



2019

RIO DE JANEIRO, Brazil

ISRS

JUNE 9-13

**14th
INTERNATIONAL
STEREOTACTIC
RADIOSURGERY
SOCIETY CONGRESS**

**WINDSOR CONVENTION
& EXPO CENTER**

FINAL PROGRAM

endorsed by **ASTRO**
AMERICAN SOCIETY FOR RADIATION ONCOLOGY



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Prof. Antonio De Salles *Congress Chairman*

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Welcome message

THE 2019 CONGRESS PRESIDENT'S MESSAGE



Thank you for joining us for our 14th ISRS biannual meeting, which promises to be a milestone for our society. Since the 13th meeting in Montreux, our society has quadrupled in size to over 800 members and is growing by the day. This has been in response to greater than ever society activity, combined with the joining of local societies in affiliated membership to the ISRS.

For those who are joining us for the first time, welcome to our society and congress. You will find we are an all-embracing, multi-disciplinary society that accepts our differences and appreciates that these differences allow us to learn from each other. It would be a sterile and stale environment if radiosurgery was dominated by just one discipline and one platform, with little to discuss and learn. I strongly believe that it has been the cross-fertilisation of ideas from Neurosurgery, Radiation Oncology and Medical Physics working together that has moved our discipline forward, and will continue to do so.

We hope that you enjoy our scientific program with over 300 presentations featuring outstanding invited speakers from a wide range of specialities. We invite you to participate in the carefully organised social program; promising to take advantage of the astonishing beauty and vibrancy of Rio.

Ian Paddick

President of the ISRS

THE 2019 CONGRESS CHAIRMAN'S MESSAGE

« Bringing Medical Specialties Together under the Radiosurgery Umbrella »



As Radiosurgery once revolutionized the medical world of Neurosurgery and Radiation Oncology, it now marches to integrate Surgical Oncology and Medical Oncology specialists under the same umbrella. Be tuned for an enticing scientific program and the unmatched beauty of a major metropolis punctuated by mountains, jungles, ocean and native friendly people representing cross-cultural groups from all corners of the world. They have chosen this paradisiac site to live and receive visitors to participate with their joyful way of living. Prepare to enjoy Rio living and Radiosurgery Science on June 9-13, 2019.

Antonio De Salles

Congress Chairman

15th INTERNATIONAL STEREOTACTIC RADIOSURGERY SOCIETY CONGRESS



2021

BRISBANE AUSTRALIA

ISRS

MAY 30 • JUNE 03

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& EXHIBITION CENTRE

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The ISRS society

ABOUT THE ISRS

The International Stereotactic Radiosurgery Society (ISRS) was founded as a worldwide non-profit organization in 1991 and remains the leading professional body of its kind.

Created to foster learning and research on the topics of brain and body radiosurgery, the society is dedicated to:

- Promoting technical developments in stereotactic radiosurgery
- Promoting the highest levels of clinical expertise
- Convening every two years at the ISRS Congress

MEMBERS' PROFILES

The ISRS encourages interaction amongst a diverse international community of neurosurgeons, radiation oncologists, medical physicists and other healthcare professionals dedicated to the advancement of stereotactic radiosurgery.

The current membership of the society has an increasingly international flavour and is composed of over 800 specialists from all continents. Membership of the ISRS can be either individual or through affiliated Societies, which are currently represented by the Argentinean Radiosurgery Society (AAR), the Brazilian Society of Radiosurgery (SBRC), the Latvian Therapeutical Radiology Association (LTRA), and the Russian Radiosurgery and Stereotactic Radiotherapy Society (RSRS).

ISRS OFFICIAL JOURNAL

The ISRS and Samuel Ryu as Editor in chief has launched the Journal of Radiosurgery & SBRT (Stereotactic Body Radiation Therapy), which is intended to foster learning and research in the rapidly emerging area of radiosurgery/SBRT for the brain and body sites.

ISRS EDUCATIONAL PROGRAM

ISRS WEBINAR LECTURES

Featuring key international experts on the field of radiosurgery and oncology highlighting current practice and future directions of extra- and intra-cranial SRS/SBRT, the ISRS held its 50th webinar in December 2018.

The upcoming webinar schedule can be seen on the following page: www.isrsy.org/public/en/courses/webinars/upcoming-webinars

Previous webinars are available for replay for ISRS members

ISRS EDUCATIONAL COURSES

From December 2016, ISRS has implemented a program of Educational Courses, which are dedicated to various applications of SRS/SRT for management of brain and body diseases. The events are organized 6 times per year in different countries worldwide. For more information on forthcoming Courses, please visit our web-site: www.isrsy.org/public/en/courses/training/forthcoming

The society will also offer to endorse meetings and courses that are consistent with its values or set up a partnership with other societies or organizations in order to create joint courses.

ISRS GUIDELINES PROJECT

This project employs a mentorship strategy to develop the next generation of leaders in radiosurgery as each project lead is matched with a senior academician.

Our main objective is to provide standards for all SRS treatments, in order to globally support the safe practice of radiosurgery.

The first phase of the ISRS guideline project is now completed. The next set of guidelines have been scheduled and are under preparation.

ISRS RESEARCH ACTIVITIES

The ISRS Working Group on Prostate Radiosurgery was created in November 2018. For more information about its activities, please, visit our web-site: www.isrsy.org/public/en/radiosurgery/isrs-working-groups

JOIN US!

Ready to join us? Do you want to become a member, or are you already a member of the ISRS?

If you have not previously registered with the ISRS, it is quick and easy to set up.

Click on the «Become an ISRS member» button and follow the on-screen instructions (www.isrsy.org/public/en/sign-in/).

Current members of the ISRS can renew their membership directly by paying their dues through the online payment system or by bank transfer.

Visit our website www.isrsy.org and join our community on the social networks : Facebook, Twitter and LinkedIn.



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The ISRS Board of Directors 2017-2019 is composed of:

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Industry-Sponsored Sessions

Monday

Monday June 10 13:15-14:15



PRECISION RADIATION MEDICINE: MOMENTS THAT MATTER

- Welcome and Introduction. *Aaron Oaks, Vice President Marketing, Elekta*
- Elekta Unity™ Installation and Initial Clinical Usage at the University of Iowa.
Mark Smith, MD, Clinical Associate Professor, Iowa University Hospital (USA)
- Managing the Increasing Demand for Intracranial Radiosurgery Treatments in an integrated Oncology and Neurosurgical Setting.
Matthew Foote, MD, Associate Professor, University of Queensland (Brisbane, Australia)
- 4D Image Guidance and Other Motion Management Techniques for Lung SBRT.
Farkhad Manapov MD, PhD LMU Munich University Hospital (Germany)

Monday June 10 17:00-18:30



CUTTING EDGE RADIOSURGERY FROM VARIAN

- Implementing HyperArc™ SRS in Scotland: Clinical Experience with over 70 Patients.
Suzanne Currie, MSc, Beatson West of Scotland Cancer Centre, Glasgow (UK)
- HyperArc™ for Cranial SRS: First Year Indications & Outcomes on the EDGE® at UAB.
Evan M. Thomas, MD, PhD, University of Alabama at Birmingham (USA)
- RapidArc™ Radiosurgery and SGRS – The Brazilian Experience.
Samir A. Hanna, MD, PhD, Hospital Sírio-Libanês, Universidade de São Paulo (Brazil)
- VMAT on the EDGE® for H&N and other Extracranial Targets: The Henry Ford Experience.
Farzan Siddiqui, MD, PhD, Henry Ford Health System, Detroit (USA)
- Frameless Functional Linac-Based Radiosurgery: Focus on Essential Tremor.
Barton L. Guthrie, MD, University of Alabama at Birmingham (USA)
- Immunotherapy plus SRS/SBRT: Increasing the Probability of the Abscopal Effect.
James S. Welsh, MD, MS, Stritch School of Medicine, Loyola University, Chicago (USA)



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Industry-Sponsored Sessions

Wednesday

Wednesday June 12 13:15-14:15



NOVALIS CIRCLE SYMPOSIUM: CLINICAL AND TECHNICAL INNOVATIONS IN SPINE SRS TREATMENTS

- Value of SRS over Conventional Fractionation for Bone Metastases
Yoshiya Yamada, MD, Memorial Sloan Kettering Cancer Center (USA)
- Commissioning and Clinical Implementation of Elements Spine SRS
Niko Papanikolaou, PhD, UT Health San Antonio, MD Anderson Cancer Center (USA)
- Clinical Experience Utilizing Elements Spine SRS
Pablo Castro Peña, MD, Instituto Zunino (Argentina)
- Review of 6D Setup and Monitoring for Spine SRS Treatment
Amol Ghia, MD, The University of Texas MD Anderson Cancer Center (USA)

Wednesday June 12 13:15-14:15



CYBERKNIFE RADIOSURGERY FOR INTRAMEDULLARY ARTERIOVENOUS MALFORMATIONS

*Iris C. Gibbs, MD, FACR, FASTRO, Professor of Radiation Oncology,
Associate Dean of MD Admissions, Stanford Medicine (USA)*

Wednesday June 12 17:00-18:00



Moderator: Dr. Karina Moutinho

- The Challenges of Radiosurgery in Brain Metastases. *Dr. Felipe Erlich (Brazil)*
- The Challenges of Radiosurgery in treatment of oligometastatic disease. *Dr. Allisson Borges (Brazil)*
- The Oncologia D'Or Changing the Radiotherapy and Radiosurgery Scenario. *Dr. Karina Moutinho (Brazil)*



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June 10, 2019 at 17:00 – 18:30 in the El Pardo I room.](#)

Radiation treatments may cause side effects that can vary depending on the part of the body being treated. The most frequent ones are typically temporary and may include, but are not limited to, irritation to the respiratory, digestive, urinary or reproductive systems, fatigue, nausea, skin irritation, and hair loss. In some patients, they can be severe. Radiation treatment is not appropriate for all cancers. See [varian.com/use-and-safety](https://www.varian.com/use-and-safety) for more information.

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Sunday 09 June

Sunday 09 June

08:00

B11

08:00 - 10:00

ISRS SRS/SBRT EDUCATIONAL COURSE INTRACRANIAL SRS: THE BASICS

Moderators: **Guilherme ESPOSITO QUERELLI (BRAZIL), Matthew FOOTE (AUSTRALIA), Crystian SARAIVA (BRAZIL)**

- Introduction & Course Objectives. **Antonio DE SALLES (BRAZIL)**
- Principles of Radiosurgery. **Laura FARISELLI (ITALY)**
- Radiobiology of Radiosurgery. **Dennis SHRIEVE (USA)**
- QA and Imaging. **Ian PADDICK (UK)**
- Imaging for Radiosurgery. **Stephen HOLMES (USA)**
- Discussion.

Segovia
Break
Out

10:00

COFFEE BREAK

Segovia
Break
Out

10:20

B13

10:20 - 12:00

ISRS SRS/SBRT EDUCATIONAL COURSE INTRACRANIAL SRS: CLINICAL INDICATIONS

Moderators: **Julio ANTICO (ARGENTINA), John SUH (USA), Paul W. SPERDUTO (USA)**

- Brain Metastases. **Patrick HANSSENS (THE NETHERLANDS)**
- Brain Protection with Repeat SRS : Making Whole Brain Radiation Obsolete. **Iris GIBBS (USA)**
- Intracranial Benign Lesions. **Samuel CHAO (USA)**
- Stereotactic Radiosurgery for AVMs. **Bruce POLLOCK (USA)**
- Trigeminal Neuralgia and Functional Disorders. **Alessandra GORGULHO (BRAZIL)**

Segovia
Break
Out

12:00

LUNCH - Oceanico's Restaurant

Segovia
Break
Out

13:00

B15

13:00 - 14:30

ISRS SRS/SBRT EDUCATIONAL COURSE SBRT: THE BASICS

Moderators: **Francine Xavier DOS SANTOS (BRAZIL), Uriel NOVICK (ARGENTINA), Marta SCORSETTI (ITALY)**

- Contouring. **Caroline CHUNG (USA)**
- Treatment planning considerations for SBRT: from optimization to dose calculation. **Andrea GIRARDI (BELGIUM)**
- Immobilization and Positioning Considerations. **Paul MEDIN (USA)**
- Motion Management Techniques. **Fang-Fang YIN (USA)**
- Discussion.

Segovia
Break
Out

C15

13:00 - 14:30

LGKS AFTERNOON SESSION - PART I Radiosurgery - What we can expect in the future?

- Welcome. **Dan LEKSELL (SWEDEN)**
- Personalized machine learning - AI based segmentation & plan generation. **Kenneth LAU (SWEDEN)**
- Sunnybrook approach to multiple metastases - SPARE technique and workflow. **Arjun SAHGAL (CANADA)**
- Radiosurgery & Immunotherapy--A Good Bet? **Jonathan KNISELY (USA)**

El
Pardo I



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Sunday 09 June

14:30

COFFEE BREAK

Segovia
Break
Out

14:50

C17

14:50 - 18:00

LGKS AFTERNOON SESSION - PART II

Radiosurgery - What we can expect in the future?

- Increased visualization in CBCT imaging - How far can we get? **Kenneth LAU (SWEDEN)**
- MR guided RT with Unity - Potential applications and benefits. **Caroline CHUNG (USA)**
- Foresee outcome using pathology, blood biomarkers, genomics & radiomics. **Hakan NORDSTROM (SWEDEN)**
- Radiosurgery for OCD and major depression. **Antonio Carlos LOPES (BRAZIL)**
- What can we learn from dose planning comparison studies? **Ian PADDICK (UK)**
- Next generation inverse planner. **Bjorn SOMELL (SWEDEN)**
- Intuitive interactive inverse planning for Gamma Knife radiosurgery. **Marc LEVIVIER (SWITZERLAND)**
- Fast and comprehensive plan adaptation. **Hakan NORDSTROM (SWEDEN)**
- Concluding remarks. **Dan LEKSELL (SWEDEN)**

El
Pardo I

B17

14:50 - 17:00

ISRS SRS/SBRT EDUCATIONAL COURSE

SBRT: CLINICAL INDICATIONS

Moderators: **Laura FARISELLI (ITALY)**, **Samuel RYU (USA)**, **Kita SALLABANDA (SPAIN)**

- Lung. **Ben SLOTMAN (THE NETHERLANDS)**
- The evolving role of SBRT in the management of liver metastases. **Marta SCORSETTI (ITALY)**
- Prostate SBRT. **Patrick KUPELIAN (USA)**
- Spine. **Arjun SAHGAL (CANADA)**
- Oligometastases. **Rupesh KOTECHA (USA)**
- Other and Emerging Indications. **Lauren HENKE (USA)**
- Discussion.

Segovia
Break
Out

18:00

A18

18:00 - 19:00

OPENING LECTURES

- Welcome By Antonio De Salles and Brazil-Latin American Presentation Congress Chairman. **Antonio DE SALLES (BRAZIL)**
- Welcome and Lecture from Ministry of Science, Technology, Innovation and Communications - MCTIC. **Marcello MORALES (BRAZIL)**
- Define your Brand. **Edmour SAIANI (BRAZIL)**
- Words of Welcome. **Ian PADDICK (UK)**
- Words of Logistics. **Antonio DE SALLES (BRAZIL)**

Segovia
Plenary

19:00

OPENING RECEPTION - EXHIBITION AREA

Monday 10 June

07:30

A21

07:30 - 09:00

BREAKFAST SEMINAR

ISRS GUIDELINES OVERVIEW

Moderators: **Randy JENSEN (USA)**, **Daniel PAZ (BRAZIL)**, **Arjun SAHGAL (CANADA)**

- ISRS Guidelines for Multiple Brain Metastases. **Steve BRAUNSTEIN (USA)**



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Monday 10 June

Antonio DE SALLES, Laura FARISELLI, Marc LEVIVIER, Ian PADDICK, Bruce POLLOCK, Jean REGIS, Jason SHEEHAN, John SUH, Shoji YOMO, Lijun Ma

■ **Technological Considerations for Small Brain Metastases.** Alexis DIMITRIADIS (UK)

Antonio DE SALLES, Laura FARISELLI, Marc LEVIVIER, Lijun MA, Bruce POLLOCK, Jean REGIS, Jason SHEEHAN, John SUH, Shoji YOMO, Ian Paddick

■ **#17901 - Stereotactic radiosurgery for post-operative metastatic surgical cavities : International Society of Stereotactic Radiosurgery (ISRS) practice guideline.** Kristin REDMOND (Baltimore, MD, USA), Arjun SAHGAL

■ **#17541 - Stereotactic radiosurgery for post-operative spinal metastases: International Society of Stereotactic Radiosurgery (ISRS) practice guideline.** Salman FARUQI (Calgary, CANADA), Arjun SAHGAL, Laura FARISELLI, Marc LEVIVIER, Lijun MA, Ian PADDICK, Bruce POLLOCK, Jean RÉGIS, Jason SHEEHAN, John SUH, Shoji YOMO, Antonio DE SALLES

■ **#17635 - a21-5 Stereotactic Radiosurgery for Spetzler Grade I and II AVM: Systematic Review for the Formation of International Society of Stereotactic Radiosurgery (ISRS) Practice Guideline.** Christopher GRAFFEO (Rochester, MN, USA), Arjun SAHGAL, Antonio DE SALLES, Laura FARISELLI, Marc LEVIVIER, Lijun MA, Ian PADDICK, Jean REGIS, Jason SHEEHAN, John SUH, Shoji YOMO, Bruce POLLOCK

■ **#17639 - Stereotactic radiosurgery for non-functioning pituitary adenomas: International Society of Stereotactic Radiosurgery (ISRS) practice guideline.** Rupesh KOTTECHA (Miami, USA), Arjun SAHGAL, Antonio DE SALLES, Laura FARISELLI, Bruce POLLOCK, Marc LEVIVIER, Lijun MA, Ian PADDICK, Jean REGIS, Jason SHEEHAN, Shoji YOMO, John SUH

■ **#17725 - a21-4 Stereotactic radiosurgery for secretory pituitary adenomas: systematic review and development of ISRS guidelines.** David MATHIEU (Sherbrooke, CANADA)

■ **#16742 - Stereotactic radiosurgery for intracranial, non-cavernous sinus, benign meningiomas: international society of stereotactic radiosurgery (isrs), practice guideline.** Marcello MARCHETTI (Milano, ITALY), Arjun SAHGAL, Antonio DE SALLES, Marc LEVIVIER, Lijun MA, Ian PADDICK, Bruce POLLOCK, Jean REGIS, Jason SHEEHAN, John SUH, Shoji YOMO, Laura FARISELLI

Segovia
Plenary

B21

07:30 - 09:00

BREAKFAST SEMINAR SBRT IN OPERABLE LUNG

Moderators: Hilde KLEIVEN (AUSTRALIA), Patrick KUPELIAN (USA), Lisa MORIKAWA (BRAZIL)

- Patient Selection. Simon CHENG (USA)
- Motion Management. Anderson PASSARO (BRAZIL)
- Evidence Review. Jin Ho KIM (KOREA)
- Resection of Thoracic Metastases. Rui HADDAD (BRAZIL)
- MR Guided SBRT for Lung Tumors. Ben SLOTMAN (THE NETHERLANDS)

Segovia
Break
Out

C21

07:30 - 09:00

BREAKFAST SEMINAR MACHINE LEARNING AND AI IN SRS/SBRT

Moderators: Guilherme BULGRAEN DOS SANTOS (BRAZIL), Renan SERRANO RAMOS (BRAZIL), Fang-Fang YIN (USA)

- The Potential of AI in SBRT. Fang-Fang YIN (USA)
- Inverse Treatment Planning. Marc LEVIVIER (SWITZERLAND)
- Dose Painting/Delivery Automation. Richard POPPLE (USA)
- Automatic Segmentation of Structures in the Brain. Crystian SARAIVA (BRAZIL)

El Pardo I

09:00

A21b

09:00 - 09:05

OPENING ADDRESS

Speakers: Antonio DE SALLES (BRAZIL), Ian PADDICK (UK)

Segovia
Plenary

09:05

A22

09:05 - 10:20

PLENARY SESSION WHAT IS REALLY HAPPENING WHEN WE TREAT?



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Moderators: Antonio DE SALLES (BRAZIL), John KIRKPATRICK (USA), Ian PADDICK (UK)

Segovia
Plenary

- #17820 - A22-1 Basic radiobiology of high-dose SBRT and SRS. Chang SONG (Minneapolis, USA), Kathryn E. DUSENBERY, Stephanie TEREZAKIS, L. Chinsoo CHO
- The Concept of BED in SRS. John HOPEWELL (UK)
- Can Radiobiology help us further refine SRS treatments? John KIRKPATRICK (USA)
- Imaging of Radiation Necrosis. Yael MARDOR (ISRAEL)
- Oncogenesis & Stereotactic Radiation: What We Know. Jonathan KNISELY (USA)

10:20

COFFEE BREAK - POSTERS & EXHIBITION

10:45

A24

10:45 - 12:00

PARALLEL SESSION

MR GUIDED SRS/SBRT: CURRENT STATE & FUTURE DIRECTIONS

Moderators: John ADLER (USA), Patrick KUPELIAN (USA), Ben SLOTMAN (THE NETHERLANDS)

Segovia
Plenary

- MR GUIDED SRS/SBRT: Technical Overview. Ben SLOTMAN (THE NETHERLANDS)
- Realtime Adaptive Therapy: Workflow Considerations. Frank LAGERWAARD (THE NETHERLANDS)
- Beyond Anatomical Imaging: The Promise and Challenges. Caroline CHUNG (USA)
- Clinical Indications & Results. Lauren HENKE (USA)
- Clinical Trials and Research Overview. Arjun SAHGAL (CANADA)

B24

10:45 - 12:00

ORAL SESSION

FUNCTIONAL #1 - OCD/PAIN

Moderators: Eduardo ALHO (BRAZIL), Carlos CIAROLO (ARGENTINA), Jean REGIS (FRANCE)

- #17863 - b24-1 Deterministic Diffusion Tensor Imaging Tractography and Gamma Ventral Capsulotomy for Obsessive-compulsive disorder. Bruno FERNANDES DE OLIVEIRA SANTOS (Aracaju, BRAZIL), Alessandra AUGUSTA GORGULHO, Rafael COSTA LIMA MAIA, Antonio CARLOS LOPES, Crystian WILIAN CHAGAS SARAIVA, Anderson MARTINS PASSARO, Euripedes CONSTANTINO MIGUEL, Antônio AFONSO FERREIRA DE SALLES
- #17837 - b24-2 Tractography-based targeting of the ventral capsule/ventral striatum for obsessive compulsive disorder. Daniel ALVES NEIVA BARBOSA (Stanford, USA), Alessandra A. GORGULHO, Bruno F. O. SANTOS, Rafael C. L. MAIA, Antônio C. LOPES, Euripedes MIGUEL, Jennifer MCNAB, Sameer SHETH, Antônio A. F. DE SALLES, Casey HALPERN
- #17834 - b24-3 Asymmetries in Bilateral Gamma Ventral Capsulotomy for Obsessive Compulsive Disorder. Rafael COSTA LIMA MAIA (São Paulo, BRAZIL), Antonio DE SALLES, Bruno FERNANDES DE OLIVEIRA SANTOS, Antônio CARLOS LOPES, Marcelo CAMARGO BATISTUZZO, Crystian WILIAN CHAGAS SARAIVA, Anderson MARTINS PASSARO, Euripedes CONSTANTINO MIGUEL, Alessandra GORGULHO
- #17833 - b24-4 TREATMENT IMPROVEMENT FOLLOWING SINGLE-SHOT GAMMA VENTRAL CAPSULOTOMY FOR OBSESSIVE COMPULSIVE DISORDER. Antônio CARLOS LOPES (São Paulo, BRAZIL), Stephanie KASABKOJIAN, Antônio DE SALLES, Alessandra GORGULHO, Marcelo BATISTUZZO, Marcelo HOEXTER, Marinês JOAQUIM, Maria COPETTI, Juliete MELO DINIZ, Nicole MCLAUGHLIN, Benjamin GREENBERG, Georg NORÉN, Euripedes MIGUEL
- #16764 - b24-5 Intracranial radiosurgery in refractory oncological and non-oncological pain. Eduardo LOVO (San Salvador, EL SALVADOR), Fidel CAMPOS, Victor CACEROS, William REYES, Claudia CRUZ, Juan ARIAS ROSA
- #16940 - b24-6 Biologically effective dose (BED) is a stronger predictor compared with the dose in classical trigeminal neuralgia treated with Gamma Knife surgery. Constantin TULEASCA (Lausanne, SWITZERLAND), Ian PADDICK, John HOPEWELL, William T MILLAR, Hussein HAMD, Marc LEVIVIER, Jean RÉGIS
- #17724 - b24-7 Gamma knife stereotactic radiosurgery for trigeminal neuralgia secondary to multiple sclerosis: a matched case-control study. William LEDUC, Christian IORIO-MORIN, David MATHIEU (Sherbrooke, CANADA)

Segovia
Break
Out

C24

10:45 - 12:00

ORAL SESSION

OTHER BENIGN TUMORS

Moderators: Joao Gabriel GOMES (BRAZIL), Samuel RYU (USA), Isaac YANG (USA)

- #17899 - C24-1 A modified disease specific graded prognostic assessment (ds-GPA) scale for melanoma consisting



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of age, karnofsky performance score (KPS), cumulative intracranial tumor volume (CITV), and BRAF mutation status. Ahluwalia MANMEET, Clark CHEN (Minneapolis, USA)

■ #17750 - c24-2 Management of Trigeminal Schwannoma with Gamma Knife Radiosurgery. M Abid SALEEM (Karachi, PAKISTAN), A Sattar M HASHIM, Azhar RASHID

■ #17727 - c24-3 Stereotactic radiosurgery for oculomotor nerves schwannomas: an international multicenter study. Anne-Marie LANGLOIS, Christian IORIO-MORIN, Andrew FARAMAND, Ajay NIRANJAN, L.dade LUNSFORD, Nasser MOHAMMED, Jason SHEEHAN, Roman LISCAK, Dusan URGOSIK, Douglas KONDZIOŁKA, Cheng-Chia LEE, Huai-Che YANG, Atik AHMET, David MATHIEU (Sherbrooke, CANADA)

■ #17758 - c24-4 Long-Term Outcome of Gamma Knife radiosurgery for cavernous hemangioma of the orbital apex. Dong LIU (Tianjin, CHINA), Desheng XU

■ #17721 - c24-5 Multi-fraction stereotactic radiosurgery for large cavernous sinus hemangiomas: 10 years outcomes of 88 cases. Enmin WANG, Enmin WANG (Shanghai, CHINA), Xin WANG, Li PAN, Huaguang ZHU, Xiaoxia LIU, Yang WANG

■ #17771 - c24-6 Cyberknife radiosurgery for jugular foramen schwannomas: long-term outcomes. Enmin WANG, Enmin WANG (Shanghai, CHINA), Xin WANG, Huaguang ZHU, Xiaoxia LIU, Yang WANG, Li PAN

■ #17860 - b28-6 Postoperative Stereotactic Radiosurgery for Spinal Metastases: Clinical Outcomes, Failures, and Analysis of Local Control. John SHIN (Boston, USA), Muhamed HADZIPASIC, Laura VAN BEAVER, Caroline AYINON, Robert KOFFIE, Brian WINEY, Thomas BOTTICELLO, Ganesh SHANKAR, Joseph SCHWAB, Kevin OH

El Pardo I

12:00

B25

12:00 - 13:00

ORAL SESSION GENITOURINARY

Moderators: Patrick KUPELIAN (USA), Ernesto ROESLER (BRAZIL), Deivid Augusto SILVA (BRAZIL)

■ #17634 - b25-1 CyberKnife based radioablation of 500 LR and IR prostate cancer patients - single center results. Leszek MISZCZYK (Gliwice, POLAND), Aleksandra NAPIERALSKA, Małgorzata KRASZKIEWICZ, Agnieszka NAMYSŁ-KALETKA, Grzegorz WOZNIAK, Małgorzata STAPOR-FUDZIŃSKA MALGORZATA, Marcin MISZCZYK, Andrzej TUKIENDORF

■ #17666 - b25-2 CyberKnife robotic radiosurgery for intermediate unfavorable and high-risk prostate cancer patients: initial results. Maris MEZECKIS (Sigulda, LATVIA), Kirils IVANOV, Egils VJATERS, Sandra CIPKINA, Vladislav BURYK

■ #17689 - b25-3 Pattern of progression after stereotactic body radiotherapy of oligorecurrent prostate cancer patients. Aleksandra NAPIERALSKA (Gliwice, POLAND), Wojciech MAJEWSKI, Małgorzata STAPÓR-FUDZIŃSKA, Leszek MISZCZYK

■ #17765 - b25-4 Evaluation of outcomes after stereotactic hypofractionated radiotherapy for prostate cancer. Giancarlo BELTRAMO, Giovanni LONGO, Isa BOSSI ZANETTI (Milano, ITALY), Achille BERGANTIN, Anna Stefania MARTINOTTI, Irene REDAELLI, Paolo BONFANTI, Chiara SPADAVECCHIA, Livia Corinna BIANCHI, Matteo MAGGIONI, Guido DORMIA

■ #17787 - b25-5 Phase 2 multicentre study of gantry-based SBRT boost for intermediate and high risk prostate cancer. David PRYOR (Brisbane, AUSTRALIA), Mark SIDHOM, Sankar ARUMUGAM, Joseph BUCCI, Sarah GALLAGHER, Joanne SMART, Greer PETER, Sarah KEATS, Lee WILTON, Jarad MARTIN

Segovia Break Out

A25

12:00 - 13:00

ORAL SESSION METASTASES #1

Moderators: Eduardo LOVO IGLESIAS (EL SALVADOR), Edilmar MOURA (BRAZIL), John SUH (USA)

■ #17640 - a25-1 United States radiotherapy practice patterns for brain metastases in the era of stereotactic radiosurgery. Andrew BARBOUR (Durham, USA), Corbin JACOBS, Gita SUNEJA, Scott FLOYD, Jordan TOROK, John KIRKPATRICK

■ #17703 - a25-2 Stereotactic radiosurgery (SRS) for brain metastases - time trend and variation in practice in Australia. Wee Loon ONG (Melbourne, Australia, AUSTRALIA), Therese KANG, Gishan RATNAYAKE, Morikatsu WADA, Jeremy RUBEN, Sashendra SENTHI, Jeremy MILLAR, Farshad FOROUDI

■ #17560 - a25-3 Safety and efficacy of dose escalation for neoadjuvant stereotactic radiosurgery for large brain metastases: results from a prospective trial. Erin MURPHY (Cleveland, USA), Kailin YANG, John SUH, Jennifer YU, Cathy SCHILERO, Alireza MOHAMMADI, Glen STEVENS, Liliyana ANGELOV, Michael VOGELBAUM, Gene BARNETT, Gennady NEYMAN, Sam CHAO

■ #17735 - a25-4 A natural history of melanoma brain metastases on MRI: Recommendations for interval from imaging to treatment delivery. Alon KASHANIAN (Los Angeles, USA), Collin PRICE, Rebecca LEVIN-EPSTEIN, Tania KAPREALIAN, Nader POURATIAN

■ #17777 - a25-5 Stereotactic radiosurgery for small cell lung cancer brain metastases. Scott SOLTYS (Stanford, CA, USA), Rohil TAGGARS, Everett MODING, Ziad FAWAZ, Rie VON EYBEN, Erqi POLLOM, Steven CHANG, Iris GIBBS, Steven HANCOCK, Hilary BAGSHAW

Segovia Plenary



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■ #16763 - a25-6 Symptomatic brain metastases larger than 8.5cc managed with upfront radiosurgery. **Eduardo LOVO** (San Salvador, EL SALVADOR), Victor CACEROS, Mario MINERVINI, William REYES, Fidel CAMPOS

C25

12:00 - 13:10

ORAL SESSION PHYSICS #1

Moderators: Francine Xavier DOS SANTOS (BRAZIL), Josef NOVOTNY (CZECH REPUBLIC), David SCHLESINGER (USA)

■ #17812 - C25-1 Interactive inverse planning system for radiosurgery by convex optimization. **Marc LEVIVIER** (Lausanne, SWITZERLAND), Rafael E. CARRILLO, Rémi CHARRIER, Jean-Philippe THIRAN

■ #17671 - c25-2a The impact of unscheduled gaps and shot ordering on the biologically effective dose (BED) in Gamma Knife Radiosurgery. **Thomas KLINGE** (London, UK), Marc MODAT, Jamie MCCLELLAND, Alexis DIMITRIADIS, Ian PADDICK, John W. HOPEWELL, Neil KITCHEN, Sébastien OURSELIN

■ #17674 - c25-2b Calculation of biologically effective dose (BED) distribution matrices for Gamma Knife Radiosurgery. **Thomas KLINGE** (London, UK), Marc MODAT, Jamie MCCLELLAND, Alexis DIMITRIADIS, Ian PADDICK, John W. HOPEWELL, Neil KITCHEN, Sébastien OURSELIN

■ #17677 - c25-3 A linear programming approach to inverse planning in gamma knife radiosurgery. Stella RIAD, Jens SJOLUND, **Haakan NORDSTROEM** (Stockholm, SWEDEN), Haakan NORDSTROEM

■ #17803 - c25-5 Effects of variations in treatment time on clonogenic survival of V79 cells: Implications for Radiosurgery. **John W HOPEWELL** (Oxford, UK), Steven HALLGREN, Mark A HILL, Ian PADDICK, James M THOMPSON, Amy ELLIOTT, Bleddyn JONES

■ #17749 - c25-5 Application of Machine Learning Techniques for Accurate Dose Verification of MLC-based Cyberknife SRS and SBRT. **Bin HAN** (Stanford, USA), Lei XING, Yong YANG, Scott SOLTYS, Lei WANG

■ #17759 - c25-6 Deep learning for tumor contouring in neuroradiology: an evaluation of time savings. **Alexandra DALECHINA** (Moscow, RUSSIA), Valery KOSTJUCHENKO, Egor KRIVOV, Boris SHIROKIKH, Alexey SHEVTSOV, Mikhail BELYAEV, Andrey GOLANOV, Mikhail GALKIN, Amayak DURGARYAN, Ivan OSINOV

El Pardo I

13:00

LUNCH (exhibition area), VISIT OF THE EXHIBITION & POSTERS

13:15

B26

13:15 - 14:15

ELEKTA SPONSORED SESSION

Precision Radiation Medicine: Moments that Matter

■ Welcome and Introduction. **Aaron OAKS** (FRANCE)

■ Elekta Unity™ Installation and Initial Clinical Usage at the University of Iowa. **Mark SMITH** (USA)

■ Managing the Increasing Demand for Intracranial Radiosurgery Treatments in an integrated Oncology and Neurosurgical Setting. **Matthew FOOTE** (AUSTRALIA)

■ 4D Image Guidance and Other Motion Management Techniques for Lung SBRT. **Farkhad MANAPOV** (GERMANY)

■ Discussion.

Segovia
Break
Out

14:30

A27

14:30 - 15:30

PARALLEL SESSION

BENIGN BRAIN TUMORS UPDATE

Moderators: Laura FARISELLI (ITALY), Leonardo FRIGHETTO (BRAZIL), Eduardo LOVO IGLESIAS (EL SALVADOR)

■ Long Term Outcomes. **Zhiyuan XU** (USA)

■ Combination Therapy. **Bruce POLLOCK** (USA)

■ Repeat Radiosurgery. **Gus BEUTE** (THE NETHERLANDS)

■ Is Earlier Better? **Jean REGIS** (FRANCE)

Segovia
Plenary

B27

14:30 - 15:30

PARALLEL SESSION

SPINE



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Moderators: Lily ANGELOV (USA), Lucas Ignacio CAUSSA (ARGENTINA), Scott SOLTYS (USA)

Segovia
Break
Out

- Patient Selection for Spine SBRT. Matthew FOOTE (AUSTRALIA)
- Status of clinical trials for de novo metastases. Samuel RYU (USA)
- Re-irradiation Spine SBRT. Sten MYREHAUG (CANADA)
- Consensus Contouring Guidelines for Spine SRS. Kristin JANSON REDMOND (USA)
- Radiation for spinal chordoma. Scott SOLTYS (USA)
- Radiosurgery for Benign Pathologies. Kita SALLABANDA (SPAIN)

C27

14:30 - 15:30

ORAL SESSION METASTASES #2a

Moderators: Luis Gustavo GUIMARÃES (BRAZIL), Harley OLIVEIRA (BRAZIL), John SUH (USA)

- #17621 - c27-1 Clinical risk assessment score to estimate the likelihood of pseudoprogression versus tumor recurrence following stereotactic radiosurgery for brain metastases. Bente Sandvei SKEIE (Bergen, NORWAY), Per Øyvind ENGER, Paal-Henning PEDERSEN, Jan Ingemann HEGGDAL, Geir Olve SKEIE
- #17641 - c27-2 Single-fraction versus hypofractionated stereotactic radiosurgery for medium-sized (2.5 to 3 cm) brain metastases. Young Hyun CHO (SEOUL, KOREA), Kyoungjun YOON, Eun Suk PARK, Do Hee LEE, Do Hoon KWON
- #17662 - c27-3 Multi-fraction stereotactic radiosurgery in giant brain oligometastases. Hua Guang ZHU (Shanghai, CHINA), Xin WANG, Enmin WANG
- #17688 - c27-4 Stereotactic radiosurgery as primary management of intracranial germ cell metastases. Moaaz SOLIMAN, Yan WANG, Ahsan FAROOQI, Andrew BISHOP, Debra YEBOA, Kristina WOODHOUSE, Susan MCGOVERN, Tina BRIERE, Caroline CHUNG, Mary MCALEER, Matthew CAMPBELL, Shi-Ming TU, Yago NIETO, Ganesh RAO, Sherise FERGUSON, Jing Li (Houston, USA)
- #17818 - c27-5 Outcomes after 2-fractions dose-staged Gammaknife Surgery for large or brainstem located metastases. Pierre-Yves BORJUS (Paris), Aymeric AMELOT, Eli BOUSTANY, Jean Jacques MAZERON, Charles Ambroise VALERY
- #17858 - c27-6 Randomized phase III trial comparing gamma knife and linac based (EDGE) approaches for brain metastases radiosurgery: results from the Gadget trial. Ciro FRANZESE (Milano, ITALY), Pierina NAVARRIA, Elena CLERICI, Ilaria RENNA, Salvatore COZZI, Piero PICOZZI, Pietro MANCOSU, Stefano TOMATIS, Marta SCORSETTI

El
Pardo I

15:30

A28

15:30 - 16:30

ORAL SESSION VESTIBULAR SCHWANNOMA #1

Moderators: Steven CHANG (USA), Marc LEVIVIER (SWITZERLAND), Jânio NOGUEIRA (BRAZIL)

- #17683 - a28-2 Gamma knife radiosurgery for residual and recurrent vestibular schwannomas after previous surgery: clinical results in a series of 90 patients and review of the literature. Michele BAILO (Milan, ITALY), Nicola BOARI, Filippo GAGLIARDI, Martina PILONI, Alfio SPINA, Marco GEMMA, Antonella DEL VECCHIO, Angelo BOLOGNESI, Pietro MORTINI
- #17698 - a28-3 Gamma Knife Radiosurgery in the management of intracanalicular vestibular schwannomas: experiences of a single high-volume center. Sebastian DZIERZECKI (Warsaw, POLAND), Grzegorz TUREK, Katarzyna DYTUS-CEBULOK, Maciej HARAT, Mirosław ZABEK
- #17730 - a28-4 Basic pretreatment RADIOMIC features to predict SRS outcome of vestibular schwannomas. Herwin SPECKTER (Santo Domingo, DOMINICAN REPUBLIC), Jairo SANTANA, Jose BIDO, Giancarlo HERNANDEZ, Diones RIVERA, Luis SUAZO, Santiago VALENZUELA, Peter STOETER
- #17764 - a28-5 Predictability of transient tumor enlargement following gamma knife radiosurgery on vestibular schwannoma. Patrick LANGENHUIZEN (Tilburg, THE NETHERLANDS), Sander SEBREGTS, Svetlana ZINGER, Sieger LEENSTRA, Patrick HANSSENS, Peter DE WITH, Jeroen VERHEUL
- #17856 - a28-6 Gamma Knife radiosurgery following partial resection of large vestibular schwannomas: evaluation of long-term tumor control. Patrick LANGENHUIZEN (Tilburg, THE NETHERLANDS), Víctor FU, Svetlana ZINGER, Sieger LEENSTRA, Patrick HANSSENS, Peter DE WITH, Jeroen VERHEUL

Segovia
Plenary

B28

15:30 - 16:30

ORAL SESSION SPINE



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Monday 10 June

Moderators: Sebastiao CORREA (BRAZIL), Kita SALLABANDA (SPAIN)

- #17631 - b28-1 Phase I study of spinal cord constraint relaxation with single session spine stereotactic radiosurgery (SSRS) in the primary management in patients with inoperable, previously irradiated metastatic epidural spinal cord compression (MESCC). Amol GHIA (Houston, USA), Nandita GUHA-THAKURTA, Kenneth HESS, Stephen SETTLE, Erik SULMAN, Hadley SHARP, Mary Francis MCALEER, Jing LI, Xin WANG, Eric CHANG, Claudio TATSUI, Paul BROWN, Lawrence RHINES
- #17685 - b28-2 PREST: Pain Reduction with bone metastases STereotactic radiotherapy: A phase III randomized multicentric trial. Valeria MASIELLO, Stefania MANFRIDA, Ernesto MARANZANO, Paolo MUTO, Silvia CHIESA, Stefano PERGOLIZZI, Francesco DEODATO, Savino CILLA, Vincenzo VALENTINI, Francesco CELLINI (Roma, ITALY)
- #17694 - b28-3 RADIOSURGERY IN SPINE TUMORS, COMBINE TREATMENT. Kita SALLABANADA DIAZ (Madrid, SPAIN), Rafael GARCIA, Iciar SANTAOLALIA
- #17729 - b28-4 Management of chordomas: an evolving paradigm shift from a Brazilian tertiary center. Andre CHEN (Sao Paulo, BRAZIL), Douglas NARAZAKI, Virginio RUBIN, Bruno ALBARICCI, Hugo STERMAN, Sergio GONCALVES, Alexandre CRISTANTE, William TEIXEIRA
- #17855 - b28-5 Estimation of achievable control probabilities of microscopic disease of the epidural space in spinal stereotactic body radiation therapy. P. James JENSEN, John KIRKPATRICK, Scott FLOYD, Jordan TOROK (Durham, NC, USA), C. Rory GOODWIN, Elizabeth HOWELL, Will GILES, Fang-Fang YIN, Q. Jackie WU

Segovia
Break
Out

C28

15:30 - 16:30

ORAL SESSION METASTASES #2b

Moderators: Lily ANGELOV (USA), Sergio DANTAS (BRAZIL), Yoshiyasu IWAI (JAPAN)

- #16803 - c28-1 The Effect of Gamma Knife Radiosurgery on Large Posterior Fossa Metastases (LPPM) and the associated peritumoral edema and 4th ventricle volume. Baha'eddin MUHSEN, Lilyana Angelov Md ANGELOV (Cleveland, USA), Michael VOGELBAUM, John SUH, Alireza MOHAMMADI, Samuel CHAO, Gene H BARNETT, Hamid BORGHEI-RAZAVI, Krishna JOSHI, Bicky THAPA, Bryan LEE
- #17679 - c28-2 Reducing ctv-ptv margin from 2mm to 0mm in stereotactic radiotherapy of single brain metastasis. Justine BADLOE (The Hague, THE NETHERLANDS), Mirjam MAST, Anna PETOUKHOVA, Jan-Huib FRANSSSEN, Elyas GHARIQ, Ruud WIGGENRAAD
- #17704 - c28-3 Impact of the number of metastatic brain lesions on survival after gamma knife radiosurgery. Sergey BANOV, Andrey GOLANOV (Moscow, RUSSIA), Elena VETLOVA, Alexandra DALECHINA, Valery KOSTJUCHENKO, Ivan OSINOV
- #17720 - c28-4 Stereotactic radiosurgery versus whole brain with simultaneous integrated boost using VMAT for multiple brain metastases. Jose REGIS NETO (São Paulo, BRAZIL), Wellington Pimenta NEVES JUNIOR, Anselmo MANCINI, Sebastião Francisco Miranda CORREA
- #17800 - c28-5 Stereotactic radiosurgery for resected brain metastases - does the surgical corridor need to be treated? Scott SOLTYS (Stanford, CA, USA), Siyu SHI, Joseph ABI JAOUDE, Navjot SANDHU, Kirsten SCHOFIELD, Elyn WANG, Michael JIN, Carrie ZHANG, Steven CHANG, Erqi POLLOM
- #17900 - c28-6 Adverse radiation effect after stereotactic radiosurgery for brain metastases: an international multi-center retrospective analysis. Ali ALATTAR, Jiri BARTEK, JR., Brian HIRSHMAN, Clark CHEN (Minneapolis, USA)

El
Pardo I

16:30

COFFEE BREAK - POSTERS & EXHIBITION

17:00

A291

17:00 - 18:00

YOUNG INVESTIGATOR SEMINAR

Moderators: Christopher GRAFFEO (USA), Paulo OPPITZ (BRAZIL), Scott SOLTYS (USA)

- Designing Studies. Debra Nana YEBOA (USA)
- Perfecting Article Writing and Publication. Isaac YANG (USA)
- Interpreting Statistics: Common Pitfalls to Avoid. David PRYOR (AUSTRALIA)
- Remember the Patient. Lily ANGELOV (USA)

Segovia
Plenary

B291

17:00 - 18:00

BREAST SYMPOSIUM

Moderators: Laura FARISELLI (ITALY), Karina MOUTINHO (BRAZIL), Mariza TUNMER (SOUTH AFRICA)

Segovia
Break
Out



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- Influence of Molecular Subgroups and Systemic Therapy on Outcomes of Metastatic Breast Cancer Patients Receiving Stereotactic Radiosurgery for Brain Metastases. Steve BRAUNSTEIN (USA)
- Focal Radiation Techniques (incl. IORT). Lorenzo LIVI (ITALY)
- SBRT Clinical Trials and Research Overview. Allisson Barcelos BORGES (BRAZIL)

C291

17:00 - 18:30

VARIAN SPONSORED SESSION

Cutting EDGE Radiosurgery from Varian

- Implementing HyperArc™ SRS in Scotland: Clinical Experience with over 70 Patients. Suzanne CURRIE (UK)
- HyperArc™ for Cranial SRS: First Year Indications & Outcomes on the EDGE® at UAB. Evan THOMAS (USA)
- RapidArc™ Radiosurgery and SGRS - The Brazilian Experience. Samir HANNA (BRAZIL)
- VMAT on the EDGE® for H&N and other Extracranial Targets: The Henry Ford Experience. Farzan SIDDIQUI (USA)
- Frameless Functional Linac-Based Radiosurgery: Focus on Essential Tremor. Evan THOMAS (USA)
- Immunotherapy plus SRS/SBRT: Increasing the Probability of the Abscopal Effect. James WELSH (USA)

El Pardo I

Tuesday 11 June

07:30

B31

07:30 - 09:00

BREAKFAST SEMINAR

QUALITY OF LIFE: WHAT THE DATA SHOWS

Moderators: Allisson Barcelos BORGES (BRAZIL), Joao Gabriel GOMES (BRAZIL), Jonathan KNISELY (USA)

- Gliomas: What is Best for the Patient. Bente Sandvei SKEIE (NORWAY)
- Metastases & Neurocognition: An Update. Jeff WEFEL (USA)
- Skullbase Lesions: Is SRS/SRT Better Than Surgery? Oystein TVEITEN (NORWAY)
- Risk of Radiation-Associated Intracranial Malignancy after SRS for Benign Tumors. Matthias RADATZ (UK)

Segovia
Break
Out

C31

07:30 - 09:00

BREAKFAST SEMINAR

PROSTATE SBRT

Moderators: Sebastiao CORREA (BRAZIL), Ciro FRANZESE (ITALY), Luis LARREA (SPAIN)

- Clinical Results. David PRYOR (AUSTRALIA)
- Quality of Life in prostate SBRT. Maris MEZECKIS (LATVIA)
- Quality Assurance. Fernando JAPIASSU (BRAZIL)

El Pardo I

A31

07:30 - 09:00

BREAKFAST SEMINAR

PEDIATRIC BRAIN RADIOSURGERY

Moderators: Leonardo FRIGHETTO (BRAZIL), Paul W. SPERDUTO (USA), Amanda DE OLIVEIRA LÓPES (BRAZIL)

- Craniopharyngioma Combined Approach - Surgery and Radiosurgery. Leonardo FRIGHETTO (BRAZIL)
- Efficacy, Outcomes, and new directions. Shannon FOGH (USA)
- Long Term Outcomes: Brain Tumors. Erin MURPHY (USA)
- #17732 - a31-4 Radiosurgery for Paediatric AVM - A Single Centre Experience in 50 consecutive Patients. Shweta KEDIA (New Delhi, INDIA), Atmanranjan DASH, Deepak AGARWAL, Manmohan SINGH, Rajinder THAYLLING, Shashank KALE
- #17544 - a31-5 Extracranial dose measurements in paediatric patients receiving radiosurgery and the risk of radiation-induced malignancy. Alexis DIMITRIADIS (London, UK), Amjad ALYAHYAWI, Alison CAMERON, Neil KITCHEN, Gregory JAMES, Ian PADDICK
- The risk of oncogenesis. Andrey GOLANOV (RUSSIA)

Segovia
Plenary



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Tuesday 11 June

09:00

A32

09:00 - 10:15

PARALLEL SESSION

SPECIAL SYMPOSIUM: IMMUNOTHERAPY & SRS/SBRT

Moderators: **Jing LI (USA)**, **Michael LIM (USA)**, **John SUH (USA)**, **Leonardo VIEIRA (BRAZIL)**

- Immunology for the Oncologist. **James WELSH (USA)**
- Clinical Application in Brain: What we know. **Michael LIM (USA)**
- Clinical Application in Lung: What we know. **Clarissa BALDOTTO (BRAZIL)**
- What We Don't Yet Know: Key Issues. **Paul W. SPERDUTO (USA)**
- Clinical Trials & Research Summary. **Daniel TRIFILETTI (USA)**

Segovia
Plenary

B32

09:00 - 10:15

ORAL SESSION

PHYSICS #2

Moderators: **Fernando JAPIASSU (BRAZIL)**, **Anderson PASSARO (BRAZIL)**, **David SCHLESINGER (USA)**

- #17753 - b32-1 A phase-space source model for Monte Carlo dosimetry calculations in Gamma Knife clinical applications. **Andreas LOGOTHETIS**, **Evangelos PANTELIS**, **Emanouil ZOROS**, **Eleftherios PAPPAS**, **Georgios KOLLIAS**, **Alexis DIMITRIADIS**, **Ian PADDICK**, **Jonas GARDING**, **Jonas JOHANSSON**, **Pantelis KARAIKOS (Athens, GREECE)**
- #17644 - b32-2 Evaluation of PTW microdiamond edge-on orientation for small field dosimetry. **Jeremy DAVIS (Wollongong, AUSTRALIA)**, **Sultan ALHUJAI**, **Owen BRACE**, **Dean WILKINSON**, **Duncan BUTLER**, **Jason PAINO**, **Brad OBORN**, **Michael LERCH**, **Marco PETASECCA**
- #17682 - b32-3 Comparison of planning techniques for linac-based stereotactic radiosurgery in patients with 4 up to 10 brain metastases. **Ruud WIGGENRAAD (The Hague, THE NETHERLANDS)**, **Anna PETOUKHOVA**, **Roland SNIJDER**, **Linda DE BOER-DE WIT**, **Ivonne MUDDÉ-VAN DER WOUDE**, **Mireille FLORIJN**, **Jaap ZINDLER**, **Jan VAN SANTVOORT**
- #17810 - b32-4 Accuracy of frameless image guided stereotactic radio-surgery for brain metastases. **Young-Bin CHO (Toronto, CANADA)**, **Winnie LI**, **Normand LAPERRIERE**, **David SHULTZ**, **Caroline CHUNG**, **Barbara-Ann MILLAR**, **David JAFFRAY**, **Catherine COOLENS**
- #17882 - b32-5 Use of non-composite shots for robust planning in Gamma Knife Icon mask-based treatment. **Dershan LUO (Houston, Texas, USA, USA)**, **Eun HAN**, **Xin WANG**, **Tina BRIERE**
- #17785 - b32-6 End-to-End dosimetric and geometric accuracy of linac-based high-definition dynamic stereotactic treatments for multiple metastases: A multi-institutional study. **Emmanouil ZOROS (Greece, GREECE)**, **Daniel SAENZ**, **Kyveli ZOURARI**, **Michael REINER**, **Lip Teck CHEW**, **Samuel HANCOCK**, **Alex NEVELSKY**, **Christopher F NJEH**, **Niko PAPANIKOLAOU**, **Evangelos PAPPAS**

Segovia
Break
Out

10:15

COFFEE BREAK - POSTERS & EXHIBITION

10:45

A34

10:45 - 11:15

PARALLEL SESSION

THE LEKSELL LECTURE

Moderators: **Antonio DE SALLES (BRAZIL)**, **Laura FARISELLI (ITALY)**, **Marc LEVIVIER (SWITZERLAND)**, **Ian PADDICK (UK)**, **Jean REGIS (FRANCE)**

- Gamma Knife Radiosurgery from Leksell to the Present: An Insider's View. **Christer LINDQUIST (SWEDEN)**

Segovia
Plenary

C34

10:45 - 11:45

ORAL SESSION

THORACIC & GASTRO-INTESTINAL

Moderators: **David PRYOR (AUSTRALIA)**, **Ben SLOTMAN (THE NETHERLANDS)**, **Rosemarie STAHLSCHEMIDT (BRAZIL)**

- #17660 - c34-1 Dynamic tracking SBRT (DTSBRT) for the treatment of primary and/or metastatic lung cancer. **Katsuyuki KARASAWA (Tokyo, JAPAN)**, **Yumiko MACHITORI**, **Satoshi KITO**, **Sara HAYAKAWA**, **Kaiji NIHEI**
- #17713 - c34-2 DIBH implementation for lung SBRT treatment with low cost local solution in Argentina.



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Tuesday 11 June

Ruben Oscar FARIAS, Leon ALDROVANDI, Florencia MAURI, Augusto ALVA, Federico Javier DIAZ, Maria Liliana MAIRAL, Mabel Edith SARDI, Mara Lia SCARABINO (Buenos Aires, ARGENTINA)

■ #17747 - c34-3 Artificial Intelligence techniques improve SBRT treatment planning quality. Q. Jackie WU, Jiahang ZHANG, Chunhao WANG, Yang SHENG, Suradet JITPRAPAUKULSARN, Fang-Fang YIN (Durham, NC, USA), Yaorong GE

■ #17768 - C34-4 Clinical experience with calypso tracking in sbrt for pancreatic tumours. Domagoj KOSMINA (Zagreb, CROATIA), Hrvoje KAUCIC, Luka NOVOSEL, Adlan CEHOBASIC, Vanda LEIPOLD, Jelena HAJREDINI, Sanja GASPAS, Marica KESER, Ivo PEDISIC, Dragan SCHWARZ, Sasa SCHMIDT, Andreas MACK

■ #17821 - c34-5 Prospective duodenal sparing decreases GI toxicity in pancreatic SBRT. Prashant VEMPATI (Lake Success, USA), Raymond CHAN, Peter K TAYLOR, Huma CHAUDHRY, Emile GOGINENI, Sewit TECKIE, Rajiv SHARMA, Vincent VINCIGUERRA, Maged GHALY

■ #17904 - c34-6 Novel treatment planning technique to facilitate safe pancreatic SBRT dose escalation. Evan THOMAS (BIRMINGHAM, USA), Christina BLALOCK, Rex CARDAN, Richard POPPLE, Rojymon JACOB

■ #17851 - c34-7 Stereotactic body radiation therapy in the management of oligometastatic colorectal cancer. Ciro FRANZESE (Milano, ITALY), Tiziana COMITO, Davide FRANCESCHINI, Elena CLERICI, Fiorenza DE ROSE, Angelo TOZZI, Pierina NAVARRIA, Pietro MANCOSU, Stefano TOMATIS, Marta SCORSETTI

El Pardo I

11:15

AB5

11:15 - 11:45

PARALLEL SESSION

EVOLUTION AND IMPACT OF RADIOSURGERY

Moderators: Laura FARISELLI (ITALY), Christer LINDQUIST (SWEDEN), Paul W. SPERDUTO (USA)

- What I Know Now That I Wish I Knew Then. Antonio DE SALLES (BRAZIL)
- How Radiosurgery has Impacted Radiation Oncology. Scott SOLTYS (USA)

Segovia Plenary

11:45

AB6

11:45 - 12:30

PARALLEL SESSION

CONTEMPORARY MANAGEMENT OF BRAIN METASTASES

Moderators: Pablo CASTRO PENA (ARGENTINA), Marcos MALDAUN (BRAZIL), Scott SOLTYS (USA)

- #17647 - a36-1 Single versus multifraction stereotactic radiosurgery for large brain metastases: An international meta-analysis of 24 trials. Eric LEHRER, Jennifer PETERSON, Nicholas ZAORSKY, Paul BROWN, Arjun SAHGAL, Veronica CHIANG, Samuel CHAO, Jason SHEEHAN, Daniel TRIFILETTI (Jacksonville, USA)
- Japanese Study Group Update: Evidence from "crazy treatment" to standard treatment. Yoshiyasu IWAI (JAPAN)
- Pre-operative SRS for Brain Metastases : A New Paradigm. Stuart BURRI (USA)
- Current status of prognostic models and grading systems. Paul W. SPERDUTO (USA)

Segovia Plenary

B36

11:45 - 12:45

ORAL SESSION

FUNCTIONAL #2 - MOVEMENT DISORDERS

Moderators: Joao Gabriel GOMES (BRAZIL), Christer LINDQUIST (SWEDEN), Alessandra MOURA LIMA (BRAZIL)

- #17895 - b36-1 Probabilistic tractography for radiosurgical dosimetry of functional regions of the thalamus. Richard A. POPPLE (Birmingham, USA), Erik H. MIDDLEBROOKS, Evan M. THOMAS, John B. FIVEASH, Rex A. CARDAN, Harrison C. WALKER, Barton L. GUTHRIE, Markus BREDEL
- #17905 - b36-2 Preliminary results of phase II clinical trial for linac-based coneless and frameless SRS thalamotomy for essential tremor and tremor-dominant Parkinson's disease. Evan THOMAS (BIRMINGHAM, USA), Richard POPPLE, John FIVEASH, Barton GUTHRIE, Markus BREDEL
- #17661 - b36-3 Vento-lateral motor thalamus abnormal functional connectivity before and after left Vim radiosurgery for drug-resistant essential tremor: a resting-state fMRI study. Constantin TULEASCA (Lausanne, SWITZERLAND), Jean RÉGIS, Elena NAJDENOVSKA, Tatiana WITJAS, Nadine GIRARD, Mohamed FAOUZI, Vincent MARION, Jean-Philippe THIRAN, Meritxell BACH CUADRA, Marc LEVIVIER, Dimitri VAN DE VILLE
- #17868 - b36-4 Radiosurgical Pallidotomy for Generalised & Focal Dystonias: Is It The Last Part in The Ship of Theseus. Manjul TRIPATHI (Chandigarh, INDIA)
- #17485 - b36-5 VIM Radiosurgery for tremor : results of a large prospective cohort of 626 consecutive patients. Jean REGIS, Giorgio SPATOLA, Axel CRETOL (MARSEILLE), Tatiana WITJAS
- #17836 - b36-6 Gamma Forel's campotomy for dystonia with coarse tremor. Juliete MELO DINIZ (SAO PAULO, BRAZIL), Antônio DE SALLES, Rafael COSTA LIMA MAIA, Aline Lariessy CAMPOS PAIVA,

Segovia Break Out



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Tuesday 11 June

Crystian WILIAN CHAGAS SARAIVA, Alessandra GORGULHO

C36

11:45 - 12:45

ORAL SESSION VASCULAR DISORDERS

Moderators: Marcello REIS DA SILVA (BRAZIL), Zhiyuan XU (USA), Vladimir ZACCARIOTTI (BRAZIL)

- #17638 - c36-1 Safety-efficacy of stereotactic radiosurgery in the treatment of ARUBA-eligible patients with unruptured brain AVM ≤ 5 cc: a cohort of 247 patients. [Jean REGIS](#) (MARSEILLE), Jean-François HAK, Giorgio SPATOLA
- #17886 - c36-2 IntuitivePlan inverse planning performance evaluation for arteriovenous malformations. [Ian PADDICK](#) (London, UK), Alexis DIMITRIADIS
- #17021 - c36-3 Intracranial Dural Arteriovenous Fistulas with Cortical Venous Drainage: Gamma Knife Radiosurgery as the Treatment of Choice. [Hardik SARDANA](#) (New Delhi, INDIA), Deepak AGRAWAL
- #16718 - c36-4 Dose Response in Volume Staged Radiosurgery for Large Arteriovenous Malformations: A Multi-Institutional Study. [Zachary SEYMOUR](#) (Royal Oak, USA), Jason CHAN, Penny SNEED, Hideyuki KANO, Rachel JACOBS, Craig LEHOCKY, L. Dade LUNSFORD, Hong YE, Tomas CHYTKA, Roman LISCAK, Cheng-Chia LEE, Huai-Che YANG, Dale DING, Jason SHEEHAN, Caleb FELICIANO, Rafael RODRIGUEZ-MERCADO, Veronica CHIANG, Judith HESS, Samuel SOMMARUGA, Brendan MCSHANE, John LEE, Anthony KAUFMANN, Inga GRILLS, Micheal MCDERMOTT
- #17861 - c36-5 Long-term results following repeat gamma knife surgery for incompletely obliterated arteriovenous malformations after the first gamma knife treatment. [Bente Sandvei SKEIE](#) (Bergen, NORWAY), Peter QUARCOO, Jan Ingemann HEGGDAL, Kjersti Gaustad KLETT, Elisabeth LARSEN, Paal-Henning PEDERSEN, Geir Olve SKEIE, Per Øyvind ENGER
- #17875 - c36-6 Stereotactic Diffusion Tensor Tractography For Gamma Knife Stereotactic Treatment Of Brain Arteriovenous Malformations. [Cormac GAVIN](#) (London, UK), H. Ian SABIN

El Pardo I

12:45

FREE TIME FOR LUNCH - VISIT OF THE EXHIBITION & POSTERS

14:00

C37

14:00 - 15:30

SESSION IBERO-LATIN-AMERICAN SOCIETY OF RADIOSURGERY Part I

Moderators: Julio ANTICO (ARGENTINA), Sergio MORENO-JIMENEZ (MEXICO), Kita SALLABANDA (SPAIN)

- Advances in the Treatment of Giant Metastases: Surgery versus Staged Radiosurgery. Eduardo LOVO IGLESIAS (EL SALVADOR)
- Radiosurgery as a Rescue Treatment for High Grade Glioma: Does it Work and Controversies. Pablo CASTRO PENA (ARGENTINA)
- Advances on the Treatment of Spine Metastases: Radiosurgery versus Conventional Radiotherapy. Lucas Ignacio CAUSSA (ARGENTINA)
- Radiosurgery in the Treatment of Multiple Metastases: The Importance of Global Volume. Christian VARGAS (PERU)
- Radiosurgery and Epilepsy. Sergio MORENO-JIMENEZ (MEXICO)
- Radiosurgery in Giant AVMs: Which is the Best Option? Kita SALLABANDA (SPAIN)
- Treatment of Cranial Base Tumors: When Radiosurgery? Alessandra GORGULHO (BRAZIL)
- Discussion.

El Pardo I

15:30

COFFEE BREAK - POSTERS & EXHIBITION

16:00

C38

16:00 - 18:00

SESSION IBERO-LATIN-AMERICAN SOCIETY OF RADIOSURGERY Part II

Speakers: Miguel A. CELIS (MEXICO), Sergio MORENO-JIMENEZ (MEXICO), Kita SALLABANDA (SPAIN)

- Radiosurgery Concepts, Devices, Penumbra and Precision QA. Daniel VENENCIA (ARGENTINA)
- Certification Program in Radiosurgery: Requirements. Kita SALLABANDA (SPAIN)
- Radiosurgery in Large Lesions: Hypofractionation, Advantages and Controversies. Ignacio SISAIMON (ARGENTINA)
- Radiosurgery in Pediatric Patients: Specific Concepts. Carlos CHIRAOLA (ARGENTINA)

El Pardo I



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Wednesday 12 June

- Combined Treatment in Large Schwannomas. Jose LORENZONI (CHILE)
- Radiosurgery in Acoustic Schwannomas. Jorge MANDOLESI (ARGENTINA)
- Long Term Follow up of SRS for Radiosurgery. Julio ANTICO (ARGENTINA)
- SRS for Deep Cavernomas. Jessica CHAVEZ NOGUEDA (MEXICO)
- SRS for Glomus Tumors. Ascary VELAZQUEZ-PACHECO (MEXICO)
- SRS for Choroidal Melanomas. Luis LARREA (SPAIN)
- Discussion.

Wednesday 12 June

07:30

A41

07:30 - 09:00

BREAKFAST SEMINAR QUALITY SRS/SRT: WHAT'S REQUIRED

Moderators: Guilherme BULGRAEN DOS SANTOS (BRAZIL), Alexis DIMITRIADIS (UK), Anderson PASSARO (BRAZIL)

Segovia
Plenary

- Task Force Recommendations (AAPM/ASTRO). Steven GOETSCH (USA)
- The ISRS Accreditation Program. Ian PADDICK (UK)
- QA perspectives in the management of respiratory motion. Andrea GIRARDI (BELGIUM)
- Emerging QA techniques. Fang-Fang YIN (USA)

B41

07:30 - 09:00

BREAKFAST SEMINAR EMERGING SBRT INDICATIONS

Moderators: Sebastiao CORREA (BRAZIL), Richard POPPLE (USA), Ben SLOTMAN (THE NETHERLANDS)

Segovia
Break
Out

- Cervical. Yoshiya Josh YAMADA (USA)
- SBRT in the management of inoperable pancreatic cancer. Marta SCORSETTI (ITALY)
- SBRT and liver. Lorenzo LIVI (ITALY)
- Kidney. David PRYOR (AUSTRALIA)

C41

07:30 - 09:00

BREAKFAST SEMINAR VASCULAR DISORDERS

Moderators: Bruno FERNANDES DE OLIVEIRA SANTOS (BRAZIL), Leonardo FRIGHETTO (BRAZIL), Bruce POLLOCK (USA)

El Pardo I

- Management of Unruptured AVMs in the Post ARUBA Era. Steven CHANG (USA)
- Large AVMs: Strategies and Outcomes. Isaac YANG (USA)
- Endovascular Combination Therapy: Best Practices. Eduardo WAJNBERG (BRAZIL)

09:00

A42

09:00 - 10:15

PLENARY SESSION NOVEL TECHNOLOGIES & TECHNIQUES - PART I

Moderators: Matthew FOOTE (AUSTRALIA), Marc LEVIVIER (SWITZERLAND), Charles VALERY (FRANCE)

Segovia
Plenary

- Liquid Biopsy and Implications for SRS/SBRT. John SUH (USA)
- DTI & SRS for Behavioral Disorders. Alessandra GORGULHO (BRAZIL)
- Brain Radiosurgery Without a Bunker. John ADLER (USA)
- MR-LINAC Technology. David JAFFRAY (CANADA)
- #17783 - When the machine is challenging the expert : Intuitive inverse planning. Jean REGIS (MARSEILLE), Hamdi HUSSEIN, Louise MERLY, Castillo LAURA, Anne BALOSSIER, Giorgio SPATOLA

10:15



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Wednesday 12 June

COFFEE BREAK -POSTERS & EXHIBITION

10:45

A44

10:45 - 11:15

PARALLEL SESSION NOVEL TECHNOLOGIES & TECHNIQUES - PART II

Moderators: John ADLER (USA), Marc LEVIVIER (SWITZERLAND), Sergio MORENO-JIMENEZ (MEXICO)

- #17633 - a44-1 Procedural aspects of stereotactic radiosurgery for ablation of ventricular tachycardia. Jakub CVEK (OSTRAVA, CZECH REPUBLIC), Radek NEUWIRTH, Lukas KNYBEL, Otakar JIRAVSKY, Lukas MOLEND, Josef KAUTZNER, Marek SRAMKO, Petr PEICHL
- #17738 - a44-3 Laser interstitial thermal therapy (LITT) in the diagnosis and treatment of suspected radiation-induced inflammation vs recurrence after SRS. Peter FECCI (Durham, USA), Scott FLOYD, Jordan TOROK, John KIRKPATRICK
- #17740 - A44-4 Molecular profiling of high dose irradiated tissues identifies differential gene expression profiles between conventional and high dose "flash" protons. Angel KU VILLANUEVA, Swati GIRDHANI, Eric ABEL, Isabel JACKSON, John ELEY, Zejko VUJASKOVIC, Renate PARRY, Sengupta DEBANTI (Palo Alto, USA)

Segovia
Plenary

B44

10:45 - 11:45

PARALLEL SESSION OVERVIEW OF CURRENT TREATMENT TECHNIQUES FOR GLIOMAS

Moderators: Jing LI (USA), Marcos MALDAUN (BRAZIL), José Marcus ROTTA (BRAZIL)

- Advancements of Immunotherapy for GBMs. Samuel CHAO (USA)
- What are the target and margin? John KIRKPATRICK (USA)
The rationale for radiosurgery the contrast-enhancing lesion alone in recurrent malignant gliomas
- Radiosurgery and Stereotactic Radiotherapy for Gliomas. Luis LARREA (SPAIN)
- Multimodality Approach for Glioma Management. Tony WANG (USA)
- 20 Years of Leading Edge GBM Radiosurgery: An Update. Christopher DUMA (USA)

Segovia
Break
Out

C44

10:45 - 11:15

ORAL SESSION OCULAR DISORDERS

Moderators: Antonio DE SALLES (BRAZIL), Bruno FERNANDES DE OLIVEIRA SANTOS (BRAZIL), Andrey GOLANOV (RUSSIA)

- #16743 - c44-1 Relative survival rates and complications in uveal melanoma patients after C LINAC stereotactic radiosurgery. Alena FURDOVA (Bratislava SLOVAKIA, SLOVAKIA), Miron SRAMKA, Gabriel KRALIK, Martin CHORVATH
- #17733 - c44-2 Gamma-Knife radiosurgery as an eye salvage treatment of intraocular retinoblastoma: three-year results of a pilot study. Andrey YAROVVOY, Vera YAROVAYA (Moscow, RUSSIA), Andrey GOLANOV, Valery KOSTJUCHENKO, Karina DZICCOEVA
- #17781 - c44-3 Outcomes of gamma-knife radiosurgery of posterior uveal melanoma unsuitable for other eye-sparing treatment modalities. Andrey YAROVVOY (Moscow, RUSSIA), Andrey GOLANOV, Valery KOSTJUCHENKO, Vera YAROVAYA, Amina CHOCHAEVA

El
Pardo I

11:15

A45

11:15 - 11:45

PARALLEL SESSION EXPANDING APPLICATION OF SBRT: HEAD AND NECK -- OLIGOMETASTASES

Moderators: Ana BOTERO (USA), Miguel A. CELIS (MEXICO), Sebastiao CORREA (BRAZIL)

- #17814 - a45-1 Stereotactic Body Radiotherapy (SBRT) for head and neck cancers in previously unirradiated medically unfit patients. Emile GOGINENI (New York, USA), Zaker RANA, Prashant VEMPATI, Jessie KARTEN, Anurag SHARMA, Douglas FRANK, Doru PAUL, Nagashree SEETHARAMU, Maged GHALY
- #17813 - a45-2 Safety and efficacy of repeat stereotactic body radiotherapy (SBRT) for local recurrence of head and neck cancer after initial SBRT. Emile GOGINENI (New York, USA), Zaker RANA, Adam RIEGEL, Luis MADURO, Michael WOTMAN, Mihaela MARRERO, Edward GABALSKI, Lucio PEREIRA, Doru PAUL, Nagashree SEETHARAMU,

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Plenary



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Maged GHALY

- #17815 - a45-3 Using the G8 screening tool to predict quality adjusted survival for elderly head and neck cancer patients treated with stereotactic body radiotherapy (SBRT). Emile GOGINENI (New York, USA), Michael WOTMAN, Zaker RANA, Jessie KARTEN, Adam RIEGEL, Luis MADURO, Dev KAMDAR, Doru PAUL, Nagashree SEETHARAMU, Maged GHALY
- Results of Oligometastases with SBRT. Daniel TRIFILETTI (USA)

C45

11:15 - 13:00

ORAL SESSION MENINGIOMAS

Moderators: Gus BEUTE (THE NETHERLANDS), Walther KRAVCIO (PANAMA), Dennis SHRIEVE (USA)

- #17630 - c45-1 Optic nerve sheath meningiomas multisession radiosurgery. Preliminary results from a prospective study. Marcello MARCHETTI (Milano, ITALY), Valentina PINZI, Cecilia IEZZONI, Laura FARISELLI
- #17642 - c45-2 Hypofractionated stereotactic radiosurgery for large-sized skull base meningiomas: a preliminary report on 31 patients. Young Hyun CHO (SEOUL, KOREA), Hyuk-Jin OH, Kyoungjun YOON, Eun Suk PARK, Do Hee LEE, Do Hoon KWON
- #17675 - c45-3 Long-term outcome of low dose (≤ 12 Gy) gamma knife radiosurgery for skull base meningiomas. Yoshiyasu IWAI, Hiroshi UDA (Osaka, JAPAN), Kazuhiro YAMANAKA, Kenichi ISHIBASHI
- #17684 - c45-4 Gamma knife radiosurgery as primary treatment for convexity meningiomas: clinical results at long-term follow-up in a series of 206 lesions. Filippo GAGLIARDI (MILAN, ITALY), Michele BAILO, Giuseppe BARISANO, Nicola BOARI, Antonella DEL VECCHIO, Angelo BOLOGNESI, Pietro MORTINI
- #17696 - c45-5 Optimized hypofractionated SRS regimens for perioptic lesions based on low alpha/beta ratio of the optic pathway. Herwin SPECKTER (Santo Domingo, DOMINICAN REPUBLIC), Jairo SANTANA, Jose BIDO, Giancarlo HERNANDEZ, Diones RIVERA, Luis SUAZO, Santiago VALENZUELA, Peter STOETER
- #17701 - c45-6 Atypical Meningiomas: pattern of post radiotherapy recurrences in relation to the irradiated area. Mónica Helena SCHURING-PEREIRA (Rotterdam, THE NETHERLANDS), Mirjam MAST, Jan VAN SANTVOORT, Rishi NANDOE TEWARIE, Rogier HAGENBEEK, Sjoerd VAN DUINEN, Ruud WIGGENRAAD
- #17718 - c45-7 Hypofractionated SRS versus single session SRS for perioptic lesions. A single center study of 245 patients. Herwin SPECKTER (Santo Domingo, DOMINICAN REPUBLIC), Jairo SANTANA, Jose BIDO, Giancarlo HERNANDEZ, Diones RIVERA, Luis SUAZO, Santiago VALENZUELA, Peter STOETER
- #17728 - c45-8 Radiosurgical decompression for skull base meningiomas causing compressive ophthalmic neuropathy. Eun Suk PARK, Hyuk-Jin OH, Eun Jung LEE, Kyoung Jun YOON, Young Hyun CHO (SEOUL, KOREA)
- #17799 - c45-10 Risk of carotid artery stenosis or occlusion after radiosurgery of cavernous sinus meningiomas. Bruce POLLOCK (Rochester, USA), Michael LINK, Scott STAFFORD, Ian PARNEY, Robert FOOTE

El Pardo I

11:45

A46

11:45 - 13:00

PARALLEL SESSION FUNCTIONAL RADIOSURGERY UPDATE

Moderators: Daniel BENZECRY ALMEIDA (BRAZIL), Antonio DE SALLES (BRAZIL), David MATHIEU (CANADA)

- Imaging of Mind Function & Resting State fMRI. Constantin TULEASCA (SWITZERLAND)
- Facial Pain Syndromes. K Singh SAHNI (USA)
- Movement Disorders. Jean REGIS (FRANCE)
- Evolution of Gamma Knife Capsulotomy for Intractable Obsessive-Compulsive Disorder. Miguel EURIPEDES (BRAZIL)
- History in the Context of Behavioral Disorder Surgery. Michael SCHULDER (USA)

Segovia
Plenary

B46

11:45 - 13:00

ORAL SESSION METASTASES #3

Moderators: Lily ANGELOV (USA), Kita SALLABANDA (SPAIN), Leonardo VIEIRA (BRAZIL)

- #17636 - b46-1 Cranial radiosurgery using ELEKTA Unity MR-LINAC. Preliminary results on patient-specific End-to-End QA for a multiple brain metastases case. Evangelos PAPPAS (ATHENS, GREECE), Georgios KALAITZAKIS, Thomas MARIS, Dimitris MAKRIS, Efstathios EFSTATHOPOULOS, Ioannis SEIMENIS
- #17669 - b46-2 Rapid Rescue Radiosurgery (RRR) in the acute management of critically located brain metastases: a two-center short-term outcome analysis. Georges SINCLAIR, Georges SINCLAIR (Reading, UK, UK), Georges SINCLAIR,

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Hamza BENMAKHLOUF , Kerime AKDUR, Mustafa Aziz HATIBOGLU

■ #17705 - b46-3 Stereotactic radiosurgery for brain metastases from renal-cell carcinoma. **Andrey GOLANOV** (Moscow, RUSSIA), Sergey BANOVA, Elena VETLOVA, Alexandra DALECHINA, Valery KOSTJUCHENKO, Natalia ANTIPINA, Ivan OSINOV, Amayak DURGARYAN

■ #17744 - b46-4 Hypofractionated Stereotactic Radiosurgery and Radiotherapy to Large Resection Cavity of Metastatic Brain Tumors. **Leonardo CONRADO** (Salvador, BRAZIL), Tania KAPREALIAN, Alisson R. TELES, Stephen TENN, Nader POURATIAN

■ #17838 - b46-5 Immune checkpoint inhibitors and stereotactic radiosurgery in melanoma brain metastases. **Charles VALERY** (Paris), Charlotte FENIOUX, Aymeric AMELOT, Pierre-Yves BORIUS, Idriss TROUSSIER, Iannis LAMPROGLOU, Philippe SAIAG, Philippe MAINGON, Jean-Jacques MAZERON, Philippe CORNU

■ #17859 - b46-6 Hypofractionated stereotactic radiosurgery for resected brain metastases. **Jordan TOROK** (Durham, NC, USA), Andrew FAIRCHILD, Justus ADAMSON, Zhanerke ABISHEVA, Scott FLOYD, Michael MORAVAN, Peter FECCI, Fang-Fang YIN, John KIRKPATRICK

Break
Out

13:00

LUNCH (exhibition area), VISIT OF THE EXHIBITION & POSTERS

13:15

B47

13:15 - 14:15

BRAINLAB SPONSORED SESSION

Novalis Circle Symposium: Clinical and Technical Innovations in Spine SRS Treatments

- Value of SRS over Conventional Fractionation for Bone Metastases. Yoshiya Josh YAMADA (USA)
- Commissioning and Clinical Implementation of Elements Spine SRS. Niko PAPANIKOLAOU (USA)
- Clinical Experience Utilizing Elements Spine SRS. Pablo CASTRO PENA (ARGENTINA)
- Review of 6D Setup and Monitoring for Spine SRS Treatment. Amol GHIA (USA)

Segovia
Break
Out

C47

13:15 - 14:15

ACCURAY SPONSORED SESSION

Cyberknife Radiosurgery for Intramedullary Arteriovenous Malformations

- Cyberknife Radiosurgery for Intramedullary Arteriovenous Malformations. Iris GIBBS (USA)

El Pardo I

14:30

A48

14:30 - 15:00

PANEL 1

PITUITARY TUMORS POINT - COUNTERPOINT

Moderator: Manoel PAIVA (BRAZIL)

- The Case for SRS. Bruce POLLOCK (USA)
- The Case for SRT. Daniel TRIFILETTI (USA)
- Panelist. Yoshiyasu IWAI (JAPAN), Alessandra GORGULHO (BRAZIL)

Segovia
Plenary

B48

14:30 - 15:00

PANEL 2

SPINE POINT - COUNTERPOINT

- The Case for SRS. Amol GHIA (USA)
- The Case for SRT. Yoshiya Josh YAMADA (USA)
- Panelist: Stereotactic radiosurgery for patients with asymptomatic spine metastasis: observation versus early intervention. Lily ANGELOV (USA), Moon-Jun SOHN (KOREA)
- Panelist: Stereotactic radiotherapy for intramedullary spinal lesions. Yoshimasa MORI (JAPAN), Samuel RYU (USA)

Segovia
Break
Out

C48



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Wednesday 12 June

14:30 - 15:30

ORAL SESSION PHYSICS #3

Moderators: **Batista DELANO (BRAZIL)**, **Steven GOETSCH (USA)**, **Uriel NOVICK (ARGENTINA)**

- #17885 - c48-1 C48-1 Commissioning tests on a Gamma Knife Icon using an RTSafe humanoid phantom. **Ian PADDICK (London, UK)**, **Ben EARNER**, **Thomas BURROWS**, **Alexis DIMITRIADIS**
- #16789 - c48-2 A high-precision, registration accuracy and full-system test for adaptive SRS. **Michael NIX**, **Gavin WRIGHT (Leeds, UK)**, **Peter BOWNES**, **Peter FALLOWS**, **Wayne SYKES**
- #16886 - c48-3 Interfractional Patient Motion and Adaptive Planning in Fractionated Gamma Knife Radiotherapy. **Florian STIELER (Mannheim, GERMANY)**, **Beate SCHWEIZER**, **Frederik WENZ**, **Frank Anton GIORDANO**, **Sabine MAI**
- #17708 - c48-4 Pre-treatment CBCT image verification for frame-based SRS on Gamma Knife Icon. **Gavin WRIGHT (Leeds, UK)**, **Peter FALLOW**, **Paul HATFIELD**, **Nick PHILLIPS**, **Peter BOWNES**
- #17754 - c48-5 Comparison of initial setup accuracy of the ExacTrac system using the mask-base fusion method or the localizer and target positioner method for intracranial frameless stereotactic radiosurgery. **Katrina WOODFORD (Melbourne, AUSTRALIA)**, **Gishan RATNAYAKE**, **Sashendra SENTHI**, **Jeremy D RUBEN**, **Vanessa PANETTIERI**
- #17766 - c48-6 Using Cone Beam Computer Tomography for stereotactic space verification within frame-based Leksell Gamma Knife Icon radiosurgery. **Valery KOSTJUCHENKO (Moscow, RUSSIA)**, **Irina BANNIKOVA**, **Alexandra DALECHINA**, **Andrey GOLANOV**, **Sergey BANOV**, **Angelika ARTEMENKOVA**, **Ivan OSINOV**
- #17796 - c48-7 Preliminary report of stereotactic radiotherapy using mask system of Leksell Gamma Knife Icon. **Takuya KAWABE (Kyoto, JAPAN)**, **Manabu SATO**

El Pardo I

15:00

A49

15:00 - 15:30

PANEL 3 VESTIBULAR SCHWANNOMA POINT-COUNTERPOINT

- **Earlier is Better.** **Marc LEVIVIER (SWITZERLAND)**
- **Watch and Wait.** **Oystein TVEITEN (NORWAY)**
- **Panelist.** **Gus BEUTE (THE NETHERLANDS)**, **Manoel PAIVA (BRAZIL)**, **Isaac YANG (USA)**

Segovia
Plenary

B49

15:00 - 15:30

PARALLEL STANDARDISATION IN RADIOSURGERY

Moderators: **Felipe ERLICH (BRAZIL)**, **Patrick HANSSENS (THE NETHERLANDS)**, **Crystian SARAIVA (BRAZIL)**

- **Contouring: How do we improve what we see?** **Caroline CHUNG (USA)**
- #17857 - b49-2 The impact of the variability of target delineation on the resulting treatment planning and dose distributions in GK radiosurgery - a multicentre analysis. **Helena SANDSTRÖM (Stockholm, SWEDEN)**, **Caroline CHUNG**, **Hidefumi JOKURA**, **Iuliana TOMA-DASU**
- **Variations in dose According to Planning Philosophy.** **Ian PADDICK (UK)**

Segovia
Break
Out

15:30

A491

15:30 - 16:20

ORAL SESSION GLIOMAS

Moderators: **Samuel CHAO (USA)**, **Christopher DUMA (USA)**, **Rodrigo GUIMARAES (BRAZIL)**

- #17650 - a491-2 Interplay of focal radiation therapy with targeted cellular therapy in glioblastoma. **Daniel TRIFILETTI (Jacksonville, USA)**, **Henry RUIZ-GARCIA**, **Rachel SARABIA ESTRADA**, **Hugo GUERRERO-CAZARES**, **Anna HARRELL**, **Sujan MONDAL**, **Keila ALVARADO-ESTRADA**, **Alfredo QUINONES-HINOJOSA**
- #17678 - a491-3 Bioengineering TRAIL for synergy with focal irradiation in glioblastoma. **Henry RUIZ-GARCIA**, **Natanael ZARCO**, **Virginea DE ARAUJO-FARIAS**, **Anna HARRELL**, **Hugo GUERRERO-CAZARES**, **Rachel SARABIA ESTRADA**, **Alfredo QUINONES-HINOJOSA**, **Daniel TRIFILETTI (Jacksonville, USA)**
- #17657 - a491-4 Stereotactic radiosurgery in combination with high-dose methotrexate as a first-line treatment for primary central nervous system lymphoma: a single institution experience. **Hao LONG (Guangzhou, CHINA)**
- #18092 - a491-6 Fractionated Radiosurgery plus Check Point Blockade is a Novel Paradigm for Treating

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Plenary



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Wednesday 12 June

Glioblastoma Multiforme. Samuel RYU (Stony Brook NY, USA), Alex STESSIN, Mariano CLAUSI, Timothy DUONG, Stella TSIRKA

B491

15:30 - 16:20

ORAL SESSION PITUITARY TUMORS

Moderators: Gustavo ADOLPHO (BRAZIL), Benjamin JONKER (AUSTRALIA), Manoel PAIVA (BRAZIL)

- #17659 - a491-1 Follow-up studies of Gamma Knife radiosurgery for non-functioning pituitary adenomas. Shibin SUN (Beijing, CHINA)
- #17665 - a491-2 Long-term outcome of gamma knife radiosurgery for patients with nonfunctioning pituitary adenomas. Yoshiyasu IWAJ (Osaka, JAPAN), Kenichi ISHIBASHI, Kazuhiro YAMANAKA
- #17697 - a491-3 Plasticity of the visual cortex to visual pathway injuries before and after SRS of suprasellar tumors. Herwin SPECKTER (Santo Domingo, DOMINICAN REPUBLIC), Jairo SANTANA, Jose BIDO, Giancarlo HERNANDEZ, Diones RIVERA, Luis SUAZO, Santiago VALENZUELA, Peter STOETER
- #17888 - a491-4 Gamma knife radiosurgery in patients with Crooke's cell adenoma. Zhiyuan XU (Charlottesville, USA), David SCHLESINGER, Sheehan JASON

Segovia
Break
Out

C491

15:30 - 16:20

ORAL SESSION VESTIBULAR SCHWANNOMA #2

Moderators: Yuri ANDRADE DE SOUZA (BRAZIL), Laura FARISELLI (ITALY), Randy JENSEN (USA)

- #17545 - c491-1 Efficiency Index comparison of linac-based and Gamma Knife-based radiosurgery of vestibular schwannoma treatment plans. Alexis DIMITRIADIS (London, UK), Hany ATTALLAH, Ronald BEANEY, Ian PADDICK
- #17691 - c491-2 Radiomic: prediction of acoustic neuroma response to the cyberknife treatment. Isa BOSSI ZANETTI (Milano, ITALY), Natascha Claudia D'AMICO, Enzo GROSSI, Giovanni VALBUSA, Deborah FAZZINI, Achille BERGANTIN, Irene REDAELLI, Anna Stefania MARTINOTTI, Cecilia IEZZONI, Giuseppe SCOTTI, Laura FARISELLI, Sergio PAPA, Giancarlo BELTRAMO
- #17854 - c491-3 Short-term volumetric tumor response as predictor for long-term tumor control after Gamma Knife radiosurgery of vestibular schwannoma. Patrick LANGENHUIZEN (Tilburg, THE NETHERLANDS), Svetlana ZINGER, Sieger LEENSTRA, Patrick HANSSENS, Peter DE WITH, Jeroen VERHEUL
- #17864 - c491-4 Role Of Bevacizumab As A Prophylactic And Rehabilitative Treatment Modality In Cases Of Sporadic And Syndromic Vestibular Schwannoma: Fifty Shades Of Grey. Manjul TRIPATHI (Chandigarh, INDIA)
- #17646 - c491-5 Observation or stereotactic radiosurgery for newly diagnosed vestibular schwannomas: A systematic review and meta-analysis. Janet LEON, Eric LEHRER, Jennifer PETERSON, Laura VALLOW, Henry RUIZ-GARCIA, Austin HADLEY, Steven HERCHKO, Larry LUNDY, Kaisorn CHAICHANA, Prasanna VIBHUTE, Jason SHEEHAN, Daniel TRIFILETTI (Jacksonville, USA)

El Pardo I

16:20

COFFEE BREAK - POSTERS & EXHIBITION

17:00

A493

17:00 - 17:45

ISRS GENERAL ASSEMBLY

Segovia
Plenary

C493

17:00 - 18:00

REDE D'OR SPONSORED SESSION

- Moderator. **Karina MOUTINHO (BRAZIL)**
- The Challenges of Radiosurgery in Brain Metastases. **Felipe ERLICH (BRAZIL)**
- The Challenges of Radiosurgery in treatment of oligometastatic disease. **Allisson Barcelos BORGES (BRAZIL)**
- The Oncologia D'Or Changing the Radiotherapy and Radiosurgery Scenario. **Karina MOUTINHO (BRAZIL)**

El Pardo I

20:00

CONGRESS DINNER - Casa Das Canoas, Tijuca Forest - (Upon Registration)



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Thursday 13 June

Thursday 13 June

07:30

A51

07:30 - 09:00

BREAKFAST SEMINAR EVERYTHING YOU NEED TO KNOW ABOUT IMAGING

Moderators: Xiao FUREN (TAIWAN), Paulo OPPITZ (BRAZIL), Georges SINCLAIR (UK)

- Novel MRI Sequences for SRS. Herwin SPECKTER (DOMINICAN REPUBLIC)
- Functional images for behavior disorders. Ricardo DE OLIVEIRA (BRAZIL)
- #17884 - a51-3 Integrated Stereotactic Diffusion Tensor Tractography for Gamma Knife Stereotactic Radiosurgery. Cormac GAVIN (London, UK), H. Ian SABIN
- Review of MR Pulse Sequences for SRS/SBRT: What Does Each Provide. Stephen HOLMES (USA)

Segovia
Plenary

B51

07:30 - 09:00

BREAKFAST SEMINAR ATYPICAL MENINGIOMAS

Moderators: Andrey GOLANOV (RUSSIA), Carlos MATTOZO (BRAZIL), Gelareh ZADEH (CANADA)

- #17896 - b51-1 A tentative strategy to management of atypical or WHO I meningiomas with high grade MIB-Ki67. Enrico MOTTI (Milano, ITALY), Enrico GIUGNI, Laura VENTRELLA, Federico RAMPA, Floranna MAURO
- Prognostic Tools. Isaac YANG (USA)
- Clinical Results. Randy JENSEN (USA)
- Improving the Treatment Paradigm of Atypical Meningiomas. Carlos MATTOZO (BRAZIL)

Segovia
Break
Out

C51

07:30 - 09:00

BREAKFAST SEMINAR HOT TOPICS

Moderators: Yuri ANDRADE DE SOUZA (BRAZIL), David JAFFRAY (CANADA), Christian VARGAS (PERU)

- The Prescription Dose Debate. Gennady NEYMAN (USA)
- The Case for Margins. Andrea GIRARDI (BELGIUM)
- The Case against Margins. David SCHLESINGER (USA)
- Dose fall-off characterization of isocentric and non-isocentric brain radiosurgery. David SCHLESINGER (USA)

El Pardo I

09:00

A52

09:00 - 09:40

PLENARY SESSION SPECIAL GUESTS LECTURE

Moderators: Antonio DE SALLES (BRAZIL), Ian PADDICK (UK)

- What does the market has to teach us? The experience of a MD, PhD who lead R&D at multibillion dollar company. Luiz Eugenio MELLO
- Challenges of Big Data and the Promises of Artificial Intelligence. David JAFFRAY (CANADA)

Segovia
Plenary

09:40

A53

09:40 - 10:00

SPECIAL LECTURE FABRIKANT LECTURE

Moderators: Antonio DE SALLES (BRAZIL), Ian PADDICK (UK)

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Plenary



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Thursday 13 June

B53

09:40 - 10:00

FLASH ORAL SESSION PHYSICS: HOT TOPICS

Moderators: **Guilherme BULGRAEN DOS SANTOS (BRAZIL)**, **Alexis DIMITRIADIS (UK)**, **Thiago SCHMELING (BRAZIL)**

- **#17801 - B53-1** Comparison of planning techniques for single-isocenter multiple-target stereotactic radiosurgery. **Andrew BALLELIO (Durham, USA)**, **Zhiheng WANG**
- **#17807 - B53-2** MRI only radiotherapy planning for brain metastases with Varian's HyperArc SRS system. **Peter HOUSTON**, **Westley INGRAM**, **Suzy CURRIE (Glasgow, UK)**
- **#17873 - B53-3** Radiosurgery of brain metastases using a linear accelerator (SRS-Cones vs. VMAT). **Andrea SCHMOELZER (Klagenfurt, AUSTRIA)**, **Andreas GMOSEK**, **Christine ORASCH**, **Wolfgang RAUNIK**

Segovia
Break
Out

10:00

COFFEE BREAK - POSTERS & EXHIBITION

10:30

A55

10:30 - 11:00

PLENARY SESSION CONGRESS SUMMARY I

Moderators: **Gilberto FONSECA (BRAZIL)**, **Randy JENSEN (USA)**, **Isaac YANG (USA)**

- **ISRS 2019 Review: Malignant Tumors.** **Samuel CHAO (USA)**
- **ISRS 2019 Review: Vascular Disorders.** **Gus BEUTE (THE NETHERLANDS)**
- **ISRS 2019 Review: Benign Tumors.** **Michael SCHULDER (USA)**

Segovia
Plenary

11:00

A56

11:00 - 11:40

PLENARY SESSION CONGRESS SUMMARY II

Moderators: **Laura FARISELLI (ITALY)**, **Alessandra GORGULHO (BRAZIL)**, **Jean SABATIER (FRANCE)**

- **ISRS 2019 Review: FUNCTIONAL RADIOSURGERY.** **Jean REGIS (FRANCE)**
- **ISRS 2019 Review: Immunotherapy + SRS.** **Jonathan KNISELY (USA)**
- **ISRS 2019 Review: Extracranial SRS/SRT.** **Rupesh KOTECHA (USA)**
- **ISRS 2019 Review: Physics.** **Steven GOETSCH (USA)**

Segovia
Plenary

11:40

A57

11:40 - 12:00

PLENARY SESSION SRS/SBRT CLINICAL TRIALS OVERVIEW

Moderator: **Dennis SHRIEVE (USA)**

- **International Radiosurgery Research Foundation (IRRF).** **Gene BARNETT (USA)**
- **Clinical Trials for Oligometastatic Disease: A Scientific Path Forward.** **Rupesh KOTECHA (USA)**

Segovia
Plenary

12:00

A58

12:00 - 13:05

CLOSING SESSION & AWARDS CEREMONY

Moderators: **Antonio DE SALLES (BRAZIL)**, **Laura FARISELLI (ITALY)**, **Ian PADDICK (UK)**

- **ISRS Educational Courses.** **Mikhail CHERNOV (JAPAN)**
- **ISRS: Past, Present and Future.** **Ian PADDICK (UK)**

Segovia
Plenary



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- **Young Investigator Award & Young Professional Award.** Laura FARISELLI (ITALY)
- **Best Poster Award.** Marc LEVIVIER (SWITZERLAND)
- **2021 Congress Introduction.** Matthew FOOTE (AUSTRALIA)
- **Final Remarks.** Antonio DE SALLES (BRAZIL)