trials for Rural Patients in the United States from 2010-2020
Nevel K, Capouch S, Arnold L, Peters K, Mohile N, Thomas A

Characterization of radiation-induced meningiomas in a brain tumor database
Vaghjiani N, Schwieder A, Upalapatia S, Kons Z, Kazarian E, Sattiraju S, Opalac K, Harris T, Broadus W

Embedding outpatient palliative care into neuro-oncology clinic – results from a one year pilot

Mitochondrial DNA sequence variation and risk of glioma

Patient-reported outcomes following pertuzumab plus high-dose trastuzumab in patients with HER2-positive metastatic breast cancer (MBC) and central nervous system (CNS) progression post-radiotherapy

Posttraumatic growth in neuro-oncology
Kovalchick L, Willis K, Brechbiel J, Lanoye A, Husain M, Aslazadeh F, Braun S, Parker K, Loughan A
Pre-infusion neurofilament light chain (NFL) levels predict the development of immune effector cell-associated neurotoxicity syndrome (ICANS)

Pre-surgery immune profiles of adult glioma patients

Quantifying the potential public health impact of varicella zoster virus (VZV) vaccination on glioma incidence
Shen E, Wallace A, Zhang C, Shannon C, Ashley D, Walsh K

Racial/ethnic disparities in treatment pattern and time to treatment for adults with glioblastoma in the US
Ostrom Q, Patil N, Cioffi G, Barnholtz-Sloan J

Stereotactic radiosurgery and chemotherapy treatment patterns in breast cancer brain metastases

The role of p38 and JNK MAPK pathways in cisplatin chemotherapy-related cognitive impairment
Lomeli N, Di K, Bota D

The vanishing tumor phenomenon in the diagnosis of primary CNS lymphoma
Yim E, Umemura Y, Sun Y, Junck L

Use of medical assistance in dying (“Death with Dignity”) in Washington state patients with brain tumors.
Graber J, Sofie K, Taylor L

Patient Care & Survivorship Session II

Is the RANO Criteria for low-grade glioma reliable in the clinical setting? – A reliability study
Horta E, Zhou Y, Poisson L, Griffith B, Stone M, Snyder J, Walbert T

Service reconfiguration into an urgent elective pathway for the management of glioblastoma patients improves outcomes, costs and patient experience and adjunct use: a single centre six year review
Sun R, Sharma S, Watts C, Wykes V

Clinical and Genomic Factors Associated with Seizures in Meningiomas

Clinical Characteristics of Low Grade Glioma Patients with Non-Canonical IDH1 and IDH2 Mutations

Effectiveness of HER2-targeted antibody therapy in HER2-positive breast cancer brain metastases: a national analysis
Hulsbergen A, Broekman M, Smith T, Aizer A, Iorgulescu B

Efficacy and long-term outcomes in the management of large brain metastasis (≥ 4 cm³) using 2-staged Stereotactic radiosurgery (2-SSRS): an international study

First-line antiepileptic drug treatment in glioma patients with epilepsy: levetiracetam versus valproic acid
van der Meer P, Dirven L, Fiocco M, Vos M, Kouwenhoven M, van den Bent M, Taphoorn M, Koekkoek J

Increased overall survival among racial minorities and suboptimal use of standard of care treatment in glioblastoma multiforme

Lifestyle coaching is feasible and improves pilot outcomes in fatigued brain tumour patients: the BT-LIFE (Brain Tumours, Lifestyle Interventions, and Fatigue Evaluation) multi-centre, Phase II RCT.
Neurologic improvement with corticosteroids prior to surgery is predictive of durable post-operative improvement in motor deficits due to brain metastases

Predictors of endocrine outcome after endoscopic transsphenoidal surgery for non-functioning pituitary adenomas

Predictors of outcome after MR-determined white matter injury(WMI) predicts neurocognitive decline after hippocampal avoidance(WA)WBRT+Memantine for brain metastases: Second analysis of NRG OncologyCC001

Radiographic characteristics and steroid usage in laser interstitial thermal therapy versus medical management for biopsy-proven radiation necrosis after stereotactic radiosurgery of brain metastases

Reliability and validity of a new self-report index of cognitive concerns in brain tumor patients
Zarrella G, Perez A, Dietrich J, Parsons M

The detrimental effect of biopsy preceding resection in surgically accessible Glioblastomas: Results from the National Cancer Database

The safety and efficacy of dexamethasone in the management of glioma patients

Characterizing Temporal Genomic Heterogeneity in Pediatric Low-Grade Gliomas

GD2 is a Macrophage Checkpoint Molecule and Combined GD2/CD47 Blockade Results in Synergistic Effects against GD2 positive malignancies
Theruvath J, Mount C, Monje M, Mackall C, Majzner R

H3K27M mutant gliomas hijack a conserved and critical metabolic pathway used by IDH1 mutant gliomas to maintain their preferred epigenetic state

Loss of the H4 lysine methyltransferase KMT5B drives invasion / migration by depleting H3K27me3 at loci otherwise retained in H3K27M mutant DIPG cells

Medulloblastoma Utilize GABA Transaminase to Survive in the Cerebrospinal Fluid Microenvironment and Promote Leptomeningeal Dissemination
Mutational Analysis of the C11orf95 Domain and Single Cell RNAseq Profile of a Mouse model of Supratentorial Ependymoma
Truong K, He J, Randazzo E, Dunnack J, LoTurco J

Oncolytic adenovirus Delta-24-RGD engineered to express 4-1BBL as a therapeutic approach for DIPG

Pharmacologic inhibition of lysine specific demethylase-1 (LSD1) as an adjuvant immune-sensitization strategy in diffuse intrinsic pontine glioma (DIPG)

Project HOPE: “Pediatric and AYA High-Grade Glioma Omics Project”- A longitudinal molecular landscape of high-grade gliomas resolved at single-cell level

Single-cell RNA-seq of pediatric ependymoma reveals prognostic impact of impaired neuronal-glial fate specification

Smoothed-activating lipids drive resistance to CDK4/6 inhibition in Hedgehog-associated medulloblastoma

Targeting epigenetic vulnerabilities identified from a CRISPR screen in H3.K27M DIPG

The integration of a liquid biopsy program into the care of pediatric brain tumor patients

TIM-3 aptamer in combination with radiotherapy results in enhanced survival in DIPG models

Pediatric (Clinical) Session I

A Phase 2 study of trametinib for patients with pediatric glioma with activation of the MAPK/ERK pathway. TRAM-01

Can young children with relapsed medulloblastoma be salvaged after initial irradiation-sparing approaches?

Clinical efficacy of ONC201 in newly diagnosed DIPG and in previously irradiated pediatric H3 K27M-mutant gliomas

Clinical features, neurologic recovery, and risk prediction of post-operative posterior fossa syndrome: A prospective study
Debio1347, an oral FGFR inhibitor: results from a single center study in pediatric patients with recurrent/refractory FGFR altered gliomas

Efficacy and safety of larotrectinib in patients with tropomyosin receptor kinase (TRK) fusion primary central nervous system (CNS) tumors: an expanded dataset

First-in-pediatrics phase I study of GDC-0084 (paxalisib), a CNS-penetrant PI3K/mTOR inhibitor, in newly diagnosed diffuse intrinsic pontine glioma (DIPG) or other diffuse midline glioma (DMG)

Immune profiles associate with outcomes in HLA-A*02:01+, H3.3K27M+ patients with diffuse midline gliomas treated with H3.3K27M peptide vaccine combined with Poly-ICLC: a PNOC report

Neoajuvant Chemotherapy Followed by Craniospinal Irradiation for intracranial NGGCTs: Clinical Outcomes and Age-stratified Toxicities in a Cohort of 111 Patients

Oncolytic virus for DIPG: The clinical experience with DNX-2401

Phase I trial of DAY101 in pediatric patients with radiographically recurrent or progressive low-grade glioma (LGG)
Wright K, Krzykwa E, Greenspan L, Chi S, Yeo K, Prados M, Mueller S, Haas-Kogan D

The ReMIND trial: multi-antigen targeted T cells for pediatric CNS tumors

The role of biopsy in molecular diagnosis of diffuse intrinsic pontine glioma patients
Epelbaum J, Krystal J, Atlas M, Schneider S, Mittler M, Rodgers S

Surgery, Radiation, Imaging Session I

Clinical Outcomes of Breast Brain Metastases by Subtype following LINAC Based Stereotactic Radiation

Deep Learning Survival Analysis for Multiple Brain Metastases

Deep learning-based Peritumoral Microstructure mapping in Glioblastomas using free water volume fraction (Abstract Award for Excellence in Neuro-Imaging)
Riahi Samani Z, Parker D, Antony Alappatt J, Brem S, Verma R

Differentiating Tumor Types based on the Peritumoral Microenvironment using Convolutional Neural Networks
Riahi Samani Z, Parker D, Antony Alappatt J, Brem S, Verma R

Discussant
Hayden-Gephart M
Discussant
Sulman E

Genetic, cellular, and connectomic characterization of the adult human brain regions commonly plagued by glioma
Mandal A, Romero-Garcia R, Hart M, Suckling J

Mitotic enrichment as an efficient strategy to radiosensitize glioblastoma

Multi-habitat radiomics unravels distinct phenotypic subtypes of glioblastoma with clinical and genomic significance

Prediction of lower-grade glioma molecular subtypes using deep learning

Radiation therapy reprograms the tumor metabolism to promote survival and immunosuppression in glioblastoma
De Martino M, Daviaud C, Vanpouille-Box C

Radiogenomic Signatures of Driver Genes in Newly Diagnosed Glioblastoma Patients Based on Pre-operative Multi-Parametric MRI
Fathi Kazerooni A, Toorens E, Bakas S, Akbari H, Sako C, Mamourian E, Min Ha S, Thakur N, Rosado J, Bagley S, Ganguly T, MacLean N, Davatzikos C

The irradiated brain microenvironment supports glioma stemness and survival via astrocyte-derived transglutaminase 2

Validation of modified response assessment in neuro oncology (mRANO) determined PFS as a strong predictor of overall survival in recurrent glioblastoma treated with a targeted immunotoxin
Ellingson B, Chandhasin C, Coello M, Merchant N, Merchant F

Validation of simultaneous pH- and O2-weighted molecular MRI using ¹⁸F-FDG PET, immunohistochemistry, and bioenergetics

Surgery, Radiation, Imaging Session II

Adjuvant SBRT for resected brain metastases: the effect of timing on long-term intended-field control
Bander E, Yuan M, Reiner A, Panageas K, Brennan C, Beal K, Tabar V, Moss N

Combination Laser Interstitial Thermal Therapy Plus SRS Increases Time to Progression for Recurrent SRS-Treated Brain Metastases

Detection of glioma infiltration at the tumor margin using quantitative stimulated Raman scattering microscopy

Discussant
Mahajan A

Early concurrent immunotherapy with stereotactic radiosurgery is associated with prolonged survival and decreased distant brain failure in patients with newly diagnosed melanoma brain metastases (MBM)
Effect of Ventricular Entry During Glioblastoma Resection on Patient Outcomes

MR-guided laser interstitial thermal therapy for brain tumors in geriatric patients
Ginalis E, Danish S

Postoperative radiotherapy for WHO grade II–III intracranial ependymoma in adults: An intergroup collaborative study (KROG 18-06/KNOG 18-01)

Preoperative single fraction radiosurgery versus postoperative fractionated radiosurgery for resected brain metastases: a bi-institutional analysis of safety and clinical outcomes

Prospective Observational Study to Determine the Immune System Response to Gamma Knife Radiosurgery for Vestibular Schwannomas

Radiotherapy in the Management of Optic Nerve Sheath Meningiomas: An International Systematic Review and Meta-Analysis of Eighteen Studies
Vaishnav Y, Singh R, Didwania P, Lehrer E, Bakaeva T, Harris T, Miglioreti M, Trifiletti D

Risk of Tract Recurrence with Stereotactic Biopsy of Brain Metastases: an 18-year Cancer Center Experience

Safety of intra-arterial chemotherapy with or without osmotic blood brain barrier disruption in treatment of brain tumors

Surgical resection of primary central nervous system lymphoma: impact of patient selection on overall survival

The impact of neurologic impairments on the relative benefit of maximal extent of resection in newly diagnosed IDH-wild type glioblastoma
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