Presentation number	Name	Affiliation	Title	Session Date and Time	Announcement Time	Category
AG1-1	Hyun Joo Park	Seoul National University Bundang Hospital	Long-term Outcomes of Gamma Knife Radiosurgery for Central Neurocytoma	February 10 (Fri.), 13:10-14:30	13:10-13:20	Benign tumors
AG1-2	Ji-Eyon KWON	Seoul National University Bundang Hospital	Central Neurocytoma with Hemorrhage during GammaKnife Surgery: Case Reports and Review of the Literature	February 10 (Fri.), 13:10-14:30	13:20-13:30	Benign tumors
AG1-3	You-Cong, Chen	Neurological Institute, Taipei Veterans General Hospital, Taipei	Stereotactic radiosurgery for orbital cavernous hemangiomas: a single-center experience over a 22-year period	February 10 (Fri.), 13:10-14:30	13:30-13:40	Benign tumors
AG1-4	Yoshinori Higuchi	Department of Neurological Surgery, Chiba University Graduate School of Medicine	Reasonable timing to treat vestibular schwannomas with gamma knife surgery: serial observation of untreated small tumors and remnants after surgery	February 10 (Fri.), 13:10-14:30	13:40-13:50	Benign tumors
AG1-5	Kyoko Aoyagi	Gamma Knife House, Chiba Cerebral and Cardiovascular Center	Gamma Knife Radiosurgery Treatment Results for Older (Age of ≥75) Patients with Vestibular Schwannoma	February 10 (Fri.), 13:10-14:30	13:50-14:00	Benign tumors
AG1-6	So Young Ji	Department of Neurosurgery, Seoul National University Bundang Hospital	Long-lasting transient volume expansion of sporadic vestibular schwannomas after stereotactic radiosurgery: Is it tumor progression?	February 10 (Fri.), 13:10-14:30	14:00-14:10	Benign tumors
AG1-7	Hung−Chuan Pan	Taichung Veterans General Hospital	Using the deformity index of vital structures to predict outcome of patients with large vestibular schwannomas after Gamma Knife Radiosurgery	February 10 (Fri.), 13:10-14:30	14:10-14:20	Benign tumors
AG1-8	Chih-Ying Huang	Taipei Veterans General Hospital	Quantification of tumor response of cystic vestibular schwannoma to Gamma Knife radiosurgery by using artificial intelligence	February 10 (Fri.), 13:10-14:30	14:20-14:30	Benign tumors
AG2-1	Yong-Sin Hu	National Yang-Ming University, Taiwan School of Medicine	Brain arteriovenous malformations and dural arteriovenous fistulas: risk evaluations and radiosurgical outcome prediction	February 10 (Fri.), 16:15–17:05	16:15-16:45	Vascular disorders
AG2-2	Cheng-chia Lee	Taipei Veterans General Hospital	Gamma Knife Radiosurgery for the Clival Epidural-Osseous Dural Arteriovenous Fistulas	February 10 (Fri), 16:15–1705	16:45-16:55	Vascular disorders
AG2-3	Kanwaljeet Garg	All India Institute of Medical Sciences, New Delhi (India)	Radiosurgical Outcome Of Intracranial Avms Planned On DSA And MRI For Gamma Knife Stereotactic Radiosurgery Versus MRI Alone	February 10 (Fri), 16:15–1705	16:55-17:05	Vascular disorders
AG3-1	Yoshimasa Mori	Center for Advanced IGRT, Shin-Yurigaoka General Hospital	Usefulness of Elements workstation (BrainLAB) in stereotactic radiosurgery/stereotactic radiotherapy treatment planning	February 10 (Fri.), 16:15-17:15	16:15-16:25	Functional disorders and others
AG3-2	Motohiro Hayashi	Section of Stereotactic Radiosurgery, Department of Neurosurgery, Tokyo Women's Medical University	Long term results of Gamma knife radiosurgery for essential trigeminal neuralgia: final clinical evaluation of the role and needs according to more than 100 patients with at least 10 years follow up	February 10 (Fri.), 16:15-17:25	16:25-16:35	Functional disorders and others
AG3-3	Jung-Il Lee	Samsung Medical Center, Sungkyunkwan University School of Medicine	Outcome of Gamma Knife thalamotomy and biologically effective dose (BED)	February 10 (Fri.), 16:15-17:25	16:35-16:45	Functional disorders and others
AG3-4	Ai Peng Tan	National University Hospital Singapore	Dynamic radiation-induced imaging changes more than 20 years following Gamma Knife Surgery	February 10 (Fri.), 16:15-17:25	16:45-16:55	Functional disorders and others
AG3-5	Szu-Hao Andrew Liu	Gamma knife center & Department of Neurosurgery, Kaohsiung Veterans General Hospital, Taiwan	Adverse radiation effects (ARE): The major challenging complication after stereotactic radiosurgery on intracranial lesions	February 10 (Fri.), 16:15-17:25	16:55-17:05	Functional disorders and others

Young Seok Park	Department of Neurosurgery, Gamma Knife Icon Center, Chungbuk National University Hospital, Cheongju, Cheongju, Republic of Korea	Ventralis oralis anterior (Voa) deep brain stimulation plus Gamma Knife thalamotomy in an elderly patient with essential tremor	February 10 (Fri.), 16:15-17:25	17:05-17:15	Functional disorders and others
Abdul Sattar M Hashin	Department of Neurosurgery, Neurospinal and Cancer Care Institute	Gamma knife radiosurgery multisession providing long term tumor control of skull base meningioma	February 10 (Fri.), 16:15-17:25	17:15-17:25	Functional disorders and others
Tanxia Qu	NYU Langone Health, NY,USA	Efficient Timer Errors Measurements for All Three Collimators in Gamma Knife (GK) ICON	February 10 (Fri.), 17:10-18:00	17:10-17:20	Physics, QA, QC
Tanxia Qu	NYU Langone Health, NY,USA	Use an electrometer's time-series data logger function in Gamma Knife ICON QA	February 10 (Fri.), 17:10-18:00	17:20-17:30	Physics, QA, QC
Tanxia Qu	NYU Langone Health, NY,USA	Use an Electrometer's Time-Series Data Logger Function to Measure a Beam Profile	February 10 (Fri.), 17:10-18:00	17:30-17:40	Physics, QA, QC
Hyun-Tai Chung	Seoul National University College of Medicine	Verification of the absorbed energy calculation procedure of the Leksell Gamma Plan.	February 10 (Fri.), 17:10-18:00	17:40-17:50	Physics, QA, QC
Eliseo Dela Cruz, Jr.	Philippine Gamma Knife Center	Error Analysis of Probe Measurements in Extend Treatment Procedures	February 10 (Fri.), 17:10-18:00	17:50-18:00	Physics, QA, QC
Po-Wei Huang	Shuang Ho Hospital, Taipei Medical University, Taiwan	Hemorrhage Risk of Unruptured Brain Arteriovenous Malformation after Gamma Knife Radiosurgery: Significance of Vascular Compactness	February 11 (Sat.), 14:30–15:10	14:30-14:40	Vascular disorders 2
Binh Thanh Nguyen	Cho Ray Hospital	Gamma Knife radiosurgery for brain arteriovenous malformations: a 15-year single center experience in Southern Vietnam	February 11 (Sat.), 14:30-15:10	14:40-14:50	Vascular disorders 2
Jun Kawagishi	Jiro Suzuki Memorial Gamma House, Furukawa Seiryo Hospital	Comparison of the outcomes after Gamma Knife radiosurgery for arteriovenous malformations in pediatric and adult patients	February 11 (Sat.), 14:30-15:10	14:50-15:00	Vascular disorders 2
Atsuya Akabane	Gamma Knife Center, NTT Medical Center Tokyo	A case of spontaneous obliteration of medium-sized unruptured cerebral arteriovenous malformation accompanied by reduced activity of protein S	February 11 (Sat.), 14:30-15:10	15:00-15:10	Vascular disorders 2
Ai Seon Kuan	Taipei Veterans General Hospital	Improved prognosis for NSCLC patients with wildtype/mutant EGFR and brain metastases following stereotactic radiosurgery and immune/targeted therapy	February 11 (Sat.), 15:20-16:30	15:20-15:30	Metastases 1
Guan-Ying Chiou	Neurosurgery, Department of Surgery, Fu Jen Catholic University Hospital	Can We Alleviate the Radiation Treatment for Brain Metastasis in the Lung Cancer Patient with EGFR Mutation in the Era of Targeted Therapy?	February 11 (Sat.), 15:20-16:30	15:30-15:40	Metastases 1
Ryuichi Noda	NTT Medcial Center Tokyo	VEGFR-TKI Treatment for Radiation-Induced Brain Injury After Gamma Knife Radiosurgery for Brain Metastases from Renal Cell Carcinomas	February 11 (Sat.), 15:20-16:30	15:40-15:50	Metastases 1
Shoji Yomo	Division of Radiation Oncology, Aizawa Comprehensive Cancer Center, Aizawa Hospital	Effectiveness of immune checkpoint inhibitors in combination with stereotactic radiosurgery for patients with brain metastases from lung cancer: a propensity score-matched analysis	February 11 (Sat.), 15:20-16:30	15:50-16:00	Metastases 1
Yi−han, Huang	Neurological Institute, Taipei Veterans General Hospital, Taipei, Taiwan	Gamma Knife radiosurgery for surgical cavity of brain metastases: factor analysis and gene consideration	February 11 (Sat.), 15:20-16:30	16:00-16:10	Metastases 1
Shigeo Matsunaga	Yokohama Rosai Hospital	Gamma knife radiosurgery for metastatic brain tumors from ovarian cancer (JLGK1801)	February 11 (Sat.), 15:20-16:30	16:10-16:20	Metastases 1
	Abdul Sattar M Hashir Tanxia Qu Tanxia Qu Tanxia Qu Hyun-Tai Chung Eliseo Dela Cruz, Jr. Po-Wei Huang Binh Thanh Nguyen Jun Kawagishi Jun Kawagishi Atsuya Akabane Ai Seon Kuan Guan-Ying Chiou Ryuichi Noda Shoji Yomo	Young Seok Park Obungbale National University Hospital. Cheoregiu. Cheoregiu.   Abdul Sattar M Hashin Department of Neurosurgery, Neurospinal and Cancer Care Institute   Tanxia Qu NYU Langone Health, NY,USA   Hyun-Tai Chung Seoul National University College of Medicine   Eliseo Dela Cruz, Jr. Philippine Gamma Knife Center   Po-Wei Huang Shuang Ho Hospital, Taipei Medical University, Taiwan   Binh Thanh Nguyen Cho Ray Hospital   Jun Kawagishi Jiro Suzuki Memorial Gamma House, Furukawa Seiryo Hospital   Atsuya Akabane Gamma Knife Center, NTT Medical Center Tokyo   Ai Seon Kuan Taipei Veterans General Hospital   Guan-Ying Chiou Neurosurgery, Department of Surgery, Fu Jen Catholic University Hospital   Ryuichi Noda NTT Medcial Center Tokyo   Shoji Yomo Division of Radiation Oncology, Aizawa Comprehensive Cancer Center, Aizawa Hospital   Yi-han, Huang Neurological Institute, Taipei Veterans General Hospital, Taipei, Taiwan	Young Sook Perk   Encode and theory insure Dong, Charren   Indexty petions with sessential tremore     Addut Sattar M Hash   Department of Neurosurgery, Neurospinal   Gamma Knife radiosurgery multisession providing long term tumor control of skull base meningioma     Tanxia Qu   NYU Langone Health, NY,USA   Efficient Time: Enrore Measurements for All Time: Collinators in Gamma Knife (QKI ICON)     Tanxia Qu   NYU Langone Health, NY,USA   Efficient Time: Enrore Measurements for All Time: Collinators in Gamma Knife (QKI ICON)     Tanxia Qu   NYU Langone Health, NY,USA   Use an electrometer's time-series data logger function in Gamma Knife (QKI ICON)     Tanxia Qu   NYU Langone Health, NY,USA   Use an electrometer's Time-Series Data Lagger function in Gamma Knife ICON QA     Tanxia Qu   NYU Langone Health, NY,USA   Use an electrometer's Time-Series Data Lagger function to Measure a Beam Profile     Hyun-Tai Chung   Secul Mational University College of University College of University. Taivian   Verification of the absorbed energy cataculation presedure of the Lakkell Gamma Knife Gamma Knife Medical     Po-Wei Huang   Shuang Ho Hoopital. Taipei Medical   Henorrhage Risk of University for Interviewous malformations: a 15-year single center or previewous malformations: a 15-year single center or previewous malformations: a 15-year single center or previewous Matine Matine Medical Enrore Measurements     Jun Kanagishi   Jiro Suncki M	Young Seek Park   Young Seek	Young Seek Peak   Young Seek

AG6-7	Moon HC (Park YS)	Department of Neurosurgery, Gamma Knife Icon Center, Chungbuk National University Hospital, Cheongju, Cheongju, Republic of Korea	Volume prediction for large brain metastases after hypofractionated gamma knife radiosurgery through artificial neural network.	February 11 (Sat.), 15:20-16:30	16:20-16:30	Metastases 1
AG7-1	Yu−Chi Chen	National Yang-Ming Chao-Tung University	Natural History of Lung Squamous Cell Brain Metastases in Patients treated with Radiosurgery: a Thirty-Year Experience at a Tertiary Medical Center	February 11 (Sat.), 16:30-17:30	16:30-16:40	Metastases 2
AG7-2	Haewon Roh	The department of Neurosurgery, Guro Hospital, Korea University of Medicine	Use of thyroid transcription factor 1 and napsin A to predict local failure and survival after Gamma Knife radiosurgery in patients with brain metastases from lung adenocarcinoma	February 11 (Sat.), 16:30–17:30	16:40-16:50	Metastases 2
AG7-3	Takeshi Kondoh	Shinsuma General Hospital	Large cystic brain metastases are treatable without drainage by hypofractionated or staged radiosurgery	February 11 (Sat.), 16:30-17:30	16:50-17:00	Metastases 2
AG7-4	Ryuichi Noda	NTT Medcial Center Tokyo	Fractionated Gamma Knife radiosurgery after cyst aspiration for large cystic brain metastases: case series and literature review	February 11 (Sat.), 16:30-17:30	17:00-17:10	Metastases 2
AG7-5	Kazunori Koyama	Gamma Knife Center, Okuma Hospital	Usefulness of Gamma Knife stereotactic radiotherapy for repeat brain metastasis in the choroid plexus from renal cell carcinoma: a case report.	February 11 (Sat.), 16:30-17:30	17:10-17:20	Metastases 2
AG7-6	Beehong Soon	Department of Oncology and Radiotherapy, Faculty of Medicine, National University of Malaysia, Kuala Lumpur, Malaysia. Diagnostic Imaging and Radiotherapy, Faculty of Allied Health, National University of Malaysia, Kuala	Gamma Knife Radiosurgery: A Safe and Effective Treatment for Brain Metastases in Pregnancy	February 11 (Sat.), 16:30–17:30	17:20-17:30	Metastases 2
AG8-1	Jiani Sherry Liu	National University Hospital Singapore	Gamma Knife Surgery for twenty or more brain metastases – a pilot and feasibility study.	February 12 (Sun.), 9:30-10:30	9:30-9:40	Metastases 3
AG8-2	Yasuhiro Matsushita	Gamma Knife Center, Okuma Hospital	Multi-session radiosurgery for numerous small brain metastases	February 12 (Sun.), 9:30-10:30	9:40-9:50	Metastases 3
AG8-3	Liu, Chan-Wei	Neurological Institute, Taipei Veterans General Hospital	Leukoencephalopathy in Patients with Brain Metastases Who Received Radiosurgery With or Without Whole Brain Radiotherapy	February 12 (Sun.), 9:30-10:30	9:50-10:00	Metastases 3
AG8-4	Se-Hyuk Kim	Ajou University Medical Centerer	Whole-bain rdiotherapy vs. Localized rdiotherapy after rsection of brain metastases in the era of targeted therapy: a retrospective Study	February 12 (Sun.), 9:30-10:30	10:00-10:10	Metastases 3
AG8-5	Masaaki Yamamoto	Southern Tohoku Hospital	Treatment results of post-stereotactic radiosurgical recurrence in patients with brain metastases	February 12 (Sun.), 9:30-10:30	10:10-10:20	Metastases 3
AG8-6	Toru Serizawa	Tokyo Gamma Unit Center, Tsukiji Neurological Clinic	A new tool for assessing risks of systemic and neurologic death in brain metastasis patients undergoing Gamma Knife radiosurgery	February 12 (Sun.), 9:30–10:30	10:20-10:30	Metastases 3
AG9-1	Han-Song Tseng	National Yang Ming Chiao Tung University	Development of Expanding Hematoma and Expanding Cysts in AVMs after GKS	February 12 (Sun.), 12:25-13:05	12:25-12:35	Vascular disorders 3
AG9-2	Kazuhiro Yamanaka	Osaka City General Hospital	Long-term results of gamma knife radiosurgery for pediatric arteriovenous malformations	February 12 (Sun.), 12:25-13:05	12:35-12:45	Vascular disorders 3
AG9-3	Etsuko Yamamoto Hattori	National Cerebral and Cardiovascular Center	Effect of treatment of cerebral arteriovenous malformations (AVMs) on AVM-associated epilepsy	February 12 (Sun.), 12:25-13:05	12:45-12:55	Vascular disorders 3
AG9-4	Fukumori Junji	National Cerebral and Cardiovascular Center Hospital	Two cases of response to gamma knife radiosurgery for arteriovenous malformation complicated by Moyamoya disease	February 12 (Sun.), 12:25-13:05	12:55-13:05	Vascular disorders 3

Nguyen Duc Lien	National cancer hospital (K hospital), Ha Noi, Viet Nam	Results of 2-staged Gamma Knife radiosurgery for large brain metastases at Ha Noi, Viet Nam.	February 10 (Fri), 14:40-16:00	14:40-14:53	SRT for metastatic brain tumors
Cristian Udovicich	Department of Radiation Oncology, Peter MacCallum Cancer Centre, Melbourne, Victoria 3000, Australia	Neoadjuvant stereotactic radiosurgery for brain metastases: single-fraction and hypofractionation experience	February 10 (Fri), 14:40-16:00	14:53-15:06	SRT for metastatic brain tumors
Kazutaka Yatsushiro	Fujimoto General Hospital	Hypofractionated irradiation with Gamma Knife Icon for large metastatic brain tumors	February 10 (Fri), 14:40-16:00	15:06-15:19	SRT for metastatic brain tumors
Takuya Kawabe	Rakusai Shimizu Hospital	Fractionated radiotherapy for metastatic brain tumors using mask system of Leksell Gamma Knife Icon	February 10 (Fri), 14:40-16:00	15:19-15:32	SRT for metastatic brain tumors
Mariko Kawashima	NTT Medical Center Tokyo	Interfractional change of tumor volume during fractionated stereotactic radiotherapy using gamma knife for brain metastases	February 10 (Fri), 14:40-16:00	15:32-15:45	SRT for metastatic brain tumors
Mariko Kawashima	NTT Medical Center Tokyo	Gamma knife radiosurgery and radiotherapy for brain metastases in non-small cell lung cancer harboring driver gene alterations	February 10 (Fri), 14:40-16:00	14:45-15:58	SRT for metastatic brain tumors
Hisae Mori	National Cerebral and Cardiovascular Center Hospital	The role of gamma knife surgery in the treatment of high-grade ruptured cere bral AVMs.	February 11 (Sat.), 13:15-14:20	13:15-13:28	Gamma Knife radiosurgery for large AVM
Taichi Ikedo	National Cerebral and Cardiovascular Center	Change of therapeutic strategies with GKS and other interventional therapies for unruptured brain arteriovenous malformation after the publication of the ARUBA trial	February 11 (Sat.), 13:15-14:20	13:28-13:41	Gamma Knife radiosurgery for large AVM
Huai−Che Yang	Taipei Veterens General Hospital	The Irradiated Brain Volume within 12 Gy is a Predictor for Radiation-Induced Changes after Stereotactic Radiosurgery in Patients with Unruptured Cerebral Arteriovenous Malformations	February 11 (Sat.), 13:15-14:20	13:41-13:54	Gamma Knife radiosurgery for large AVM
Saori Kubota	Gamma Knife House, Chiba Cerebral and Cardiovascular Center	Efficacy of embolization before stereotactic radiosurgery for brain arteriovenous malformations	February 11 (Sat.), 13:15-14:20	13:54-14:07	Gamma Knife radiosurgery for large AVM
Yuki Shinya	the University of Tokyo Hospital	Against controversy: Long-term outcomes of gamma knife radiosurgery for non-hemorrhagic large AVM based on the over 1,000 cases in 30 years at our institution	February 11 (Sat.), 13:15-14:20	14:07-14:20	Gamma Knife radiosurgery for large AVM
Yoshiyasu Iwai	Department of Neurosurgery, Tominaga Hospital	Hearing preservation after planned partial resection followed by gamma knife radiosurgery for large vestibular schwannomas	February 12 (Sun.), 10:35-12:20	10:35-10:48	Long term results of GKS for benign lesions
Hidefumi Jokura	Jiro Suzuki Memorial Gamma House, Furukawa Seiryo Hospital	Gamma knife radiosurgery for vestibular schwannomas: Looking back 30 years of our experience	February 12 (Sun.), 10:35-12:20	10:48-11:01	Long term results of GKS for benign lesions
Shinya Watanabe	Mito Kyodo General Hospital, Tsukuba University Hospital Mito Area Medical Education Center, Mito	Stereotactic radiosurgery for post-operative residual vestibular schwannomas: immediate irradiation versus at time of confirmed growth	February 12 (Sun.), 10:35-12:20	11:01-11:14	Long term results of GKS for benign lesions
Motohiro Hayashi	Section of Stereotactic Radiosurgery, Department of Neurosurgery, Tokyo Women's Medical University	Long term results of Gamma knife micro-radiosurgery for acoustic tumors in Neurofibromatosis type 2 patients: treatment policy, strategy, and clinical results for maintenance of serviceable hearing	February 12 (Sun.), 10:35-12:20	11:14-11:27	Long term results of GKS for benign lesions
Maheep Singh Gaur	Vimhans Hospital New Delhi	Long Term Effects of Gamma knife Radiosurgery for Skull Base Meningiomas	February 12 (Sun.), 10:35-12:20	11:27-11:40	Long term results of GKS for benign lesions
Motoyuki Umekawa	The University of Tokyo Hospital	Long-term outcomes of stereotactic radiosurgery for skull base tumors involving the cavernous sinus	February 12 (Sun.), 10:35-12:20	11:40-11:53	Long term results of GKS for benign lesions
	Cristian Udovicich Kazutaka Yatsushiro Takuya Kawabe Mariko Kawashima Mariko Kawashima Mariko Kawashima Hisae Mori Taichi Ikedo Huai-Che Yang Saori Kubota Saori Kubota Yuki Shinya Yoshiyasu Iwai Hidefumi Jokura Shinya Watanabe Motohiro Hayashi Maheep Singh Gaur	Nguyen Duc Lien Ha Noi, Viet Nam   Oristian Udovicich Department of Radiation Oncology, Peter   MacCellum Cancer Centre, Melbourne, Victoria 3000, Australia   Kazutaka Fujimoto General Hospital   Takuya Kawabe Rakusai Shimizu Hospital   Mariko Kawashima NTT Medical Center Tokyo   Mariko Kawashima NTT Medical Center Tokyo   Mariko Kawashima NTT Medical Center Tokyo   Hisae Mori National Cerebral and Cardiovascular Center Hospital   Taichi Ikedo National Cerebral and Cardiovascular Center   Huai-Che Yang Taipei Veterens General Hospital   Saori Kubota Gamma Knife House, Chiba Cerebral and Cardiovascular Center   Yuki Shinya the University of Tokyo Hospital   Yoshiyasu Iwai Department of Neurosurgery, Tominaga Hospital   Hidefumi Jokura Jiro Suzuki Memorial Gamma House, Furukawa Seiryo Hospital   Shinya Watanabe Mito Kyodo General Hospital, Tsukuba University Mospital   Motohiro Hayashi Section of Stereotactic Radiosurgery, Medical University Medical University   Maheep Singh Gaur Vimhans Hospital New Delhi	Naciven Due Lien   Ha Noi, Viet Nam   Healties of Z-Eagled salama Anter Analourgery for single oran instatistics at Ha Noi, Viet Ham.     Oristian Udavieich   Abacterian Oradiging Parr Microbiolity Composition of the Composition of the Composition of the Composition and Parrier Science Composition of the Compositis for non-thermatice Compositis and Compositis and Com	OpplyPrivate Lubel   Initial No. Vent Num   Peaks of 2 basis of 2 ba	Market Hule Los   Its Me, Vet Name   Meddad of all ages clama staffs descapes yet age brain mediates at it is No. Vet Mill.   Perkury 10 (Pril, 14.40–16.00)   It result is a first descape brain mediates in information with mediates and print descapes.   Perkury 10 (Pril, 14.40–16.00)   It staffs.     Cristing Librority Control   Market and Indiation Oxide Transmission and Indiation with Energy for head mediates at it is No. Vet Mill.   February 10 (Pril, 14.40–16.00)   It staffs.     Cristing Indiates Oxide General Heaptal   Market and Indiation with Energy for instantial indiate indiate mediates and indiates and indicates and indindindin and in the material and indindindicates and indi

AS3-7	Toshinori Hasegawa	IN OMAKI LITV HOSPITAL	Long-term risks of hemorrhage and adverse radiation effects of stereotactic radiosurgery for brain arteriovenous malformations	February 12 (Sun.), 10:35-12:20	11:53-12:06	Long term results of GKS for benign lesions
AS3-8	Akihiro Niwa		Multimodal treatment for ruptured arteriovenous malformations at our institution with three modalities	February 12 (Sun.), 10:35-12:20	12:06-12:19	Long term results of GKS for benign lesions