出國報告(出國類別：開會)

# 第十九屆世界神經放射線醫學會議
# XIX Symposium Neuroradiologicum
# (SNR)

服務機關：國防醫學院三軍總醫院
姓名職稱：陳震宇、主治醫師科主任
派赴國家：義大利
報告日期：99 年 10 月 14 日
出國時間：99 年 10 月 3 日至 10 月 10 日

# 摘要

世界神經放射線醫學會自 1939 年第一屆在比利時安特沃普省(Antwerp)舉辦以來，今年已經將屆 71 年，早期舉辦時間不一，例如第二屆是十年後在荷蘭鹿特丹(Rotterdam)，隨後每隔三年在歐洲國家與北美舉辦，直到 1970 年開始每隔四年舉辦一次迄今。上一屆在澳洲阿得雷得舉行，本人有幸在過去六屆（共 24 年間）均有參加並發表論文。這一屆在義大利波羅納（Bologna）舉行，由於大會會長 Marco Leonardo 教授是本人的多年好友，邀請本人在大會主持會議，並發表論文（並不贊助旅費與報名費），所以個人在取得國科會旅費贊助與國防部公假同意後，便於 10 月 3 日出發經由法國轉義大利。

本次會議對台灣而言有兩重意義，第一是爭取 2018 年世界神經放射線醫學會在台灣舉辦，第二是在世界神經放射醫學會替台灣爭取一席理事席位(member at large)，這兩項任務均非常困難達成，但在中華民國神經放射線醫學會理事們的多年努力與奔走，兩項目標都完全達成，2018 年將是台灣神經放射界的重要年份。

本次在義大利舉行的醫學會議以神經放射診斷(neuroradiology)，頭頸放射診斷(head and neck radiology)與神經介入治療(interventional neuroradiology)爲主；會中探討幾個主題，包括腦瘤，影像研究（researches），腦病變 (encephalopthies)，先天性畸形(malformations)，腦動脈瘤的治療等。會議形式則以早上的教育演講(morning sessions)，大會演講(plenary lecture)邀請世界級的名師與會，研討會專題演講(symposium)，午餐演講(lunch symposium)由廠商贊助的教授演講最新顯影劑的運用，口頭論文發表(oral presentation of scientific paper) ，最後一項是壁報展覽(scientific posters)。此次會議的重要特色是提供足夠的口頭報告時間（10-20 分鐘）與討論時間（5 分鐘完整的討論）。本人即受邀在第一天報告有關中毒性腦病變(toxic encephalopathy)，並在先天性畸形會議擔任座長。 會議期間由 10 月 4 日至 9 日。本人於 10 月 3 日搭長榮班機經法國轉波羅納，並於會議結束後第二天搭機返國。

# 目次

# 本文

## 開會目的

世界神經放射線醫學（Symposium NeuroRadiologicum）SNR 在義大利波羅納（Bologna）舉行，是屬於神經影像世界級的會議，參加此會議可以與來自全世界上千位專家學者互相切磋討論影像診斷 (diagnosis) 與診療(intervention) 的最新發展。本次開會的另一個目的是協助台灣爭取 2018 年世界神經放射線醫學在台灣舉行。

## 過程

本人於 10 月 3 日搭乘長榮班機由桃園國際機場飛法國戴高樂國際機場再轉義大利波羅納，波羅納位於義大利半島中部，交通尚稱便利。本屆會場設於 Bologna congress center（會議中心），有專屬開會大會議廳，可以容納 1000 人以上，同時各種中型會議室與設備健全。大會在 10 月 4 日晚上舉行歡迎大會並邀請三位大師及講者作三場言講。10 月 5 日早上 8 點 30 分開始分 7 各演講廳舉辦七場 30 分鐘學術演講，以 CME 方式進行，均邀請世界名師授課，例如 5 日早上我參加的講者爲來自 Hopkin 的教授 David Yousem，演講題目是外耳與中耳的影像與病理。CME 完後緊接著開始早上的大會演講(plenary lecture)，不分演講廳，由大師給完整的當代最新研究，例如如何使用影像技術來追蹤細胞在腦內的移行(Cell tranking and future implications to neuroimaging)等。

每個早上的會議安排均相同（10 月 5 日至 9 日）下午的研討會與論文報告則分散在 7 各演講廳進行，會中探討幾個主題，包括腦瘤，影像研究（researches），腦病變 (encephalopthies)，先天性畸形 (malformations)，腦動脈瘤的治療，中風（stroke）等，每個時段分爲 1 小時至 1 各半小時不等.。我在第一天下午兩點半主持有關先天性畸形 (malformations)研討會，會中有來自英國的學者報告嬰幼兒腦病變影像流程策略，論文中詳細報告各種腦病變發生的原因與影像診斷的特色，該學者來自 Sheffield Teaching Hospital，該醫院提供了一個標準的流程圖包括 CT 和 MRI 使用時機，唯對於小兒腦超音波的運用比較缺乏，顯示該醫院對超音波比較沒有廣泛運用。另一位來自葡萄牙的專家報告少見的先天性眼囊性病變合併大腦胼肢體發育不全，這種所謂眼囊性病變是實上可以合併許多其他腦的先天性發育不全，值得大家討論。另外一篇值得報告的是來自土耳其的一位醫師報導使用磁振擴散張量白質纖維路徑圖(Diffusion tensor fiber tractography) 分析一種少見的前腦畸形(middle interhemispheric variant of holoprosencephaly)，這種新的方法可以證明這種畸形的不正常大腦半球白質聯繫，所形成的胼肢體發育不全，與位置改變的上縱束(superior longitudinal fascicle)。

我在第一天下午三點半在腦代謝研討會演講(symposium)報告研究心得，座長爲來自瑞典的 Rainninko 教授與義大利的 Ambrosetto 教授。我的主要研究議題是有關大腦毒性腦病變的影像發現，內容著重腦受傷機轉(excitotoxicity)。本人在過去三年與美國 NIDA (National Institute on Drug Abuse)合作研究台灣的搖頭丸（MDMA）腦病變(Ecstasy encephalopathy)，得到部分的 NIH 與國科會計畫支援，本次報告 31 位使用過搖頭丸受試者之腦代謝與擴散不等性與正常受試者的差別，並提出其影響運動路徑椎體外控制的可能機制。在台灣藥檢局的幫忙下，所有個案均有實驗室頭髮分析爲 MDMA 陽性，研究方法爲使用 3T 磁振造影作磁振頻譜(proton MR spectroscopy)與磁振擴散張量不等性分析(fractional anisotropy)。在我的研究結果中顯示，曾使用搖頭丸的病人組其基底核 myoinositol 含量增加，myoinositol 屬於醣類，在腦受傷膠質化(gliosis)後會在組織中呈現增加的現象，另外一個結果是病人組在丘腦的 fractional anisotropy 有增加的情形，這顯示 basal ganglion-thalamocortical pathway 受到阻斷，使的抑制性的訊息無法由基底核傳至丘腦，導致丘腦的 FA 增加，同時大腦皮質的刺激也增加，這是全球首次使用先進的磁振造影技術發現 MDMA 使用者的腦中路徑變化情形。

第二天主題由國際知名的教授群領軍演講影像解剖學(never without anatomy)和影像生理學(imaging of behaviour; Functional system)，和影像精神學(Imaging contribution to Psychiatry)，首先由 professor Rabischong 上場，其合作教授的鼎鼎有名的 professor Duverno. 結尾爲 professor Cvolani 報導 3T 功能性磁振造影在 emotion 情緒上的運用。綜而言之，今日的大會演講強調基礎解剖的重要，並將傳統上的解剖影像學運用的生理，精神與情緒的高皮質功能階層。下午仍然以研討會的方式在七間會議室（使用顏色命名）分別研討了中風，大腦動脈流，影像研究與失智。

第三與第四天的主題分別包括腦瘤的先進影像研究與治療和介入性神經放射學，其中在十月八日還加上中風的影像策略，強調 The brain is not the heart，大腦缺血時間有限，如何在最點時間決定缺血辦影區(ischemic penunmbra)並積極使用經靜脈（IV）或經動脈（IA）溶血栓治療，如此病人的預後才可能改善。本次會議對於電腦斷層技術與運用著墨較少(在十月七日下午有場精彩的研討會)，但在最新的磁振技術報導上比較強調。主持磁振新技術的是我當年在費城兒童醫院的老師 professor Robert Zimmerman，該研討會討論 T2 FLAIR, MR pH 值量測與磁振擴散張量影像在癲癇的運用。有關脊椎影像，雖然在其他骨關節相關影像會議也有類似議題，神經放射學會仍然慎重其是的安排兩場下午場研討會，分別在七號與八號。

最後一天十月九日只有半天的會議與閉幕式，由於本人已經定了中午荷蘭航空轉英國倫敦接長榮班機，必須提前去機場，所以沒有參加。本人於會議結束第當天早上束裝返國。

# 心得及建議

這一次四年一度的世界級國際性會議，主辦國義大利努力將節目安排的非常緊湊，由於主辦會長 professor Marco Leonardo 倡議接受所有論文與海報，並強調會議中必須有充足的時間討論，所以在會議中不斷的被問問題，是此次會議常見的現象。歐洲人的英文（除了英國人以外）各種發音都有，英語比較差的國家例如日本人在聽問題與回答問題上顯然比較吃虧。本人在醫學院每兩週有教授醫用英文 1 小時，英文發音與溝通已在水準之上，所以爲台灣增了不少光。英文教育在未來是全球化的趨勢，醫用英文應該在醫學院時期就要強調，這也是台灣醫學系評鑑（TMAC）的重點。

傳統上國際醫學會強調的是持續教育（CME）與研究論文發表，這一次大會也不例外，而且涵蓋更廣，從先進磁振技術到血管內治療。聽到歐洲大師級的演講，能將血管與腦的解剖，由動物胚胎發育演化的觀點娓娓道來，真是極大的享受。

台灣在這一次國際會議打敗勁敵日本神經放射線醫學會，獲得理事的投票通過 2018 年在台灣舉辦世界神經放射線醫學會，這是台灣影像界的大事，因爲這個醫學會議在過去 60 年的歷史上，除了在 1994 年曾於日本熊本舉辦過一次（本人也參加），從沒有在歐陸或北美以外的國家主辦過。台灣要掌握契機登上國際舞台，必須思考以下事項：

1. 用心栽培世界級的神經影像學者，以便在 2018 年發表大會演講，成爲台灣之光。
2. 提供充足的研究經費，在未來八年發表重量級的文章，彰顯台灣在世界神經影像的地位。
3. 對於下一代的年輕神經影像專家要努力提攜，讓他們能在 2018 年主持研討會，並發表論文。

台灣的影像醫學在健保制度的衝擊下（如急診報告，門診量大等），要提升研究水準有相當的難度，這些必須依賴中華民國神經放射線醫學會（本人曾擔任理事長）聯合各醫學中心放下身段，合縱聯合才有機會。

附件

1. 第十九屆世界神經放射線醫學會議議程
2. 論文口頭報告議程
3. 擔任座長議程

# SCIENTIFIC PROGRAM

## MONDAY, 4 OCTOBER 2010
*Plenary Hall Sessions*

17.00 -19.10 EUROPA AUDITORIUM

17.00-17.30 *Opening Ceremony*, Welcome to Bologna

| | |
|---|---|
| Paolo Ambrosetto | *Master of Ceremonies* |
| Dario Braga | *Prorettore, University of Bologna* |
| Francesco Ripa di Meana | *Chairman, City Hospitals of Bologna* |
| Massimo Annicchiarico | *Medical Director, City Hospitals of Bologna* |
| Cosma F. Andreula | *AINR President* |
| Luc Picard | *WFNRS President* |
| Targut Tali | XX *Symposium President* |
| Marco Leonardi | XIX *Symposium President* |

17.30-19.10 *Opening Session*
*Chairs*: M. Leonardi, O. Flodmark

17.30-18.10 Thoughts on the Architectonic Organization of the Brain Applied to Diagnostic and Interventional Neuroradiology
*A. Valavanis*

18.10-18.40 Time is Brain. Still a Valid Concept for the Treatment of Acute Stroke Patients?
*R. von Kummer*

18.40-19.10 Discovering Bologna, the Secret Charm of a City
*A. Ottani Cavina*

19.15-20.30 EXHIBITION HALL Level 1 & 2

*Welcome Cocktail Buffet*

# MORNING SEMINARS

The Morning Seminars are held in PARALLEL SESSIONS from Tuesday to Saturday, at 08.30-09.00 a.m.

## TUESDAY, 5 OCTOBER 2010

08.30-09.00

Advances with Flat Detector Imaging in the Angiography Suite
*M. Mawad* — EUROPA AUDITORIUM

Suspected Abusive Head Trauma in Small Children - The Role of Neuroradiology and of the Neuroradiologist
*O. Flodmark* — ITALY HALL

Living Matter Simulation, from Gene to Body
*K. Fukasaku* — BLUE HALL

Causes and Imaging of Non-Hypertensive, Non Traumatic Intracranial Haemorrhages
*M. Schumacher* — INDIGO HALL

Neuroradiology of Emergency
*L. Simonetti* — GREEN HALL

DTI of Brachial Plexus
*G. Pellicanò* — MAGENTA HALL

External and Middle Ear Imaging and Pathology
*D. Yousem* — VIOLET HALL

Functional Spine Imaging
*V. Haughton* — WHITE HALL 1

## WEDNESDAY, 6 OCTOBER 2010

08.30-09.00

Ophtalmic Artery: Its Variations and Dangerous Anastomosis
*I.S. Choi* — EUROPA AUDITORIUM

Cerebrovascular Pathologies in North Africa
*N. Boukhrissi* — ITALY HALL

Cerebral Palsy - Neuroradiology Reveals the Patho-Physiology behind the Lesion
*O. Flodmark* — BLUE HALL

Brain AVMs Understanding and Management
*A. Valavanis* — INDIGO HALL

The Stroke Unit: Angio-CT
*L. Simonetti* — GREEN HALL

Possibilities of Magnetic Resonance Imaging in Systemic Lupus Patients
*V. Peterová* — MAGENTA HALL

Orbital Trauma
*D. Yousem* — VIOLET HALL

Imaging of White Matter Diseases
*Y. Miki* — WHITE HALL 2

Biomechanics of the Spine
*R. Izzo* — YELLOW HALL

## THURSDAY, 7 OCTOBER 2010

08.30-09.00

Current Status of Carotid Stenting: The North American vs the European Perspective
*M. Mawad* — EUROPA AUDITORIUM

Phenotipic Identification of Neurological Malformations: Neuroradiology of Syndromes
*F Triulzi* — BLUE HALL

Arterial Wall Understanding and Therapeutic Consequences
*K. Ter Brugge* — INDIGO HALL

Stroke Imaging Standardization
*M. Sasaki* GREEN HALL

Multiple Sclerosis New Techniques
*M. Papathanasiou* MAGENTA HALL

Magnetic Resonance Diffusion Tensor Tractography in the Brain: Its Application and Limitation
*S. Aoki* VIOLET HALL

Cervical Disc Herniation and the Decompensate Cervical Spine
*M. Bortoluzzi* WHITE HALL 1

## FRIDAY, 8 OCTOBER 2010

08.30-09.00

Stroke Endovascular Therapy
*G. Schroth* EUROPA AUDITORIUM

What Should a Clinical Neuroradiologist Know about Anisotropy and Optical Imaging?
*Y. Ozsunar* ITALY HALL

Diffusion Tensor Imaging with Fiber Tractography: Assessment of Developing Brain and Aberrant Fiber Connections in CNS Anomalies
*S. Lee* BLUE HALL

Dural Fistulas: Clinico-Anatomical Study and Therapeutical Strategies
*A. Biondi* INDIGO HALL

Cerebral Microbleeds, Associated Conditions and Clinical Relevance
*H.R. Jäger* MAGENTA HALL

Spinal Instability
*J. Van Goethem* WHITE HALL 1

Spinal Biopsy: How and When
*G. Pellicanò* WHITE HALL 2

## SATURDAY, 9 OCTOBER 2010

08.30-09.00

How to Prepare a Lecture or Communication, How to Keep the Audience's Attention, How to Have a Message Received
*O. Flodmark* EUROPA AUDITORIUM

MRI Studies for Patients with Neurological Disorders and Implantable Cardiac Electronic Devices: Not What We Can Do - What We Should Do
*D. Goldsher* ITALY HALL

New View on the CSF Circulation: CSF Is Produced and Absorbed by Brain Capillaries
*D. Greitz* BLUE HALL

Recurrent Aneurysms, When to Treat?
*I.S. Choi* INDIGO HALL

Whole Brain Perfusion/Dynamic CTA in Neurovascular Workup
*S. Mukundan* GREEN HALL

Ultrasound in Neuroradiology
*J. Krejza* MAGENTA HALL

Considerations on Advanced MRI Techniques in Studying Brain Gliomas
*A. Bacci* VIOLET HALL

Spontaneous Intracranial Hypotension: Diagnosis and Percutaneous Therapy
M. Gallucci WHITE HALL 1

# TUESDAY, 5 OCTOBER 2010

*Plenary Hall Sessions*

09.15-12.30 — EUROPA AUDITORIUM

**Research in Neuroradiology**
*Chairs*: L. Picard, R. von Kummer

09.15-10.00 Technology Development in Neuroradiology
*S.W. Atlas*

10.00-10.30 MR Venographic Patterns in Chronic Conditions
*N.E. Van Vucht, J. Valk, P. Pevenage*

10.30-11.00 A Plea for New Regulations on Randomized Clinical Trials in Surgical Treatments
*E. Houdart*

11.00-11.30 *Discussion*

**Molecular Imaging and Nano-Technologies**

11.30-11.50 Molecular Imaging in Neuroradiology
*C. Zimmer*

11.50-12.10 Use of Nanoparticles for CNS Imaging and Therapy
*J. Provenzale*

12.10-12.30 Cell Tracking and Future Implications to Neuroimaging
*J. Frank*

12.30-12,45 *Discussion*

## PARALLEL SESSIONS

14.00-17.15 — Tuesday, 5 October 2010 — EUROPA AUDITORIUM

14.00-15.30 **Stroke 1**
*Chairs*: A. Fox, M. Bergui

14.00-14.30 25' Continuous Aspiration Thrombectomy (CAT) in Acute Ischemic Stroke Treatment and the Penumbra System 054
*R. von Kummer (disclosure; Lecture sponsored by a Grant Penumbra).*

14.30-14.45 10' Stroke in Young People: The Increasing Role of Advanced Images
*D. Santa Cruz, A. Ojeda, M. Nallino, A. Uriarte*

14.45-15.00 10' Superficial Temporal Artery Calcification in Patients with End-Stage Renal Disease: Association with Vascular Risk Factors and Ischemic Cerebrovascular Disease
*Z. Anwar, E. Zan, M. Carone, A. Ozturk, S.M. Sozio, D.M. Yousem*

15.00-15.15 10' Improved Detection of Hyperdense Middle Cerebral Artery Sign by Sagittal Reformations
*M. Kurotsuchi, H. Terada, N. Kitamura, T. Nakatsuka, H. Kudo, S. Kasuya, R. Kasai, H. Morita, T. Hasebe, T. Nagao, R Sakakibara*

15.15-15.30 10' ROI Measurement of Middle Cerebral Artery: Is It a Primary Sign of Infarction?
*G. Panagi, M. Kastania, I. Markaki, N. Stroumbakis, S. Fondara, E. Sgora, E. Panourgias*

15.30-17.15 **Stroke 2**
*Chairs*: H.H. Henkes, L. Castellan

15.30-15.45 12' Incremental Benefit of CT Perfusion for Certainty of Stroke Diagnosis over Unenhanced CT and CT Angiographic Source Images
*A.J. Fox, J. Hopyan, A. Ciarallo, D. Dowlatshahi, P. Howard, V. John, R. Yeung, L. Zhang, J. Kim, G. Macfarlane, Ty Lee, Ri Aviv*

15.45-16.00 12' Hemorrhagic Transformation of Ischemic Stroke: Perfusion CT-Based Prediction
*A.J. Fox, R.I. Aviv, C.D. D'esterre, B.D. Murphy, J.J. Hopyan, B. Buck, V. Li, L. Zhang, S.P. Symons, T.Y. Lee*

16.00-16.15 12' Post Contrast CT Extravasation Is Associated with Hematoma Expansion in CTA Spot Negative Patients
*A.J. Fox, A. Ederies, A. Demchuk, T. Chia, D.J. Gladstone, D. Dowlatshahi, G. Bendavit, K. Wong, S.P. Symons, R.I. Aviv*

16.15-16.30 10' CT Perfusion and CT Angiography in Thrombolityc Therapy
*K. Pozsar, G. Szilagyi, G. Forrai*

16.30-16.45 10' Relation between Site of Occlusion and Outcome of Intravenous Thrombolysis in a Cohort of Patients Studied with CT Angiography
*C. Barbara, A. Stafa, G. Procaccianti, L. Simonetti, M. Leonardi*

16.45-17.00 10' Timing of CT Perfusion Abnormalities within and around Spontaneous Intracerebral Hemorrhage during the Transition from Acute to Subacute Phases
*E. Fainardi, V. Ramponi, G. Roversi, M. Borrelli, A. Saletti, A. Bernardoni, S. Sarubbo, C. Tamburino, F. Di Biase, A. De Vito, M. Cavallo, S. Ceruti, R. Tamarozzi*

17.00-17.15 10' New Markers of Prognosis in Stroke-Evaluation of Cerebral Perfusion by Computed Tomography
*M. Cordeiro, C. Nunes, G. Cordeiro, C. Moura, F.C. Alves*

14.30-17.15 Tuesday, 5 October 2010 ITALY HALL

14.30-16.00 **Aneurysms 1**
*Chairs*: A. Mironov, N. Kocer

14.30-14.45 14' Usefulness of 320-Row Area Detector CT, Focusing on the Detection of Aneurysmal Pulsation
*K. Katada, M. Hayakawa, K. Murayama*

14.45-15.00 10' Intracranial Vascular Fenestrations and Their Association with Aneurysms
*R. Sattenberg, A. Arauz, S. Arora, J. Heidenreich , R. Downs*

15.00-15.15 10' Assessing the Severity of Vasospasm after SAH using Dyna-CT to Measure Cerebral Blood Volume: Feasible Method for the Neuro-ITU Patient
*M. Kamran, Y. Deuerling-Zheng, I. Grunwald, J. Yarnold, J.V. Byrne*

15.15-15.30 10' Effect of Perianeurysmal Environment on Intraaneurysmal Flow
*I. Szikora, A. Ugron, M. Marosfoi, ZS. Berentei, GY. Paal*

15.30-15.45 10' Comparison of CT Angiography with Digital Subtraction Angiography in Small Cerebral Aneurysms
*N. Khandelwal, S. Dhana Rekha, V. Gupta, S.K. Gupta, P. Singh, S.N. Mathuria*

15.45-16.00 10' 'De Novo' Aneurysms: Radiologic and Clinical Analysis of Our Ten Years Experience
*G. Di Lella, P. Colelli, M. Rollo, B. Tirpakova, C. Colosimo*

16.00-17.00 **Aneurysms 2**
*Chairs*: D.H. Hwang, E. Cotroneo

16.00-16.15 10' MR Angiography Follow-Up 5 Years after Coiling: Formation of De Novo Aneurysms and Growth of Untreated Aneurysms
*S. Ferns, M.E. Sprengers, G.A. De Kort, B.K. Velthuis, R. Van Den Berg, W. Van Zwam, M. Sluzewski, G.J. Rinkel, W.J.J. Van Rooij, C.B. Majoie*

16.15-16.30 10' Prevalence of Asymptomatic Cerebral Aneurism in Acromegalic Patients
*R. Manara, V. Citton, S. Rizzati, I. Albano, A. Rebellato, E. Zanchetta, A. Della Puppa, G. Pavesi, G. Rolma, S. Dal Pos, C. Carollo, N. Sicolo, P. Maffei, C. Scaroni, C. Martini*

16.30-16.45 10' Atypical Ischemic Lesions in Patients with SAH Apart from Vasospasm
*M. Wagner, P. Steinbeis, E. Güresir, S. Weidauer, J. Berkefeld*

16.45-17.00 10' Venous Hypertension and Intracranial Aneurysmal Rupture
*F. Tsai*

14.30-17.30 Tuesday, 5 October 2010 BLUE HALL

14.30-15.15 **Research 1**
*Chairs*: Z. Kulcsar, A. Norbash

14.30-14.45 14' Paradigm Shift for the Management of Brain Aneurysms
*A. Takahashi*

14.45-15.00 14' Reflections on Therapeutic Approaches
*K. Murphy*

15.00-15.15 14' New Endovascular Method for Transvascular Exit of Arteries or Veins by Catheter Technique the Extroducer
*J. Lundberg, S. Jonsson, S. Holmin*

15.15 - 16.30 **Research 2**
*Chairs*: W. Taki, A. Norbash, D. Prosetti

15.15-15.30 14' A Live Swine Model for Development of Techniques Using Percutaneous Intraspinal Navigation
*P. Purdy, B. Welch, R. Novakovic, S. Miller, T. Fujimoto*

15.30-15.45 10' Effect of Olmesartan and Pravastatin on Experimental Cerebral Aneurysms in Rats
*N. Kimura, H. Shimizu, H. Eldawoody, T. Nakayama, A. Saito, A. Takahashi*

15.45-16.00 10' Creation of Surgical Terminal Aneurysms with Arteriovenous Fistula in Rabbits
*Y. Ding, D. Dai, R. Kadirval, D. Lewis, D. Kallmes*

16.00-16.15 10' Animal Experimental Application of a New Self-Expanding Stent in the Endovascular Therapy of Side-Wall Aneurysms. 6 Month Results
*A. Keuler, F. Requejo, K. Foerster, W. Mailaender, M. Schumacher*

16.15-16.30 10' The Role of Hemodynamics in the Initiation of Cerebral Aneurysm Formation: A Clinical and Computational Study
*Z. Kulcsar, A. Ugron, M. Marosfoi, Z. Berentei, G. Paal, I. Szikora*

16.30-17.30 **Research 3**
*Chairs*: M. Mawad, L. Pierot

16.30-16.45 10' "How Healthy Is Interventional Neuroradiology?" The Heart Rate of a Neuro-Interventionalist during Procedures
*P. Brouwer*

16.45-17.00 14' Simulation & Robotics for Neurointervention
*M. Negoro, S. Ikeda, C.P. Tercello, F. Arai, T. Fukuda, K. Fukasaku, I. Takahashi, M. Hayakawa*

17.00-17.15 14' Computational Simulation of Flow at Bleb of Aneurysms and Confirmation by Clinical Angiogram
*K. Fukasaku, M. Negoro, Y. Konishi, S. Noda, R. Himeno, H. Yokota, I. Nara, K. Fukui, Y. Shiokawa*

17.15-17.30 14' Intra-Arterial Contrast Injections for Measurement of Regional CBV Using C-Arm CT
*B. Aagaard-Kienitz, R. Yasuda, K. Pulfer, D. Consigny, K. Royalty, C. Strother*

14.30-17.15 Tuesday, 5 October 2010 **INDIGO HALL**

14.30-15.45 **Spinal Cord AVFs 1**
*Chairs*: A. Thron, F. Causin

14.30-15.00 25' Spinal Cord Arteriovenous Shunts of the Ventral (Anterior) Sulcus: Anatomical, Clinical and Therapeutic Considerations
*G. Rodesch, S. Kominami, A. Krajina, R. Sellar, M. Soderman, R. Vandenberg, S. Condette Auliac*

15.00-15.15 10' Role of Contrast-Enhanced MR Angiography in Spinal Dural Arterio-Venous Fistula
*F. Toni, L. Cirillo, A.F. Marliani, L. Albini Riccioli, M. LeonardI*

15.15-15.30 10' Role of 3D Angiogram in Embolization of Spinal Dural Arteriovenous Fistula
*P. Lv, D.C. Suh*

15.30-15.45 10' Endovascular Treatment of Cervical Giant Perimedullary Arteriovenous Fistulas: Transarterial Approach, Transvenous Approach and Direct Percutaneous Puncture of the Venous Pouch
*A. Casasco, L. Guimaraens, C. Senturk, E. Cotroneo, R. Gigli, T. Sola, E. Vivas*

15.45-17.15 **Spinal Cord AVFs 2**
*Chairs*: G. Rodesch, L. Biscoito

15.45-16.00 10' Neurological Improvement Pattern after Embolization and/or Surgery of Spinal Dural Arteriovenous Fistula
*D.C. Suh, Jw Park, C-S Lee, J-Y Yoo, K-K Kim, SR Jeon, SW Roh, SC Rhim*

16.00-16.15 10' Diagnosis and Endovascular Treatment of Spinal Arteriovenous Malformations Supplied by Intercostal and Lumbar Arteries
*T. Tissen, S. Yakovlev, E. Bukharin, A. Bocharov, S. Arustamyan, E. Vinogradov, B. Tissen*

16.15-16.30 10' Benefits of Balanced Action and Watchful Waiting during Coiling of a Fistulous Perimedullary AVM
*J. Zajaczek, H. Hartmann, E.J. Hermann, J.K. Krauss, H. Lanfermann, B. Haubitz*

16.30-16.45 10' Endovascular Occlussion of Spinal Cord Arteriovenous Malformations with Blood Supplied by Branches of the Subclavian Arteries
*T. Tissen, S. Yakovlev, E. Bukharin, A Bocharov, S Arustamyan, B Tissen*

16.45-17.00 10' Embolization of Spinal Cord Arteriovenous Malformations through the Anterior Spinal Artery
*S. Kominami, M Suzuki, S Kobayashi, A Teramoto*

17.00-17.15 10' Multiple Hole Fistula of Spinal Cord in a Male Child
*A. Karapurkar, N. Aditya, R. Singh, I Vishwanathan*

14.30-17.30 Tuesday, 5 October 2010 **GREEN HALL**

14.30-16.15 **fMRI 1**
*Chairs*: M. Sasaki, D. Seixas

14.30-15.00 25' New Perspectives in Contrast Enhanced MRI and MRA of the Brain
*M. Essig (disclosure: Lecture sponsored by a Grant of Bayer Schering Pharma)*

15.00-15.15 10' Diffusion Tensor Imaging in Movement Disorders: Review of Major Patterns and Correlation with Normal Brainstem/Cerebellar White Matter
*S. Reimão, C. Morgado, L. Neto, J. Campos*

15.15-15.30 10' Functional Organization of the Primary Motor Cortex in Congenital Paraplegia
*C. Stippich, J. Reinhardt, M. Akbar*

15.30-15.45 10' Cortical Adaptation to Visual Blurring: A 3T Functional MRI Comparison between Corrected Myopia and Emmetropia
*T. Nguyen, J.L. Stievenart, C. Habas, A. Abanou*

15.45-16.00 10' Challenges for Non-Invasive Brain Perfusion Quantification Using ASL
*I. Sousa, J. Sanches, M. Pimentel, P. Vilela, P. Figueiredo*

16.00-16.15 10' Quantification of Perfusion Changes during a Motor Task Using ASL
*P. Vilela, M. Pimentel, I. Sousa, P. Figueiredo*

16.15-17.30 **fMRI 2**
*Chairs*: G. Pellicanò, V. Peterová

16.15-16.30 10' Distinct Cerebellar Contributions to Intrinsic Connectivity Networks
*C. Habas, N. Kamdar, D. Nguyen, K. Prater, C.F. Beckmann, V. Menon, M.D. Greicius*

16.30-16.45 10' Functional Connectivity and Coactivation of the Nucleus Accumbens: A Combined Functional Connectivity and Structure-Based Meta-Analysis
*F. Cauda, F. D'Agata, A.E. Apanna, K. Sacco, G.C. Geminiani, S. Duca*

16.45-17.00 10' Neuronal Basis of Haedonic Appraisal in Early Onset Schizophrenia: fMRI Investigation
*A. Catalucci, M. Mazza, E. Ciutti, M. Caulo, R. Pollice, R. Roncone, M. Casacchia, F. Di Salle, M. Gallucci*

17.00-17.15 10' Neuropsychiatric Lupus Patients and Advanced MR Sequences
*V. Minarech, K. Peterová, J. Krásenský, Z. Masín, L. Podrazilová, M. Olejárová, M. Klembárová, A. Navrátilová, J. Závada, Z. Potysová, S.S. Pesicková, M. Kron, V. Ecerová, V. Peterová*

17.15-17.30 10' Magnetic Resonance Imaging in Young Patients with Neuropsychiatric Systemic Lupus Erythamatosus: A Case Series
*V. Gupta, H.A. Mumtaaz, P. Singh, S. Verma, S. Singh, N. Khandelwal*

14.30-17.30 Tuesday, 5 October 2010 **MAGENTA HALL**

14.30-15.15 **Encephalopathies 1**
*Chairs*: J. Valk, F. Pizzini

14.30-15.00 25' Noninvasive Measuring Brain pH and Biomarker of Brain Tissue Using Mr Technology
*R.H. Wu, Z.W. Shen, Q.C. Qiu*

15.00-15.15 14' Stem Cell Imaging in Neuroradiology: Relevance for Translational Medicine
*L. S. Politi*

15.15-16.30 **Encephalopathies 2**
*Chairs*: A. Rovira, T. Yoshiura

15.15-15.30 10' Functional Topography of the Corpus Callosum as Depicted by fMRI and DTI Investigations
*G. Polonara, M. Fabri, G. Mascioli, G.L. Cavola, A. Paggi, T. Manzoni, U. Salvolini*

15.30-15.45 10' A Novel Tract Imaging of the Brain Stem Using Phase Difference Enhanced Imaging Technique: Normal Anatomy and Multiple System Atrophy
*J. Moriya, S. Kakeda, J. Nishimura, T. Yoneda, T. Sato, Y. Hiai, N. Ohnari, K. Okada, H. Hayashi, E. Matsusue, Y. Korogi*

15.45-16.00 10' The Anatomy of the Medial Lemniscus within the Brainstem Demonstrated at 3 Tesla with High Resolution Fat Suppressed T1-Weighted Images and Diffusion Tensor Imaging
*C. Romanowski, M. Hutton, J. Rowe, J. Yianni, D. Warren, J. Bigley, I.D. Wilkinson*

16.00-16.15 10' Anomalies of Major Brainstem White Matter Tracts by Diffusion Tensor Imaging
*N. Rollins, M. Morriss, T. Booth, D. Veltkamp, K. Koral, Z. Wang*

16.15-16.30 10' Carotid Artery Wall Thickness and Leukoaraiosis. Evaluation Using Multi-Detector Row CT Angiography
*L. Saba, G. Mallarini*

16.30-17.30 **Encephalopathies 3**
*Chairs*: S. Mukundan, N. Canto Moreira

16.30-16.45 14' Is Multiple Sclerosis a Grey Matter Disease?
*F. Barkhof, M. Wattjess*

16.45-17.00 10' Magnetic Resonance Imaging Characteristics Associated with Aquaporin 4 Antibodies in Neuromyelitis Optica and Neuromyelitis Optica Spectrum Disorders
*J. Downer , M. Leite , R. Carter , W. Küker , J. Palace, G. Quaghebeur*

17.00-17.15 10' MR Imaging in Multiple Sclerosis: the Accuracy of Dual Inversion Recovery at 3 Tesla and the Potential for Single Sequence Imaging
*M. Khangure, S.R. Khangure*

17.15-17.30 10' Differentiation of Acute and Chronic Demyelinating Plaques in Patients with Multiple Sclerosis (MS): Diffusion Tensor Imaging (DTI) Study
*T. Nehrych , Z. Rozhkova , A. Khoma, O. Dolia*

14.30-17.15 Tuesday, 5 October 2010 VIOLET HALL

14.30-15.30 **Malformations 1**
*Chairs*: C.Y.S. Chen, C. Carollo

14.30-15.00 25' The Encephalopathic Child
*O. Abeyakoon, D. Connolly*

15.00-15.15 10' Congenital Cystic Eye with Corpus Callosum Hypoplasia
*P. Soares Pinto, V. Ribeiro, B. Moreira*

15.15-15.30 10' Evaluation of Middle Interhemispheric Variant of Holoprosencephaly (Syntelencephaly) by Diffusion Tensor Imaging and Fiber Tractography
*E. Zan, E. Pasaoglu, N. Bulakbasi*

15.30-17.15 **Metabolic Pathology 1**
*Chairs*: R. Raininko, P. Ambrosetto

15.30-15.45 10' Neuroimaging of Toxic Encephalopathy
*C. Chen*

15.45-16.00 10' Efficacy and Safety of Iron Chelating Agent Deferiprone in Patients with Pantothenate Kinase Associated Neurodegeneration (PKAN)
*L. Chiapparini, D. Aquino, G. Zorzi, A. Solari, A. Piga, E. Bertini, B. Garavaglia, F. Zibordi, M. Savoiardo, M.G. Bruzzone, N. Nardocci*

16.00-16.15 10' Radiological Features of Cask Mutations
*S. Yuasa, J. Takanashi, H. Arai, S. Hayashi, J. Inazawa, N. Okamoto, A.J. Barkovich*

16.15-16.30 10' Diffusion Weighted MRI Imaging and MR Spectroscopy Findings in Neonatal Nonketotic Hyperglycinemia
*K. Tlili-Graiess, H. Moulahi, W. Gamaoun, S. Nouri, N. Mama, N. Mahdhaoui, H. Jemni, H. Seboui*

16.30-16.45 10' Diffuse Periventricular Leukomalacia in Preterm Children: Assessment of Grey Matter Changes by MRI
*L. Tzarouchi, A. Zikou, A. Drougia, L. Astrakas, M. Papastefanaki, V. Xydis, S. Andronikou, M. Argyropoulou*

16.45-17.00 10' Our Experience with the MR Diagnostics of Late Infantile Form of Neuronal Ceroid Lipofuscinosis
*I. Zsigmond, A. Tegzes, P. Barsi*

17.00-17.15 10' Infantile Neuroaxonal Dystrophy (INAD): Contribute of MRI Patterns Correlate to Clinical Findings in Differential Diagnosis
*B. Bernardi, A. Pini, E. Franzoni, G. Gobbi, M. Santucci, A. Parmeggiani, G. Cenacchi, B. Garavaglia, V. Ucchino, C. Garrone, A Guerra, C. Barzaghi, P. Preda*

14.30-17.30 Tuesday, 5 October 2010 WHITE HALL 1

14.30-16.00 **Brain Tumors 1**
*Chairs*: D. Montanaro, M. Uusväli

14.30-15.00 25' Advances in MR Imaging and New Analysing Methods to Assess Treatment Response in Brain Tumour
*P. Maly Sundgren, C. Galban, C. Tsien, D. Hamstra, C.R. Meyer, B.D. Ross, T.L. Chenevert*

15.00-15.15 10' Correlation of MRI and Various Perfusion Parameters with Histopathological Grading of Tumours
*S. Soneji, R. Bhade, R. Gandhi, R. Kakkar, S.B. Desai*

15.15-15.30 10' Impairment of Default-Mode Network Connectivity in Patients with Cerebral Glioma
*R. Esposito, D. Mantini, G.L. Romani, A. Tartaro, M. Caulo*

15.30-15.45 10' Reorganization of Functional Connectivity MRI in Patients with Brain Tumors
*C. Briganti, E. Pravata', D. Mantini, C. Sestieri, A. Tartaro, M. Caulo*

15.45-16.00 10' Role of Diffusion Tensor MR Tractography in Predicting Supratentorial Gliomas Resectability
*A. Castellano, C. Michelozzi, L. Bello, A. Iadanza, G. Scotti, A. Falini*

16.00-17.30 **Brain Tumors 2**
*Chairs*: D. Yousem, Y. Özsunar Dayanir

16.00-16.15 14' Multimodal MRI and Overall Diagnostic Accuracy in Non-Enhancing Brain Gliomas
*S Gaudino, Vs Lorusso, M. Caulo, A. Tartaro, T. Tartaglione, G. Di Lella, C. Colosimo*

16.15-16.30 10' Contribution of Diffusion Weighted MRI in the Differentiation of Intracranial Meningiomas and Correlation with Immunohistochemistry
*L. Castelletti, M. Bendini, L. Saitta, L. Bonzano, F. Di Paola, L. Castellan*

16.30-16.45 10' Intratumoral Topography of CNS Gliomas Revealed by Diffusion Tensor Imaging: Correlations with Tumor Volume and Grade
*A. Jakab, P. Molnár, M. Emri, E. Berényi*

16.45-17.00 10' Analysis of Brain Tumors and Metastases by Quantitative MT Imaging with bSSFP: Initial Experiences
*M. Garcia, M. Gloor, O. Bieri, F. Jax, K. Scheffler, CH. Stippich*

17.00-17.15 10' New Distant Tumors in Patients Successfully Treated for Glioblastoma Multiformis: 10 Years Experience
*G. Di Lella, C. Falcone, E. Pravatà, S. Gaudino, A. M. Costantini, C. Colosimo*

17.15-17.30 10' Comparison of 1.5 and 3.0 T Diffusion-Weighted MR Imaging for Brain Tumors
*Z. Merhemic, F. Gavrankapetanovic, N. Bilalovic, M. Niksic, Z. Kadenic, E. Avdagic, M.M. Thurnher*

14.30-17.45 Tuesday, 5 October 2010 WHITE HALL 2

14.30-16.30 **Management 1**
*Chairs*: B. Gomez Anson, D. Goettmann

14.30-14.45 14' Teleradiology in Neuroradiology: Present and Future
*B. Gomez Anson, L. van den Hauwe, R. Jager, C. Schorlemmer, Y. Vives*

14.45-15.00 10' Teleradiology in Neuroradiology - Considerations about and Implications for Quality of Service
*D. Goettmann*

15.00-15.10 10' Exam Portability in Europe: First Steps of a Global Project
*A. Fernandes, T. Baptista*

15.15-15.30 10' Developing Outcome Prediction Models for Acute Intracerebral Hemorrhage Patients: Evaluation of a Support Vector Machine Based Method
*A. Jakab, L. Lánczi, L. Csiba, I. Széll, E. Berényi*

15.30-15.45 10' Comparaison of Magnetic Resonance Imaging Findings with Complaints and Physical Examinations of the Patients
*A. Arslanoglu, H. Celik*

15.45-16.00 10' Patient Records, Datamining and Best Practice - How Much Information Is Enough, and How Do We Get It?
*P. Summers, P. Bijlenga, J. Byrne, J. Macho, S. Coley, T. Sola, T Doczi, J. Van Der Lei, D. Rufenacht*

16.00-16.15 10' Japanese Society of Neuro-Endovascular Therapy (JSNET) Specialist Qualification System. Eight Years Examination Experience
*T. Hyogo, W. Taki, Jsnet Sqc Board Members*

16.15-16.30 10' Cost-Effectiveness in Endovascular Treatment of Wide Necked Aneurysms: Comparison between Stent Assisted Coiling vs. Flow Diverter Stents
*L. Lemme-Plaghos, W. Casagrande, S. Garbugino, D. Avattaneo*

16.30-17.45 **Contrast Media 1**
*Chairs*: E.M. Larsson, B.G. Ziedses des Plantes

16.30-16.45 10' Preliminary Experience with Gadobenate Dimeglumine for High-Resolution Steady State MR Angiography of the Carotid Arteries
*M. Anzidei, A. Napoli, B. Cavallo Marincola, M. Kirchin, C. Neira, D. Geiger, F. Zaccagna, C. Catalano, R. Passariello*

16.45-17.00 10' Pharmacokinetics and Safety of Gadobenate Dimeglumine (Multihance®) in Patients from 2 to 5 years of Age undergoing Clinically Indicated MRI of the CNS
*G. Pirovano, M. Pasowicz, M.A. Kirchin, N. Shen, J. Parker, A. Spinazzi*

17.00-17.15 10' Contrast-Enhanced Carotid MRA in the NSF Era: Possible Contrast Dose Reduction with a High Relaxivity Contrast Agent
*M. Kuhn, B. Young, A. Kuhn*

17.15-17.30 10' Impact of Contrast Media Concentration and kVp Settings on Image Quality in CT Angiography of the Intracranial Vessels
*B. Ramgren, R. Siemund*

17.30-17.45 10' Superficial Siderosis of the Central Nervous System
*J. Nunes, B.C. Gomes, R. Veiga, R.P. Pais, M.T. Garcia*

14.30-17.30 Tuesday, 5 October 2010 YELLOW HALL

14.30-16.30 **Spine 1**
*Chairs*: R. Cartolari, A. Stafa

14.30-14.45 14' The Dehydrated or Dark Disk: Imaging Features and Morphological, Biochemical and Biomechanical Features
*V. Haughton*

14.45-15.00 10' MR Myelography in Patients with Lumbosacral Radicular Pain: Diagnostic Value and Technique
*J. Wilmink, J.T. Wilmink*

15.00-15.15 10' The Axial Loaded Imaging of the Lumbar Spine 18 Years After. Is It Still a Valuable Examination?
*R. Cartolari*

15.15-15.30 10' MRI Imaging of the Lumbar Spine Using a Low-Field Dedicated Tilting Scanner: Computer Assisted Morphometric Evaluation of Positional Changes
*C. Mollica, F. Ferrando, R. Spagnuolo, L. Satragno, M. Salvatore, A. Brunetti*

15.30-15.45 10' Magnetic Resonance Imaging of Spondylolysis and Spondylolisthesis
*P. Niggemann, J. Kuchta, H.K. Beyer, D. Grosskurth, K.S. Delank*

15.45-16.00 10' Evaluating Marrow Signal Intensity: Comparison of T1 Flair and T1 FSE Images
*S. Destian, A. Allmendinger*

16.00-16.15 10' MR Findings of Seronegative Spondyloarthritis. Fat Saturation Sequences and Contrast Medium
*P. D'Aprile, A. Tarantino, C. Dell'Atti*

16.15-16.30 10' Extra-Spinal Cord Pyogenic Infections: Neuroimaging Findings in Four Spinal Epidural Abscesses and One Spinal Subdural Empyema
*I. Cravo, G. Zuccoli, T. Palma, S. Costa, R. Simões, F. Coelho, C. Romero, J. Cabral*

16.30-17.30 **Spine 2**
*Chairs*: V. Haughton, K. Murphy

16.30-16.45 10' Clinico-Radiological Profile of Spinal Cord Multiple Sclerosis
*G. Roberson, A. Bag, B. Patel*

16.45-17.00 10' Spinal Cord MR in Multiple Sclerosis and Other Idiopathic Demyelinating Diseases
*A. Rovira, C. Auger*

17.00-17.15 10' The Study of the Spinal Cord White Matter with a 3-Tesla Device
*L. Albini Riccioli, A.F. Marliani, F. Toni, M. Leonardi*

17.15-17.30 10' Diffusion Tensor Tractography of the Spinal Cord; Preliminary Results in a Serie of 18 Patients at 1.5 T
*F. Gelbert, A. Henon, J.B. Gayet, N. Bouzar, M. Perrin, L. Balabaud, C. Mazel, R. Palau*

# WEDNESDAY, 6 OCTOBER 2010

*Plenary Hall Sessions*

09.15-13.00 **EUROPA AUDITORIUM**

09.15-10.55 **Never without Anatomy!**
*Chairs*: T. Tali, S. Kollias

09.15-09.55 Never without Anatomy! The Three Original Features of Carotid and Vertebral System
*P. Rabischong, H. Duvernoy*

09.55-10.15 Imaging Anatomy of the Basal Perforating Arteries of the Brain: Microangiography and MR Imaging
*S. Takahashi*

10.15-10.35 Neuroanatomy of Visual Pathway and Brain Stem: Demonstration with Modern MR Technology
*Y. Korogi, S. Kakeda, T. Yoneda*

10.35-10.55 Cranial Nerves: Neuroanatomy and Pathologies
*K. Karaali*

11.00-12.20 **And Physiology!**
*Chairs*: J. Ruscalleda Nadal, R. Agati

11.00-11.20 Imaging of Behaviour
*E. Gonzalez-Toledo*

11.20-11.40 Functional Magnetic Resonance Imaging (fMRI) of the Olfactory System
*D. Montanaro, F. Frijia, C. Anselmi, N. Vanello, H. Hlavata, F. Vanni, A. Bonocore, C. Maremmani, S. De Cori, F. Lombardo, R. Canapicchi*

11.40-12.00 Imaging Contribution to Psychiatry
*E. Gonzalez-Toledo*

12.00-12.20 fMRI of Emotion: Some Clinical Applications at 3 Tesla
*D. Cevolani*

12.20-13.00 *Chair*: J. Walecki

The virtual Atlas of Brain Vascular Anatomy
*W.L. Nowinski*

## PARALLEL SESSIONS

14.30-17.00 Wednesday, 6 October 2010 **EUROPA AUDITORIUM**

14.30-16.00 **Stroke 3**
*Chairs*: V. Gupta, J. Wilmink

14.30-15.00 25' 4D-DSA and 4D (Omni Plane) Fluoroscopy: New Techniques for the Angiography Suite
*C. Strother, E. Oberstar, B. Davis, K. Pulfer, C. Mistretta*

15.00-15.30 25' Quantitative Analysis of Brain Metabolite Concentrations Using MRS in Acute Hypoxia Ischemic Encephalopathy
*R. Wu, Y. Xiao*

15.30-15.45 10' Comparing b 1000 and b 2000 Diffusion Imaging in Acute Stroke at 3T MRI
*A. David, C. Billon-Grand, B. Ibanez, C. Cattin, J.F. Bonneville*

15.45-16.00 10' Ischemic Penumbra in Acute MCA Stroke: Comparison of the PWI-DWI Mismatch and the ADC-based Neurinfarct Methods
*A. Drier, T. Tourdias, Y. Attal, I. Sibon, G. Mutlu, S. Lehericy, Y. Samson, J. Chiras, D. Dormont, J.M. Orgogozo, V. Dousset, C. Rosso*

16.00-17.00 **Stroke 4**
*Chairs*: S. Gaikwad, M. Musacchio

16.00-16.30 25' Clinical Application of Whole Brain CT Perfusion on 320 Slice CT Scanner
*J. Shankar*

16.30-16.45 10' 3.0T MR Imaging of the Cranial Arterial Wall for the Strategy of Stroke Prevention
*H. Koga, T. Oishi*

16.45-17.00 10' Hyperdensity Suggestive of Hemorrhage After Stenting of PCA
*A. Karapurkar, N. Aditya, R. Singh, I. Vishwanathan*

14.30-17.30 Wednesday, 6 October 2010 ITALY HALL

14.30-15.45 **Aneurysms 3**
*Chairs*: A. Tournade, M. Muto

14.30-14.45 14' Endovascular Treatment of Complex Intracranial Aneurysms: Technical Review
*Z. Wu*

14.45-15.00 10' Technical Stragety for the Management of Ruptured Vertebrobasilar Aneurysms. A Single Center Experience
*X. Ding*

15.00-15.15 10' Endovascular Treatment of Ruptured and Unruptrued Fusiform Vertebral Artery Aneurysms
*Y. Li*

15.15-15.30 10' True Posterior Communicating Artery Aneurysms
*A. Taylor, D Lefeuvre*

15.30-15.45 10' Onyx HD 500 in the Treatment of 184 Large Necked Intracranial Aneurysms - Long Term Results
*R.I. Piske, E. Paschoal, C.E. Baccin, B.M. Chaves*

15.45-17.30 **Aneurysms 4**
*Chairs*: E. Houdart, R. Piske

15.45-16.00 10' Y-Stenting Assisted Embolization of Wide Neck Aneurysms Using Fully Retrievable and Detachable Intracranial Stents
*S. Muda, R. Ralib, R. Zakaria, Y. Yaakob, A. Abu Bakar*

16.00-16.15 10' Treatment of Wide-Necked Basilar Tip Aneurysms Using Kissing-Stent Placement plus Coiling
*T. Li, L Li, J Xue, Z Wang, W Bai, Z Li*

16.15-16.30 10' Stent Reconstruction for Bifurcation & Terminal Geometry Intracranial Aneurysms in over 70 Cases: Clinical Applications in Evolution
*J. Chaloupka, M. Hayakawa, A. Keller, R.C. Callison, C. Mertens*

16.30-16.45 10' Multicenter Prospective Study on the Safety and Efficacy of the Neuroform3TM Stent for Aneurysm Treatment (Senat Study): Preliminary Clinical Results
*A. Biondi, A. Bonafe*

16.45-17.00 10' Wide Neck Aneurysms Treated Using Stent Solitaire*
*L. Guimaraens, T. Sola , E. Vivas, A. Casasco, C. Diaz*

17.00-17.15 10' Intracranial Aneurysms: Endovascular Reconstruction with Stents; Medellin Experience
*B. Pabon, S. Vargas, P. Urena*

17.15-17.30 10' Endovascular Treatment of Blood Blister-like Aneurysms: Initial Experience with Stent-assisted Coil Embolization
*S. Meckel, M. Cronqvist, T.P. Singh, C.C. Phatouros, W. Mcaulifee*

14.30-16.30 Wednesday, 6 October 2010 BLUE HALL

14.30-16.30 **Research 4**
*Chairs*: JE Gonzalez Toledo, C. Bortolotti

14.30-14.45 10' Helps Trial: Angiographic Primary Trial Results
*P. White, R. Sellar*

14.45-15.00 10' MR Clean - Multicenter Randomized Clinical Trial of Endovascular Treatment for Acute Ischemic Stroke in The Netherlands (NTR1804)
*C. Majoie, Y.B. Roos, A. Van Der Lugt, W. Van Zwam, R. Van Oostenbrugge, D. Dippel*

15.00-15.15 10' Meta-Analysis of Clinical Outcome & Procedural Complications in Patients with Unruptured Cerebral Aneurysms in the Helps and Cerecyte Trials
*P. White, A. Molyneux, C. Williams, L. Forrester, M. Sneade*

15.15-15.30 10' Analysis of Risk Factors During Endovascular Treatment of Intracranial Ruptured Aneurysms: Results of Clarity Study
*C. Cognard, L. Pierot, R. Anxionnat, F. Ricolfi*

15.30-15.45 10' Post-Processing Imaging Analysis of Intra Aneurysmal Hemodynamical Modifications after "High Porosity" Self Expandable Stent Placement: An Experimental Study in an Animal Model
*D. Bresson, C.Y. Couquet, C. Mounayer*

15.45-16.00 10' @neufuse-A Tool for Investigating Haemodynamics in Intracranial Aneurysms
*P. Summers, P. Watton, J. Byrne, A. Chiarini*

16.00-16.15 10' Vertebrobasilar Dolichoectatic and Fusiform Intracranial Aneurysms: Proposal of a Prospective Italian Register on Natural History and New Treatment Modalities in the Era of the Flow Diverters Technology
*C. Bortolotti, C. Sturiale, M. Dall'Olio, C. Princiotta, M. Martinoni, L. Cirillo, M. Leonardi, F. Calbucci, A. Andreoli*

16.15-16.30 10' PRET. A Randomized Trial Comparing Platinum and Hydrogel-Coated Coils in Patients Prone to Recurrence after Endovascular Treatment
*J. Raymond, D. Roy, Pret Collaborative Group*

14.30-17.30 Wednesday, 6 October 2010 INDIGO HALL

14.30-15.30 **AVFs 1**
*Chairs*: S. Kominami, R. Anxionnat

14.30-14.45 10' Spinal Vascular Malformations - AVMs Experience
*N. Mishra, S.B. Gaikwad, A. Garg, Subhash Kumar*

14.45-15.00 10' Mechanism of the Formation of Dural Arteriovenous Fistula - The Role of Emissary Vein
*S. Miyachi, T. Izumi, N. Matsubara, T. Naito, K. Haraguchi, T. Ichikawa, T. Wakabayashi*

15.00-15.15 10' Parallel Dura Sinus Dural Arteriovenous Fistula: Diagnosis and Treatment
*H. Liu, C. Li, Y. Wang, T. Chen*

15.15-15.30 10' Imaging of a Reversible Cause of Dementia: Bithalamic Venous Congestion Secondary to Tentorial Arteriovenous Fistulae
*F. Signorelli, P. Khoueir, F. Scholtes, N. Mc Laughlin, D. Roy, M.W. Bojanowski*

15.30-17.30 **AVFs2**
*Chairs*: D.C. Suh, A. Tournade

15.30-15.45 14' Cavernous Sinus Dural Arteriovenous Shunts; Angioarchitect and Endovascular Treatment
*I.S. Choi*

15.45-16.00 10' Traumatic Trigeminal Cavernous Fistula Caused by Persistent Trigeminal Artery Variant Pseudo-Aneurysm: Endovascular Treatment
*S. Meckel, W. Mcauliffe*

16.00-16.15 10' A Case of Primitive Trigeminal Artery-Cavernous Fistula: Embolization, Complication and Strategy
*Q. Zeng, Y. Chen, X. He, Y. Li*

16.15-16.30 10' Hydrocoil Occlusion for Treatment of Traumatic Carotid-Cavernous Fistula
*Z. Wang*

16.30-16.45 10' Complex Cerebral Arteriovenous Fistula; Endovascular Treatment Using Trans Venous and Trans Arterial Approach
*B. Pabon, S. Vargas, P. Urena*

16.45-17.00 10' Embolization of Carotid Cavernous Fistulae by Transvenous Approach through the Facial Vein
*C. Luo, M. Teng, F. Chang, W. Guo*

17.00-17.15 10' Unusual Carotid Cavernous Sinus Fistula
*A. Karapurkar*

17.15-17.30 10' Unusual Acute Complication of Carotid Cavernous Fistula: Therapeutic Options
*F. Tsai*

14.30-17.45 Wednesday, 6 October 2010 GREEN HALL

14.30-16.00 **fMRI 3**
*Chairs*: P. Vilela, A. Bacci

14.30-14.45 10' N-Acetylaspertate (NAA) a Biomarker for Disease Activity in NPSLE Patients
*P. Wang, R.E. Harris, P. Cagnoli, J. Perry, D. Frechtling, G. Bekris, S. Gebarski, J. Mccune, P.C. Sundgren, A. Hegde*

14.45-15.00 10' Metabolic Changes on MR Spectroscopy of the Hippocampus in SLE
*C.M. Wan, L.L. Chan, H. Rumpel, K.M. Ng, C.K.Y. Tze, S. Fook-Chong, J. Thumboo, K.Y. Fong, A. Hegde*

15.00-15.15 10' Hippocampal Activation Associated with Successful External Source Monitoring
*S. Mugikura, N. Abe, M. Suzuki, A. Ueno, S. Higano, S. Takahashi, T. Fujii*

15.15-15.30 10' Plasma Levels of 3-Methoxy-4-Hydroxyphenylglycol Are Associated with Microstructural Changes within the Cerebellum in Early Stage of First-Episode Schizophrenia - A Longitudinal Voxel-Based Study
*J. Nishimura, S. Kakeda, O. Abe, R. Yoshimura, N. Goto, H. Hori, N. Ohnari, T. Sato, S. Aoki, K. Ohtomo, J. Nakamura, Y. Korogi*

15.30-15.45 10' fMRI Study of Body Image Distortion in Anorexia Nervosa
*G. Pellicanò, G. Castellini, A. D'argenio, E. Bolognesi, V. Ricca, A. Ginestroni, L. Mazzoni, N. Villari*

15.45-16.00 10' Cortical Representation of Taste in the Human Brain: A fMRI and DTI Study
*G. Polonara, G. Mascioli, M. Fabri, F. Fiori, A. Ortenzi, T. Manzoni, U. Salvolini*

16.00-17.45 **fMRI 4**
*Chairs*: S.K. Lee, S. Barkhof

16.00-16.15 10' 3T MR Spectroscopy in Drug-Resistant Temporal Lobe Epilepsy with Hippocampal Abnormalities
*S. Battaglia, A.F. Marliani, L. Albini Riccioli, V. Clementi, G. Rubboli, P. Agati, R. Agati*

16.15-16.30 10' Radiological Assessment of White Matter Pathway Involvement after Temporal Lobe Epilepsy Surgery FA Maps versus Tractography
*A. Kaneider, G. Kasprian, C. Mitter, Th. Czech, M. Weber, D. Prayer*

16.30-16.45 10' Sulcal Abnormalities Associated with Focal Cortical Dysplasia
*C. Mellerio, C. Oppenheim, C. Rodriguez, R. Souillard, O. Naggara, S. Rodrigo, B. Devaux, F. Chassoux, Jf. Meder*

16.45-17.00 10' MRI Aspects in 100 Focal Cortical Dysplasias of Palmini Type II Proven by Neuropathology
*N. Colombo, L. Tassi, A. Citterio, F. Cardinale, G. Lorusso, R. Spreafico*

17.00-17.15 10' Does Electroconvulsive Therapy (ECT) Affect White Matter Integrity? A Longitudinal Diffusion Tensor Imaging Study of Patients with Depression
*E. Larsson, E. Steffensen, P. Nordanskog, U. Dahlstrand, M. Larsson, L. Knutsson, A. Johanson*

17.15-17.30 10' Seconder Corpus Callosum Abnormalities Associated with Antiepileptic Drugs in Temporal Lobe Epileps; Evaluation by Diffusion Tensor Imaging
*H. Gunbey, K. Ercan, A. Findikoglu*

17.30-17.45 10' MRI Changes in Status Epilepticus: A Systematic Review in a Tertiary Center
*N. Bargalló Alabart, T. Lema, M. Carreño, A. Donaire, X. Aparicio, I. Maestro*

14.30-17.30 Wednesday, 6 October 2010 **MAGENTA HALL**

14.30-16.15 **Dementia 1**
*Chairs*: M. Sasiadek, K. Slavin

14.30-14.45 12' Alzheimer's Disease - New Approach to Pathogenesis and Therapy
*J. Leszek, G. Aliev*

14.45-15.00 12' Genetic Aspects of Alzheimer Disease
*K. Pesz, B. Misiak, M.M. Sasiadek*

15.00-15.15 12' Proton MR Spectroscopy (1h MRS) in Patients with Mild Cognitive Impairment (MCI)
*J. Walecki*

15.15-15.30 12' Multimodality Approach to Imaging in Dementia-Role of MR and CT Perfusion and DTI
*M. Sasiadek, A. Zimny, P. Szewczyk*

15.30-15.45 10' Cerebral Amyloid Angiopathy-Related Inflammation: An Emerging Disease
*M. Savoiardo, A. Erbetta, J.C. Difrancesco, M. Brioschi, V. Silani, A. Falini, G. Storchi, L. Brighina, C. Ferrarese, N. Ticozzi, S. Messina, F. Girotti*

15.45-16.00 10' Individual Classification of Stable Versus Progressive MCI Based on DTI Neuroimaging
*S. Haller, D. Nguyen, C. Rodriguez, J. Emch, G. Gold, A. Bartsch, K Lovblad, P Giannakopoulos*

16.00-16.15 10' Multi-Voxel MR Spectroscopic Study of Cingulate Gyrus in Patients with Mild Cognitive Impairment
*R. Wu, Z. Yang*

16.15-17.30 **Alzheimer**
*Chairs*: K. Tsuchiya, T. Stosic Opincal

16.15-16.30 10' Neuroimaging and Clinical Spectrum of Hippocampal Sclerosis Dementia
*M. Musacchio, F. Sellal, F. Blanc, J-M. Michel, J-L. Dietemann*

16.30-16.45 10' fMRI Episodic Memory Study. A Longitudinal Study in 31 Patients Presenting with Early Memory Complain
*F. Gelbert, C Baclet-Roussel, C Belin, A.M Ergis, J Ankri, R Palau, C Moroni, C Nioche, J.L Sarrazin*

16.45-17.00 10' Apolipoproteine and Gray Matter Loss in Mild Cognitive Impairment and Alzheimer's Disease
*M. Spampinato, G. Goldsberry, J. Mintzer, Z. Rumboldt*

17.00-17.15 10' Diffusion Abnormality of Corpus Callosum in Alzheimer's Disease
*A. Findikoglu, K. Ercan, H. Gunbey*

17.15-17.30 10' Influence of Fractional Anisotropy Threshold for Tract Based Diffusion Tensor Analysis of Uncinate Fascicles in Alzheimer Disease
*T. Taoka, M. Sakamoto, T. Akashi, T. Emura, T. Miyasaka, T. Wada, K. Takayama, H. Nakagawa, K. Kichikawa*

14.30-17.30 Wednesday, 6 October 2010 **VIOLET HALL**

14.30-16.15 **Epilepsy 1**
*Chairs*: F.M. Triulzi, F. Menetti

14.30-15.00 25' Radiological Aspects of Genetic Disorders with Adult-Onset CNS Symptoms
*R. Raininko, A. Melberg*

15.00-15.15 10' Hippocampal MR Volumetric Studies in Paediatric Control and Epilepsy Group
*Salmah J. Win Mar, A. Noorfizura, A. Mohd Shafie, A.H. Ahmad Helmy, A.R. Salmi*

15.15-15.30 10' Cerebral MR-Volumetric Examinations in Juvenile Myoclonic Epilepsy
*I. Gyuricza, L.R. Kozak, J. Jerney, G. Rudas, P. Barsi*

15.30-15.45 10' On the Feasibility of Passive Range-of-Motion Functional MRI Paradigms in the Diagnostic Workup of Childhood Epilepsies
*L. Kozak, M. Hegyi, P. Barsi, G. Rudas*

15.45-16.00 10' Focal Leptomeningeal Enhancement and Corticopial Calcifications Underlying a Parietal Convexity Lipoma: A Rare Spectrum of MRI Findings in Two Pediatric Epileptic Patients
*G. Morana, M.M. Mancardi, M.G. Baglietto, A. Rossi*

16.00-16.15 10' ADC Values and Glutamate/Creatine Ratios in the Brain in Normally Developing Children and in Children with Seizure Disorders: DWI and $^{1}H$ *In-Vivo* MRS Study
*Z. Rozhkova, O. Dolia*

16.15-17.30 **Round Table: Epilepsy and Malformations of the Cerebrum**
*Chair*: A.J. Barkovich

16.15-16.40 25' Epilepsy and Malformations of the Cerebrum
*A.J. Barkovich, R. Guerrini, R. Spreafico*

16.40-17.05 25' Neuropathology and Pathophysiology of Malformations of Cortical Development (MCDs) and Related Epilepsies
*R. Spreafico, A.J. Barkovich, R. Guerrini*

17.05-17.30 25' Elettroclinical Findings and Genetic Basis
*R. Guerrini*

14.30-17.30 Wednesday, 6 October 2010 **WHITE HALL 1**

14.30-16.30 **Brain Tumors 3**
*Chairs*: C. Romanowski, D. Khurjekar

14.30-15.00 25' Tissue Characteristics and Reorganization of Peri-Lesional Components in the Brain on MRI
*W. Guo*

15.00-15.15 10' Consecutive Acquisition of Time-Resolved Contrast-Enhanced MRA and Perfusion MR Imaging of Brain Tumors with a Contrast Dose of 16 ml
*K. Tsuchiya, M. Imai, M. Yoshida, H. Tateishi, T. Nitatori*

15.15-15.30 10' Metabolic Mapping of Human Gliomas: Assessment with Simultaneous PET/MR Imaging for Preoperative "Hot-Spot" Imaging of Suspected Anaplastic Gliomas
*S. Bisdas, T. Naegele, R. Ritz, A. Boss, A. Kolb, B. Pichler, U. Ernemann*

15.30-15.45 10' Differentiation between Primary Central Nervous System Lymphoma and Glioblastoma on 3-T MR Imaging: Multivariate Analysis
*M. Kitajima, T. Hirai, Y. Shigematsu, A. Sasao, S. Nishimura, K. Iwashita, K. Makino, H. Nakamura, Y. Yamashita*

15.45-16.00 10' Perifocal MR Perfusion and Diffusion Values in Gliomas
*Z. Rumboldt, P. Morgan, J. Baker, C. Rorden, G. Goldsberry, J. Fridriksson*

16.00-16.15 10' Glioblastoma Multiform: MRI Findings of the Brain and DWI Analysis
*S. Benakis, K. Tavernaraki, A. Sykara, E. Tsatalou, K. Stefanidis, C. Kolofousi, V. Ouranos, D. Chondros*

16.15-16.30 10' Brain Surface Motion Imaging for Prediction of Adhesions between Meningiomas and the Brain Surface
*T. Taoka, T. Akashi, T. Emura, T. Miyasaka, A. Iwamura, H. Wada, K. Sakamoto, H. Nakagawa, K. Kichikawa*

16.30-17.30 **Brain Tumors 4**
*Chairs*: M. Essig, F. Briganti

16.30-16.45 10' Preoperative Embolization of Meningioma with Dural Branch of Internal Carotid Artery
*M. Hirohata, S. Yamashita, Y. Takeuchi, K. Orito, T. Abe, M. Shigemori*

16.45-17.00 10' Preoperative Embolization of the Intra-Cranial Meningiomas via the Ophtalmic Artery
*M. Manisor, R. Riva, L. Tigan, M. Al-Khawaldeh, F. Trivelato-Padovani, C. Mounayer*

17.00-17.15 10' Therapeutic Embolization of Meningiomas with Glue: A Potential Alternative to Surgery?
G. Rodesch, P. Guedin, S. Gaillard, S. Aldea, O. Coskun, A. Boulin, S. Condette-Auliac

17.15-17.30 10' Embolization of Vascularized Vertebral Tumours Using Particles and Glue. Injection Technique, Advantages and Limits of Each of These Materials. Our Experience

09.15-11.30 Wednesday, 6 October 2010 **WHITE HALL 2**

09.15-10.30 **Head & Neck 1**
*Chairs*: W.Y. Guo, G. Meli

09.15-09.30 10' Dural Branches of Proximal Anterior Cerebral Artery: Radiological and Intraoperative Description of a Rare Anatomic Variant
*F. Signorelli, F. Scholtes, N. Mclaughlin, M.W. Bojanowski*

09.30-09.45 10' Compressed Print of the Cranial Nerves Observed on Multislice Motion-Sensitized Driven-Equilibrium (MSDE) in Patients with Neurovascular Compression
*M. Kanoto, A. Oda, T. Hosoya, Y. Toyoguchi, N. Ohki, N. Hasegawa, M. Kuchiki, T. Honma,Y. Sugai*

09.45-10.00 10' Quantification of the Facial Nerve Motion during Cardiac Cycle Using Phase Contrast MRI. Preliminary Results for a Better Understanding of Neurovascular Conflicts
*M. Braun, M. Labrousse, G. Calmon, G. Hossu, J. Oster, A. Chays, J. Felblinger*

10.00-10.15 10' MDCT Assessment of the Cochlear-Carotid Interval
*H. Gunbey, H. Aydin, H. Cetin, E. Gunbey, A. Alhan*

10.15-10.30 10' Imaging of the Ear. Particular Findings
*F. Calzolari, A. Martini*

10.30-11.30 **Head & Neck 2**
*Chairs*: D. Goldsher, F. Calzolari

10.30-10.45 10' TMJ Pain and Neuropathic Pain in Patients with Temporomandibular Joint Disorders
*G. Meli, A. Garufi, E. Pedulla', M. Mandala', A. Blandino, P. Cascone*

10.45-11.00 10' Diagnostic Value of MRI Performed after Intratympanic Gadolinium Administration in Patients with Ménière Disease
*F. Pizzini, A. Beltramello, F. barbieri, F. Fiorino*

11.00-11.15 10' The Large Vestibular Aqueduct Syndrome in Adults - An Almost Underestimated Realm
*D. Goettmann*

11.15-11.30 10' Real-Time fMRI Feedback Training May Improve Chronic Tinnitus
*S. Haller, R. Veit*

14.30-17.30 Wednesday, 6 October 2010 **WHITE HALL 2**

14.30-15.30 **Advanced CT Studies 1**
*Chairs*: T. Mori, J. Shankar

14.30-14.45 10' Analysis of CT Perfusion Parameters in Normal Control Patients to Assess the Normal Variations of Major Vascular Territories and the Effects of Using Different Arterial Input Functions
*A. Cherney, B. Smoller, S. Mangla, A. Bluestone, A. Dubey, S. Zhabin*

14.45-15.00 10' The Effect of Using 80 kVp versus 120 kVp on Temporal Resolution and Parametric MAP Generation in Perfusion CT
*A. Dubey, S. Mangla, A. Bluestone, B. Smoller, A. Cherney, S. Zhabin*

15.00-15.15 10' CTA-SI Are Flow Not Volume Weighted
*A.J. Fox, M. Sharma, A. Jairath, S. Symons, L.Y. Zhang, R.I. Aviv*

15.15-15.30 10' Intracranial Masses with Perilesional Edema: Differential Diagnosis with Perfusion-CT
*D. Gadda, P. Simonelli, G. Villa, V. Scardigli, D. Petacchi, C. Pandolfo, M. Moretti, S. Chiti, G.P. Giordano*

15.30-17.30 **Advanced MR Techniques 1**
*Chairs*: E. Cabanis, M.T. Iba-Zizen

15.30-15.45 10' Lehrmitte-Duclos Disease: Advanced Imaging With 3T MR Scanner
*G. Grillea, S. Carlino, V. Galasso, E. Venditt, S. Metanbou, A. Tarantino, L. Testaverde, F. Giangaspero, S. Tola, S. Paolini, G. Cantore, A. Gioiosa, G. Garreffa, M. Bartolo, C. Colonnese*

15.45-16.00 10' Diffusion Tensor Imaging Atlas of Deep White Matter Tracts
*L. Hermoye, G. Cosnard, S. Mori, J. Lemaire*

16.00-16.15 10' Improved Image Quality and Detection of Acute Cerebral Infarction with Diffusion Tensor MR Imaging
*J. Jang, C. Sohn, S. Choi, J. Kim, T. Yoon, K. Chang*

16.15-16.30 10' Brain Lesions: CAN 3D FLAIR Imaging Replace 2D Flair at 3T?
*S. Kakeda, Y. Hiai, J. Nishimura, N. Ohnari, T. Sato, Y. Korogi*

16.30-16.45 10' Evaluation of Different MR Measurement and Postprocessing Techniques for Perfusion Parameters Using a New Phantom as Gold Standard
*A. Maciak, C. Vilchez, W. Mueller-Forell, H. Speckter, P. Stoeter*

16.45-17.00 10' Voxel Based Techniques and fMRI Activation during Pronounced Period of Symptoms of Early Onset Restless Legs Syndrome Patients
*P. Margariti, L. Atrakas, S. Konitsiotis, L. Tzarouchi, S. Tsouli, M.I. Argyropoulou*

17.00-17.15 10' Magnetic Resonance Spectroscopy (MRS) of the Hippocampus
*A. Marton, L. Bús, V. Juhos, G. Rudas, P. Barsi*

17.15-17.30 10' Utilization of Cine MRI Technique in Central Nervous System, Head and Neck and beyond in Fetuses and Children
*L. Nagae, T. Feygin, R. Zimmerman, L. Bilaniuk*

09.15-11.30 Wednesday, 6 October 2010 **YELLOW HALL**

09.15-11.30 **Ozone Session**
*Chairs*: M. Bonetti, C. Andreula

09.15-09.45 25' Decade Review of Ozone Therapy in China
*X. He*

09.45-10.15 25' The Evolution in the Treatment of Spinal Degenerative Pathologies: from Demolitive, to Conservative or Regenerative Procedures
*A. Alexandre, G. Caloprisco, L. Corò, A. Borean, A.M. Alexandre*

10.15-10.30 10' The Significance of Choosing Ozone Therapy for Lumbar Disc Annular Tear or Annular Disruption
*X. He*

10.30-10.45 10' Ozonucleolysis. Early Response in Cervical Disc Prolapse
*U. Rashid Chaudhry*

10.45-11.00 10' Lumbar Disc Herniation Treatment by Microdiscectomy Versus Intradiscal Oxygen-Ozone Injections
R. Paradiso

11.00-11.30 20' Oxygen-Ozone Therapy for Herniated Disc: Analysys of Complicances
*G. Pellicanò, M. Bonetti, M. Muto, C. Andreula, M. Leonardi*

14.30-17.30 Wednesday, 6 October 2010 YELLOW HALL

14.30-15.30 **Spine 3**
*Chairs*: B. Georgy, M. Braun

14.30-14.50 18' Spinal and Posterior Fossa Endoscopic Anatomy Using Percutaneous Intraspinal Navigation
*P. Purdy , B. Welch, R. Novakovic, S. Miller, T. Fujimoto*

14.50-15.10 18' CSF Flow in Syringomyelia and Chiari Malformations
*K. Stoverud, K. Mardal, H. P. Langtangen, V. Haughton*

15.10-15.30 18' Leucocyte-Platelet Haemocomponents for Topical Use: Regenerative Potentiality
*A. Alexandre, A.M. Alexandre, G. Caloprisco, A. Borean*

15.30-17.30 **Spine 4**
*Chairs*: M. Braun, B. Georgy

15.30-16.00 25' Interpretation of Spine MRI, an Interventionalist Prospective
*B. Georgy*

16.00-16.15 10' Less Studied non Osseous Signs in Painful Lumbar Pathology
*J. Théron, T. Sola, L. Guimaraens, A. Casasco, P. Courtheoux*

16.15-16.30 10' Intradiscal and Intramuscolar Injection of Discogel Radiopaque Gelified Ethanol: Pathological Evaluation. Work in Progress
*G. Guarnieri, P. Vassallo, A. Lavanga, G. Ambrosanio, M. Muto*

16.30-16.45 10' Percutaneous Treatment of Cervical Disk Hernias Using Gelified Ethanol
*J. Théron, H. Cuellar, T. Sola, L. Guimaraens, A. Casasco, P. Courtheoux*

16.45-17.00 10' Herniated Disk: Treatment Percutaneous Using Discogel
*T. Sola, J. Theron, C. Diaz, E. Vivas, L. Guimaraens*

17.00-17.15 10' Percutaneous Treatment of Lumbar Intervertebral Disk Hernias with Discogel
*K. Pardatscher, G. Volpentesta, C. Bombardieri, A. Giaquinta*

17.15-17.30 10' Percutaneous Nucleoplasty for Discoradicular Conflict
*A. Alexandre, A.M. Alexandre, L. Coro'*

# THURSDAY, 7 OCTOBER 2010
*Plenary Hall Sessions*

09.15-12.50 EUROPA AUDITORIUM

09.15-10.35 **Brain Tumors I**
*Chairs*: P. Parizel, Y. Ono

09.15-09.35 Brain Tumors and MR-Perfusion Imaging: Clinical Applications
*P. Due-Tønnessen*

09.35-09.55 Recent Advent in DTI and Tractography for Neuro-Oncology
*K. Yamada*

09.55-10.15 Cerebral Brain Tumors: Role and Limits of Imaging and Comparison with Pathology
*D. Tampieri*

10.15-10.35 Brain Tumors: Medical Therapy
*A. Brandes*

10.40-12.50 **Brain Tumors II**
*Chairs*: E. De Divitiis, G. Wilms

10.40-11.00 The Neurosurgical Approach to Brain Tumors
*F. Calbucci*

11.00-11.20 Pre-Operative and Intra-Operative Imaging of Brain Tumors
*S. Kollias*

11.20-11.40 Intraoperative MRI for Precise Resection of the Gliomas Maintaining the Motor and Verbal Function
*Y. Ono, T. Maruyama, Y. Muragaki, Y. Konishi, K. Abe, T. Hayano, M. Kohno, T. Kawamata, H. Iseki, Y. Okada, S. Sakai*

11.40 -12.00 Boron Neutron Capture Therapy in the Treatment of Brain Tumours
*L. Pellettieri*

12.00-12.20 Nanoparticles for Medical and Surgical Tumor Therapy
*J. Provenzale*

12.20-12.50 **Conclusive Lecture**

12.20-12.50 Brain Tumor Imaging Analysis and Classification: What Can the Neuroradiologist Really Say?
*A. Osborn*

PARALLEL SESSIONS

14.30-17.30 Thursday, 7 October 2010 **EUROPA AUDITORIUM**

14.30-16.00 **Stroke 5**
*Chairs*: A. Bozzao, R. Jäger

14.30-14.45 10' Vertebral Artery Orifice Stenosis: Reporting of 43 Cases Stenting and Percutaneous Transluminal Angioplasty
*R. Mohammadian, R. Mansourizadeh, M. A. Arami, M. Farhoudi, S. Haririan*

14.45-15.00 10' Intracranial Angioplasty and Stenting for Crebral Atherosclerosis: Results of 92 Consecutive Patients
*D. Hwang, Y. Ko, K. Kim, I. Kang, S. Bae, I. Kim, C. Hur*

15.00-15.15 10' Endovascular Treatment of Atherosclerotic Intracranial Arterial Stenoses Using Undersized Balloon Dilatation and Oversized Enterprise Stent Deployment
*Z. Vajda, E. Miloslavski, S. Fischer, T. Güthe, A. Albes, W. Bettolo, H. Bäzner, H. Henkes*

15.15-15.30 10' Stenting of Distal Intracranial Vessels in Stroke
*A. Musacchio, R. Langhi, L. Langhi, M. Musacchio*

15.30-15.45 10' Stent Treatment of Intracranial Atherosclerotic Stenoses - Update of the European Intrastent Registry
*W. Kurre, J. Berkefeld*

15.45-16.00 10' Stent-Assisted Thrombo-Embolic Revascularization (SATER) for Acute Ischemic Stroke Intervention of large Artery Occlusion utilizing Self-Expanding Micro-Stents: A Series of over 30 Consecutive Patients
*J. Chaloupka, R.C. Callison, M. Hayakawa, A. Keller, J. Terry, W. Liu*

16.00-17.30 **Stroke 6**
*Chairs*: I. Szikora, S. Bakke

16.00-16.15 10' Morphological and Clinical Results of Invasive Intra-Arterial Recanalization in Acute Stroke
*I. Gubucz, ZS. Berentei, M. Marosfoi, CS. Ovary, D. Varga, I. Szikora*

16.15-16.30 10' Postdilation of the Wingspan-Stent Instead of Predilation is Feasible and Safe
*A. Ragoschke-Schumm, S. Schindhelm, P. Schmidt, S. Schiffler, A. Hansch, R. Drescher, M. Bokemeyer, A. Günther, J. Weise, T.E. Mayer*

16.30-16.45 10' Treatment of Neurovascular In-Stent Re-Stenoses Using a Coronary Paclitaxel Eluting Balloon
*H. Henkes, T. Güthe, Z. Vajda, E. Miloslavski, S. Fischer, G. Albes, D. Horvath, H. Bäzner*

16.45-17.00 10' Long-term Clinical Outcome Following Emergency MR Imaging and Reperfusion Therapy for Acute Middle Cerebral Artery Occlusion
*T. Mori, H. Tajiri, T. Iwata, T. Uesugi, M. Nakazaki*

17.00-17.15 10' Long-Term Clinical Outcome after Emergency Reperfusion Therapy for Acute Basilar Artery Occlusion Based on MR Imaging
*H. Tajiri, T. Mori, T. Iwata, T. Uesugi, M. Nakazaki, N. Soga*

17.15-17.30 10' Endovascular Recanalization for the Internal Carotid Artery or Middle Cerebral Artery Occlusion in a Subacute Stroke Stage in Deteriorating Patients with Internal Border Zone Infarctions
*T. Iwata, T. Mori, H. Tajiri, T. Uesugi, M. Nakazaki*

09.15-12.45 Thursday, 7 October 2010 **ITALY HALL**

09.15-10.15 **Aneurysms 5**
*Chairs*: P. Purdy, R. Gasparotti

09.15-09.30 14' Clinical Predictors of Delayed Cerebral Ischemia after Subarachnoid Hemorrhage: First Experience with Coil Embolization as the First-Line Treatment in the Management of Ruptured Cerebral Aneurysms
*Y. Kawabata, H. Miyake, F. Horikawa, Y. Ueno*

09.30-09.45 10' A Novel Force Sensor with an Optical System for Coil Embolization of Intracranial Aneurysms
*N. Matsubara, S. Miyachi, Y. Nagano, T. Ohshima, O. Hososhima, T. Izumi, A. Tsurumi, T. Wakabayashi, M. Sakaguchi, A. Sano, H. Fujimoto*

09.45-10.00 10' Mechanism of Catheter Kickback in the Final Stage of Coil Embolization for Aneurysms - Straightening Phenomenon
*S. Miyachi, T. Izumi, N. Matsubara, T. Naito, K. Haraguchi, T. Ichikawa, T. Wakabayashi*

10.00-10.15 10' Use of 3-D Angiograms for Prediction of Coils Needed to Embolize Small Intracranial Aneurysms
*A. Arat, R. Yasuda, B. Aagaard-Kienitz, D. Niemann, A. Turk, A. Munoz Del Rio, C. Strother*

10.15-11.30 **Aneurysms 6**
*Chairs*: P. Lylyk, N.K. Mishra

10.15-10.30 10' Endovascular Treatment of Intracranial Baby Aneurysms
*C. Barbier, S Saleme, P Lacerda, P Courtheoux*

10.30-10.45 10' Technical Aspects of Single Coil Embolization of Broad Based, Small Intracranial Aneurysms.Low Case Flow Center Experience
*L. Borota, P. Jonasson*

10.45-11.00 10' Endovascular Treatment of 55 Posterior Communicating Artery Aneurysms. Overall, Perioperative Results
*E. Cotroneo, R. Gigli, F. Puccinelli, G. Guglielmi*

11.00-11.15 10' Follow-Up Study of Intracranial Aneurysms Treatment with Coils
*H. Ghanaati, K. Firouznia, M. Motevallei, H. Ara, H. Ebrahimi, M. Mohammadifar, M. Abedini, M. Shakiba, Ah. Jalali*

11.15-11.30 10' Unruptured Middle Cerebral Artery Aneurysms Coiling, Feasibility and Outcome. Single Center Experience
*O. Mansour, J. Weber, M. Schumacher*

11.30-12.45 **Aneurysms 7**
*Chairs*: T. Hyogo, R. Riva

11.30-11.45 10' Intracranial Aneurysms Treatment with Hydrocoils: 6 Years Follow-Up in a Single Center Experience
*A. Tournade, M. Musacchio, A. Lebedinsky, N. Hirota, A. Uemuera, T. Tajahmady*

11.45-12.00 10' Endovascular Management of Ruptured Posterior Circulation Aneurysms- Review of 10 Years Experience
*N. Khandelwal, K. Priyamvadha, V. Gupta, A. Pathak, S.N. Mathuria*

12.00-12.15 10' The Technique of Double Catheterization of the Sac in the Treatment of Intra-Cranial Aneurysms
*F. Trivelato-Padovani, M. Manisor, M. Al-Khawaldeh, R. Riva, C. Mounayer*

12.15-12.30 10' Aneurysmal Rupture during Embolization with Guglielmi Detachable Coils: Causes, Management and Outcome
*D. Hwang, Y. Ko, K. Kim, I. Kang, S. Bae, S. Park, I. Kim, C. Hur*

12.30-12.45 10' Aneurysm Rupture after Flow Diversion Treatment: The Role of Intraaneurysmal Thrombosis
*Z. Kulcsar, E. Houdart, A. Bonafe, G. Parker, J. Millar, A. Goddard, S. Renowden, G. Gal, B. Turowski, K. Mitchell, R. Van Den Berg, A. Gruber, I. Wanke, D. Rufenacht*

14.30-17.45 Thursday, 7 October 2010 ITALY HALL

14.30-16.30 **Aneurysms 8**
*Chairs*: J. Moret, K. Irie

14.30-14.45 10' Double Lumen Remodelling Balloon: A New Technique for Tretament of MCA Bifurcation Aneurysm
*K. Kadziolka, W. Mustafa, A. Leautaud, L. Pierot*

14.45-15.00 10' Safety and Efficacy of the Remodelling Technique in the Treatment of Ruptured and Unruptured Intracranial Aneurysms
*L. Pierot, C. Cognard, L. Spelle*

15.00-15.15 10' Stent-Jail Technique in Endovascular Treatment of Wide-Necked Aneurysms
*Z. Wu*

15.15-15.30 10' Which Factor Increases Procedural Thromboembolic Events in Patients with Unruptured Paraclinoid Internal Carotid Artery Aneurysm Treated by Coil Embolization?
*M. Nagahata, R. Kondo, S. Saito, A. Takemura, T. Hatayama*

15.30-15.45 10' Local Intra-Arterial Tirofiban for Intraoperative Vessel Thrombosis during Aneurysm Coiling
*J. Rosales, H. Cardenas, Y. Pernia, Y. Matos, O. Rosales*

15.45-16.00 10' Iatrogenic CCF Following Attempted Endovascular Treatment of Intracranial Aneurysm
*A. Karapurkar*

16.00-16.15 10' Intravenous Thrombolysis for Acute Cerebral Ischemia Following Endovascular Treatment of Intracranial Aneurysms Using Eptifibatide
*M. Musacchio, A. Lebidensky, L. Armanet, J-F. Cerfon, A. Tournade*

16.15-16.30 10' Progressive de Novo Post-Embolization Perianeurysmal Edema, Two Different Evolutions
*H. Desal, E. Visee, J.P. N Guyen, B. Daumas-Duport, E. Auffray-Calvier, F. Toulgoat, A. De Kersaint Gilly*

16.30-17.45 **Aneurysms 9**
*Chairs*: M. Gallucci, K. Fukasaku

16.30-16.45 10' Is Follow-Up Angiography for Aneurysmal Coil Embolization Acceptable?
*Y. Ito, T. Sorimachi, K. Nishino, K. Kitazawa, J. Shimbo, Y. Jimbo, Y. Fujii*

16.45-17.00 10' Very Long Term MRA Follow-Up of Intracranial Aneurysms Adequately Occluded at 6 Months after Coiling: Lotus Study Results
*S. Ferns, M.E. Sprengers, W. Van Zwam, W.J. Van Rooij, B.K. Velthuis, G.A. De Kort, M. Sluzewski, R. Van Den Berg, G.J. Rinkel, C.B. Majoie*

17.00-17.15 10' Follow-Up of Brain Aneurysms Treated with Bare GDC Coils after 6 Years
*S. Finitsis, R. Anxionnat, A-L. Durelle, L. Picard, S. Bracard*

17.15-17.30 10' Diagnosis and Treatment of Delayed Compressive Syndrome Associated To Implant of Silk Flowdiverter
*J. Berge, X. Barreau, P. Menegon, S. Molinier, T. Tourdias, J. Bocquet, V. Dousset*

17.30-17.45 10' Eight-Year-Plus Follow-Up of Aneurysms after Embolotherapy
*V. Kahara, M. Pyysalo, L. Keski-Nisula, T. Niskakangas, J. Ohman*

14.30-16.00 Thursday, 7 October 2010 BLUE HALL

14.30-17.30 **Research 5**
*Chairs*: G. Rodesch, K. Sugiu

14.30-14.45 10' 4D CTA Imaging and Treatment of Moya-Moya Associated Intraventricular Hemorrhage
*P. Brouwer, D. Tampieri*

14.45-15.00 10' Unilateral Moyamoya Disease vs. Asymmetric Manifestations of Definite Moyamoya Disease: Angiographic Pattern Analysis with its Pathognomonic Findings
*J. Chung, Y.C. Weon*

15.00-15.15 10' Comparison between Quantification Methods of Carotid Artery Stenosis with CT Angiography
*L. Saba, R. Sanfilippo, R. Montisci, G. Mallarini*

15.15-15.30 10' Hemodynamics at the Carotid Terminus and Surrounding Segments Assessed Using Highly Accelerated High-Resolution Phase Contrast MR Velocimetry and Automated Spline Interpolation
*W. Chang, B. Landgraf, A. Frydrychowicz, S. Kecskemeti, K. Johnson, Y. Wu, O. Wieben, C. Mistretta, P. Turski*

15.30-15.45 10' Evaluation of Balloon Occlusion Test for Giant Brain Aneurysms under Local Anesthesia
*A. Sultan, T. Hassan, M.N. Olwany*

15.45-16.00 10' Developmental Venous Anomaly (DVA): What Are They Really?
*W. Chong, M Holt*

16.00-17.30 **How I Do It Session**
Small Vessel Ischemic Disease: Pathophysiology, Diagnosis, and Clinical Impact
*N. Bryan, M. Bilelo*

09.15-13.00 Thursday, 7 October 2010 INDIGO HALL

09.15-10.30 **Carotids 1**
*Chairs*: A. Karapurkar, D. Pelz

09.15-09.30 10' Utilization of 3D-RA Cone Beam CTA for CAS Procedure
*Y. Ito, T. Sorimachi, K. Nishino, K. Kitazawa, J. Shimbo, Y. Jimbo, Y. Fujii*

09.30-09.45 10' Evaluation of Soft Plaques by Magnetic Resonance Imaging Can Improve the Outcomes of Carotid Artery Stenting and Carotid Endarterectomy
*K. Yamada, S. Yoshimura, M. Kawasaki, Y. Enomoto, T. Asano, S. Minatoguchi, T. Iwama*

09.45-10.00 10' Quantitative Analysis of Intracranial Arterial Stenosis using CAAS QCA 2D and 3D Compared with Wasid Measurement
*E-S. Lee, O.K. Lim, T.I. Kim, D.C. Suh*

10.00-10.15 10' Accuracy of Preoperative Carotid Artery Stenosis Measurement - Comparison of Magnetic Resonance Angiography (MRA), Digital Subtraction Angiography (DSA) and Histological Specimens
*T. Belsan, F. Charvat, D. Netuka, V. Mandys, J. Vrana*

10.15-10.30 10' Clinical Application of Optical Coherence Tomography for Carotid Artery Stenosis
*S. Yoshimura, K. Yamada, M. Kawasaki, S. Minatoguchi, T. Iwama*

10.30-13.00 **Carotids 2**
*Chairs*: G. Bonaldi, S. Miyachi

10.30-10.45 10' Selection of a Protective Device Following Carotid Artery Stenting in Preparation for the Evaluation of Plaque Distribution by High-Resolution Black-Blood MR Imaging
*K. Irie, M. Negoro, T. Tanaka, M. Hayakawa, A. Sadato, Y. Hirose*

10.45-11.00 10' Comparison of the Balloon Versus Filter Protection in Carotid Artery Stenting
*K. Sugiu, K. Tokunaga, Y. Takasugi, Y. Ohkuma, T. Hishikawa, I. Date*

11.00-11.15 10' Safety & Effectiveness of Carotid Artery Stenting with Protection
*M. Negoro, M. Hayakawa, K. Irie, T. Ikeda, A. Sadatou, S. Maeda, Y. Hirose*

11.15-11.30 10' Prospective Analysis of Carotid Stenting in High Risk Patients in a Larger Referal Single Korean Center Study
*D.C. Suh, J.L. Kim, J.K. Kim, D.H. Lee, S.J. Kim, C.G. Choi, H.Y. Lee, D.W. Kang, S.U. Kwon, J.S. Kim*

11.30-11.45 10' Endovascular Revascularization of Complete or Near Occlusion of the Carotid Artery
*S. Nemoto*

11.45-12.00 10' Primary Carotid Stenting for Severe, Symptomatic Stenosis: a Less-invasive Approach
*D. Pelz, S Lownie, M Bussiere, D Lee, I Gulka, A Leung*

12.00-12.15 10' Carotid MM-Stenosis: What Is the Threshold That Determines Cerebrovascular Symptoms?
*L. Saba, R. Sanfilippo, R. Montisci, G. Mallarini*

12.15-12.30 10' Endovascular Repair of In-Tandem Carotid Stenosis
*H. Desal, H. Loubiere, L. Azema, A. Costargent, P. Chaillou, P. Patra, Y. Goueffic*

12.30-12.45 10' Carotid Artery Stenting Pitfall
*A. Karapurkar*

12.45-13.00 10' Transient and Prolonged Sinus Reaction after Carotid Stenting - Prospective Analysis
*J.L. Kim, J.K. Kim, D.C. Suh, D.H. Lee, S.J. Kim, C.G. Choi, H.Y. Lee, S.U. Kwon, J.S. Kim*

14.30-17.30 Thursday, 7 October 2010 **INDIGO HALL**

14.30-15.45 **Dissections 1**
*Chairs*: S. Nemoto, B. Wassermann

14.30-14.45 14' Cervico-Cerebral Arterial Dissection; The Disease of Confusing Profile
*O. Mansour, J. Weber, M. Schumacher*

14.45-15.00 10' Intracranial Dissections and Dissecting Aneurysms
*A. Biondi*

15.00-15.15 10' Advances in Diagnosis and Endovascular Management of Cerebrovascular Dissections
*A. Qureshi*

15.15-15.30 10' Can Cervical Artery Dissection Be Diagnosed on Routine Brain MRI? Sensitivity and Specificity of Stroke Brain MRI for Diagnosis of Cervical Artery Dissection: A Matched Case Control Study
*O. Naggara, F. Soares, E. Touze, X. Leclerc, J.L. Mas, C. Mellerio, C. Rodriguez, J.F. Meder, C. Oppenheim*

15.30-15.45 10' Diagnosis, Natural History and Treatment of the Carotid Dissections. Our Experience
*A. Stafa, C. Barbara, L. Simonetti, M. Leonardi*

15.45-17.30 **Dissections 2**
*Chairs*: A. Biondi, O. Mansour

15.45-16.00 10' Stent Placement for Intracranial Internal Carotid Artery Dissection Presenting with Ischemic Stroke
*R. Kondo, Y. Matsumoto, Y. Matsumori, K. Sato, S. Fujiwara, A. Takahashi, T. Tominaga*

16.00-16.15 10' Large Cervical Internal Carotid Artery Pseudoaneurysm and their Management. A Case Series
*V. Gupta, N. Khandelwal, A. Kumar, M. Singla, A. Lal, P. Singh, A. Behra, A.K. Gupta*

16.15-16.30 10' Endovascular Treatment of a Giant Cranio-Cervical Aneurysm with a New Self Expendable Endoprothesis Silk
*A Tournade, M. Musacchio, A. Lebedinsky, N. Hirota, A. Uemuera, T. Tajahmady*

16.30-16.45 10' Endovascular Treatment of Extra- and Intracranial Dissections Using Self-Expanding Microstents
*S. Fischer, E. Miloslavski, Z. Vajda, G. Albes, A. Heuschmid, E. Schmid, H. Henkes*

16.45-17.00 10' Treatment of Spontaneous Intradural Vertebral Artery Dissections
*T. Nakazawa, Y. Takeichi, Y. Yokoi, T. Fukami, J. Jito, N. Nitta, K. Takagi, K. Nozaki*

17.00-17.15 10' Endovascular Surgery for Ruptured Vertebral Artery Dissection
*Y. Matsumoto, R. Kondo, K. Sato, M. Fujimura, T. Inoue, E. Furui, H. Shimizu, T. Tominaga, A. Takahashi*

17.15 -17.30 10' Spontaneous Dissection of Intradural Vertebral and Basilar Arteries. Review of 55 Cases (28 Hemorrhagic and 27 Ischemic). Regarding Multimodality Endovascular Approaches
*R.L. Piske, J.L. Silva, C.E. Baccin*

14.30-17.30 Thursday, 7 October 2010 **GREEN HALL**

14.30-16.00 **fMRI 5**
*Chairs*: S. Aoki, C. Stippich

14.30-14.45 10' Normal CSF Flow Measurements at the Aqueduct Performed at 3T
*E. Kapsalaki, I. Tsougos, P. Svolou, E. Dardiotis, G Hadjigeorgiou, I. Fezoulidis, K.N. Fountas*

14.45-15.00 10' Balanced Steady-State Free Precession Sequence in the Study of CSF Dynamic Alterations
*G. Pellicanò, S. Meli, I. Del Seppia, I. Samih*

15.00-15.15 10' Phase-Contrast MR as Non-Invasive Tool in the Diagnosis of Benign Intracranial Hypertension
*L. Nocetti, A. Mantovani, S. Vallone, T. Costi, P. Carpeggiani, G. Pinna*

15.15-15.30 10' Normal Pressure Hydrocephalus (NPH): Is It Time for MRI CSF Dynamics Studies for the Diagnosis?
*D.M. Peltz, U. Godano*

15.30-15.45 10' White Matter Changes in Normal Pressure Hydrocephalus, a Possible Marker for the White Matter Damage
*J. Vrana, D. Horinek, V. Sulc, P. Rejchrt, D. Hoza, T. Belsan, F. Charvat*

15.45-16.00 10' Abnormalities of the Dura Mater: Are Multiple Clinical Syndromes with Dural Lesions Associated to Abnormal Connective Tissue?
*D. Quiñones, J. Viaño*

16.00-17.30 **fMRI 6**
*Chairs*: D. Tampieri, E. Piovan

16.00-16.15 10' Automated Versus Human In Vivo Segmentation of Carotid Plaque MRI
*C. Oppenheim, R. Van't Klooster, R. Marsico, O. Naggara, O. Eker, R.J. Van Der Geest, I.M. Adame, E. Touze, J.F. Meder*

16.15-16.30 10' Idiopathic Intracranial Hypertension: Assessment of the Endovasal Techniques for Treatment
*A. Mironov*

16.30-16.45 10' Endovascular Stenting of Unilateral Transverse Sinus Stenosis for Treatment of Benign Intracranial Hypertension
*W. Mustafa, K. Kadziolka, A. Leautaud, L. Pierot*

16.45-17.00 10' Interest of Endovascular Techniques in the Pseudotumor Cerebri Syndrome
*P. Courthéoux, S. Saleme, C. Barbier, P. Lacerda*

17.00-17.15 10' Diagnosis and Non-Invasive Follow-Up of Cerebro-Vascular Pathologies (10 Years of CT, DWI and Angio-MR without Contrast Medium)
*L. Sabattini*

17.15-17.30 10' Clinical Application of Balanced Steady-State Free Precession Technique in Neuroradiology
*Y. Lu, S. Wu, J. Lirng, W. Guo, C. Chang*

09.15-12.30 Thursday, 7 October 2010 **MAGENTA HALL**

09.15-10.30 **Infectious Diseases 1**
*Chairs*: L. Lucato, F. Resta

09.15-09.30 14' The Different Faces of Central Nervous System Tuberculosis: A Pictorial Review
*S. Muda, SA. Al-Edrus, NR. Mohd Zain, S. Mukari, N. Mohd Nasir, K. Abdul Latif*

09.30-09.45 10' Miliary TB Meningitis: MRI Findings in Three Patients
*A. Kartikasalwah, M. Nazri Mn, S. Muda*

09.45-10.00 10' Revisiting the CNS Tuberculosis with Emphasis on Giant Tuberculomas and Introducing the Outer RIM Excrescence Sign
*D. Kumar, R.K. Sheoran, S.K. Bansal, O.P. Arora*

10.00-10.15 10' Tuberculosis Simulating Tumour in Brain
*U. Rashid Chaudhry*

10.15-10.30 14' Infectious Diseases of the CNS: the Importance of Local Singularities in an Increasingly Interconnected World. The Latin America Experience
*L. Lucato*

10.30-11.30 **Encephalopathies 4**
*Chairs*: M. Brant-Zawadzki, M. Papathanasiou

10.30-10.45 10' The Role of Magnetic Resonance Perfusion Imaging in the Assessment of Limbic Encephalitis with Neuronal Potassium Channel Antibody. A Case of Rapidly Progressive Dementia
*C. Nunes, M. Cordeiro, F. Silva, I. Santana, C. Moura, F. Alves*

10.45-11.00 10' MRI Imaging in Nonneoplastic Limbic Encephalitis
*M. Scharitzer, C. Baumgartner, A. Muehlebner, D. Prayer*

11.00-11.15 10' Missense PANK2-mutation without the Tiger's Eye - MR Findings in a Large Group of Patients with Pantothenate Kinase-Associated Neurodegeneration (PKAN)
*R. Fermin, A. Rolfs, P. Roa, E. Perez, R. Jimenez, J. Oviedo, H. Speckter, O. Riess, P. Bauer, H. Péturson, Ch. Klein, T. Böttcher, U. Gölnitz, B. Förster, P. Stoeter*

11.15-11.30 10' Rhombencephalitis by Listeria SPP. in Immunocompetent Patient
*J. Nunes, B.C. Gomes, M. Shamasna, R.P. Pais, M.T. Garcia*

11.30-12.30 **HIV**
*Chairs*: P. Demaerel, R. Wu

11.30-11.45 10' Neuroimaging of Immune Reconstitution Inflammatory Syndrome (IRIS) during HIV Infection
*V. Cuvinciuc, G. Martin-Blondel, H. Dumas, C. Cognard, B. Marchou, F. Bonneville*

11.45-12.00 10' Brain Metabolism and Cognitive Impairment in HIV Infection: A 3 Tesla Magnetic Resonance Spectroscopy Study
*M. Mohamed, P. Barker, R. Skolasky, O. Selnes, R. Moxley, M. Pomper, N. Sacktor*

12.00-12.15 10' MRI Spectrum of HIV Related Neurological Disorders and Evaluation of the Different MRI Techniques in Diagnosis and Prognostication of Them
*R. Badhe, R. Kakkar, R. Gandhi, S. Soneji, S. Desai*

12.15-12.30 10' Glaucoma and Blindness, an Early Axonal Diagnosis and Prevention by MRI
*M.-T. Iba-Zizen, E.A. Cabanis, A. Istoc, M. Yoshida*

14.30-16.30 Thursday, 7 October 2010 **MAGENTA HALL**

14.30-16.30 **Parkinson 1**
*Chairs*: Y. Korogi, K. Sartor

14.30-14.45 10' Ultrasonography and RM Imaging in Progressive Supranuclear Palsy (PSP)
*W. Liboni, E. Salzedo, P. Pignatta, F. Molinari, S. Giordano*

14.45-15.00 10' A Simple Method to Assess Accuracy of Deep Brain Stimulation Electrode Placement: Pre-Operative MRI and Postoperative CT Image Fusion
*M. Metello Lourenco, J. Silva, M. Ayres Basto, C. Reis, M. Jose Rosas, P. Linhares, R. Vaz*

15.00-15.15 10' High Resolution 3T Diffusion Tensor Imaging-Based Tractography for Differential Diagnosis of Parkinsonism
*J. Furtner, G. Kasprian, S. Seidel, W. Pirker, D. Prayer*

15.15-15.30 10' Correlation of Magnetization Transfer Ratios and Clinical Parameters in Late Parkinson's Disease
*M. Gavra, M Papathanasiou, E Boviatsis, D Sakas, A Gouliamos*

15.30-15.45 10' DBS Targeting of Subthalamic Nucleus by Means of 3 Tesla MR Unit: Comparison with Conventional Targeting
*G. Ricciardi, M. Longhi, G. Tommasi, S. Ottaviani, L. Bertolasi, A. Nicolato, R. Foroni, M. Tinazzi, G. Moretto, M. Gerosa, A. Beltramello*

15.45-16.00 10' Diffusion Tensor Imaging and MR-Tractography for Characteristic of Microstructural Integrity of White Matter in Patients with Parkinson's Disease (PD)
*Z. Rozhkova, I. Karaban', N. Karaban', M. Shkliar*

16.00-16.15 10' Neuromelanin MR Imaging in Dementia with Lewy Bodies (DLB) at 3T: Comparison with Parkinson's Disease and Alzheimer Disease
*S. Sugawara, M Ida, M Ishizuka, N Torozu, K Hino, Y Kubo, Y Kawaguchi, T Suzuki, S Ikuta*

16.15-16.30 10' High Field MR Findings in Lower Body Parkinsonism
*J.S.P. Tan, L.L. Chan, K.M. Ng, H. Rumpel, E.K. Tan, A. Hegde*

09.15-11.45 Thursday, 7 October 2010 **VIOLET HALL**

09.15-10.15 **Paediatrics Vascular 1**
*Chairs*: K. Yamada, P. Soares Pinto

09.15-09.45 25' Angioarchitectures, Clinical Manifestations and Endovascular Remodelings of the 24 Galenic Malformations
*Y. Iizuka, M Sugiyama, T Kunihiro, N Murata, A Katoh, T Gomi, M Nagamoto, E Kohda, S Iwabuchi, Y Tsutsumi, H Masaki, Y Konishi*

09.45-10.00 10' Collateral Pathways from the Galenic System in Cerebral AV Shunts
*M. Komiyama, T. Ishiguro, T. Morooka*

10.00-10.15 10' Cerebral Medullary Veins: Normal Anatomy and Pathologic Pattern in Fetal and Paediatric Patients
*T. Feygin, L.T. Bilaniuk, M. Epelman, R.A. Zimmerman*

10.15-11.45 **Paediatrics Vascular 2**
*Chairs*: K. Ter Brugge, Y. Iizuka

10.15-10.30 10' Endovascular Management of Pediatric Aneurysms
*R. Dawson, E Saleh*

10.30-10.45 10' Intracranial Aneurysms and Coarctation of the Aorta: A Magnetic Resonance Angiographic Screening in a Paediatric Population of 61 Patients
*L. Spinardi, C. Leoni, L. Faccioli, M. Pastore Trossello*

10.45-11.00 10' Brain Artery Stenosis in Neurofibromatosis Type 1 (NF1)
*A. D'Amico, F. D'Arco, F. Caranci, D. Melis, R. Taurisano, E. Del Giudice, G. Lama, A. Scuotto, R. Conforti, M. Melone, N. Di Paolo, A. Brunetti*

11.00-11.15 10' New Observation: The Cytotoxic Edema Has a Special Pathogenesis and Evolution in Case of the Neonatal Hypoxic-ischemic Encephalopathy
*G. Rudas, M. Bangó, Lr. Kozák, P. Barsi, M. Szabó*

11.15-11.45 25' Differential Consideration of Bilateral Basal Ganglia Lesions in Children
*G. Zuccoli, L. Flom, V. Sperling, A. Panigrahy, C. Fitz*

14.30-16.05 **Paediatrics Brain Tumors 1**
*Chairs*: E. De Luis, A. Righini

14.30-14.50 18' Pediatric Brain Tumors
*R. Zimmerman*

14.50-15.05 14' Is There Any Relationship between Radiotherapy and MRI-Signal Changes in the Basal Ganglia and/or Dentate Nucleus?
*A. Neruda, D. Prayer, I. Slavc, M. Weber*

15.05-15.20 10' Medulloblastoma: Atypical CT & MRI Findings in Children
*A. Eran, A. Ozturk, N. Aygun, I. Izbudak*

15.20-15.35 10' Contrast Behaviour of Low Grade Gliomas (LGG) during Follow-Up
*B. Bison, M. Warmuth-Metz, M. Schneckenburger, C. Mirow, A.K. Gnekow*

15.35-15.50 10' Can Malignant Transformation of Pediatric Solid Gliomas Be Predicted with MRS? A Comparison Grading Between Children and Adults
*L. Porto, M. Kieslich, U. Pilatus, F Zanella, E Hattingen*

15.50-16.05 10' Unusual Giant Spinal Teratoma in an Infant
*Y. Lu, F, Chang, W. Guo, C Chang*

16.05-17.30 **Paediatrics Brain Tumors 2**
*Chairs*: L. van den Hauwe, B. Goraj

16.05-16.25 18' Optic Pathway Gliomas in Children with and without Neurofibromatosis Type 1 - MRI-Morphologic Features
*S. Leykamm, B. Bison, A.K. Gnekow, B. Thieme, C. Mirow, L. Solymosi, M. Warmuth-Metz*

16.25-16.45 18' Infarction after Surgical Resection in Chiasmatic Low Grade Gliomas (LGG)
*B. Bison, M. Warmuth-Metz, M. Hupp, C. Mirow, J. Krauß, A.K. Gnekow*

16.45-17.00 10' Pituicytoma Presenting with Spontaneous Hemorrhage
*P. Soares Pinto, B. Moreira, M. Melo Pires, J. Xavier*

17.00-17.30 25' Cerebellar fMRI Lateralization of Language in Children after Pilocytic Astrocytoma Resection: Comparison with Healty Children
*F. Ghielmetti, A. Erbetta, S. Bulgheroni, P. Vitali, D. Riva, M.G. Bruzzone*

14.30-17.30 Thursday, 7 October 2010 **WHITE HALL 1**

14.30-16.30 **Brain Tumors 5**
*Chairs*: M.A. Weber, A. Falini

14.30-15.00 25' Characterization of Glioblastoma and Metastatic Tumor Tissue by Proton Spectroscopy and Diffusional Kurtosis Imaging
*P. Raab, E. Bültmann, A. Tabesh, U. Pilatus, E. Hattingen, F.E. Zanella, H. Lanfermann*

15.00-15.15 10' MR Characterization of Gliomas Using Arterial Spin Labeling in Combination with Multivoxel MR-Spectroscopy
*J. Furtner, G. Kasprian, M. Krssak, D. Prayer*

15.15-15.30 10' Diffusely Infiltrating Gliomas with Non-Significant Contrast-Enhancement: Is 1h-Magnetic Resonance Spectroscopy Chemical Shift Imaging a Clinically Reliable Technique for Detection of Malignant Intratumoral Areas?
*G. Widhalm, M. Krssak, G. Minchev, A. Woehrer, T. Traub-Weidinger, T. Czech, S. Asenbaum, C. Marosi, E. Knosp, J.A. Hainfellner, S. Wolfsberger, D. Prayer*

15.30-15.45 10' Single Voxel Spectroscopy in the Follow-Up of Low Grade Glioma
*A. Di Gaeta, P. Vassallo, A .A. Diano, E. Capobianco, M. Muto*

15.45-16.00 10' Conventional MRI and MR Spectroscopy in Primary Central Nervous System Lymphoma
*H. Chen, W. Guo, H. Wu, J. Lirng, C. Luo, F. Chang, C. Chang*

16.00-16.15 10' Proton Magnetic Resonance Spectroscopy Provides Relevant Prognostic Information in High Grade Astrocytomas
*C. Majós, J Bruna, M Julià-Sapé, M Cos, A Camins, M Gil, JJ Acebes, C Arús, C Aguilera*

16.15-16.30 10' 5 Year Longitudinal MRI and 1h Single Voxel MRS Follow-Up in 14 Patients with Gliomatosis Treated with Temodal, Radiotherapy and Antiangiogenic Therapy
*J. Constans, N. Courouble, F. Kauffmann, C. Collet, G. Hossu, W. Dou, S. Ruan, F. Rioult, J.M. Derlon, E. Lechapt-Zalcmann, F. Chapon, S. Valable, J.S. Guillamo, J. Theron, P. Courtheoux*

16.30-17.30 **Brain Tumors 6**
*Chairs*: S. Condette Auliac, B. Billewicz

16.30-16.45 10' Recurrence of High Grade Gliomas Treated with Bevacizumab (Anti Vascular Endothelial Growth Factor) and Irinotecan: How to Diagnose Tumour Progression on MRI?
*S. Condette-Auliac, A. Boulin, O. Coskun, L. Bozec-Le Moal, S. Aldea, S. Guieu, G. Rodesch*

16.45-17.00 10' Prevalence of Brain White Matter Signal Abnormalities in Acromegalic Patients Undergoing Magnetic Resonance Imaging
*V. Citton, R. Manara, S. Rizzati, I. Albano, A. Rebellato, E. Zanchetta, D. D'Avella, G. Pavesi, S. Dal Pos, C. Carollo, P. Maffei, N. Sicolo, C. Martini, C. Scaroni*

17.00-17.15 10' Pineal Parenchymal Tumor of Intermediate Origin: Imaging Spectrum of an Unusual Tumor in 11 Cases
*S. Komakula, M. Warmuth-Metz, P. Hildenbrand, L. Loevner, R. Hewlett, A. Osborn*

17.15-17.30 10' Intracranial Extramedullary Hematopoiesis and Concurrent Cystic Astrocytoma in a Patient with Thalassemia Major
*M.D. Aybar, I. Demirci, A. Ozturk, A.Y. Barut*

09.15-10.00 Thursday, 7 October 2010 **WHITE HALL 2**

09.15-10.15 **Head & Neck 3**
*Chairs*: W. Dillon, A. Gouliamos

09.15-09.30 10' Extraskeletal Chondrosarcoma of the Inferior Nasal Concha
*I. Demirci, M.D. Aybar, A.Y. Barut, A. Ozturk, I.N. Mutlu*

09.30-09.45 10' Characteristic Dynamic Enhancement Pattern of MR Imaging for Malignant Thyroid Tumor
*H. Hwang, Y.N. Park, Y.S. Shim, S.S. Byun, H.S. Kim*

09.45-10.00 10' Liquid-Based Cytology for Thyroid Fine-Needle Aspiration: Comparison with Conventional Smear Cytology
*H. Seo, J. Lee, Y.H. Lee*

10.00-11.00 **Head & Neck 4**
*Chairs*: S. Kan, G.K. Ricciardi

10.00-10.15 10' Computer Tomography-Guided Biopsy of the Deep-Seated Lesions in Deep facial and Skull Base Areas
*E. Wu, S.H. Ng, Y.L. Chen, Y.M. Wu*

10.15-10.30 10' Radiological Appearances of Oropharyngeal Soft Tissue Reduction with Bipolar Radio-Frequency Treatment in Sleep Disordered Breathing: A Pilot Study
*S. Ghosh-Ray, B. Kotecha, S. Chawda*

10.30-10.45 10' Duel Acquisition Extracranial CTA/ Enhanced Neck CT for Pre-transoral Laser Microsurgery Evaluation of Head & Neck Cancer Patients
*S. Weindling, J. Salassa, J. Casler, D. Chellini*

10.45-11.00 10' Bilateral Temporal Muscles Hypertrophy - Case Report and Review of the Literature
*A. Couceiro, A.P. Antunes, R. Sousa, L. Pereira, G. Sá*

14.30-17.30 Thursday, 7 October 2010 **WHITE HALL 2**

14.30-16.15 **Advanced CT Studies 2**
*Chairs*: P. Maly Sundgren, C. Strother

14.30-14.45 10' Iterative Reconstruction Algorithm for Head CT
*Z. Rumboldt, S. Tipnis, V. Spampinato, W. Huda, G. Goldsberry, A. Cianfoni*

14.45-15.00 10' Evaluation of Neuro Best Contrast Filter for Head CT
*Z. Rumboldt, V. Spampinato, W. Huda, S. Tipnis*

15.00-15.15 10' Radiation Dose Reduction in CT of the Brain: Can Advanced Noise Filtering Compensate for It?
*R. Siemund, A. Löve, D. Van Westen, L. Stenberg, C. Petersen*

15.15-15.30 10' Impact of Varying Arterial Input Functions in CT Perfusion Studies of the Brain in Pathologic Ischemic Studies
*B. Smoller, A. Cherney, S. Mangla, A. Dubey, A. Bluestone, S. Zhabin*

15.30-15.45 10' Whole Brain CT Perfusion of Arteriovenous Shunting in Arteriovenous Malformation
*J. Shankar, C. Lum*

15.45-16.00 10' Study of Computed Tomography Perfusion on Traumatic Cerebral Contusion
*A. Abdul Karim, W. Jalaluddin, A. Ghani, J. Abdullah*

16.00-16.15 10' CT, CTA, Perfusion CT Guidance of Acute Stroke Intervention Using the Penumbra Device
*M. Brant-Zawadzki, D.M. Brown, W.W. Peck, A. Ly, J. Muir, D. Mastrolia, L. Whitaker, K. Furlong*

16.15-17.30 **Advanced MR Techniques 2**
*Chairs*: R. Zimmerman, A. D'Amico

16.15-16.30 10' T2 Flair Hyperintense Signal Intensity at the Posterior Limb of the Internal Capsule: Clinical Significance in ALS Patients
*G. Protogerou, S. Ralli, I. Tsougos, I. Patramani, G.M. Hadjigeorgiou, I. Fezoulidis, E. Kapsalaki*

16.30-16.45 10' The Technique Methods and Progress of MR pH Imaging
*Z Shen, L Ning, R Wu, K Brindle*

16.45-17.00 10' The Comparison among Three Different Reprocessing Technologies for Quantitation and the Influence of Steam and Press Sequence on Metabolic Concentration
*R. Wu, X. Guo*

17.00-17.15 10' Comparative Lateralizing Ability of Multimodality MRI in Temporal Lobe Epilepsy
*K. Ercan, H. Gunbey, E. Bilir, E. Zan, A. Alhan*

17.15-17.30 10' DTI in Familiar Tuberous Sclerosis - Comparison of Fractional Anistropy and Apparent Diffusion Coefficient with Normal Subjects
*A. Varga, L. Szidonya, M. Kassay, P. Varga, G. Rudas, P. Barsi*

14.30-17.00 Thursday, 7 October 2010 YELLOW HALL

14.30-15.45 **Spine 5**
*Chairs*: T. Sola, J. Théron

14.30-14.45 10' The Tangled Cauda Equina Sign: Indicator of Significant Spinal Stenosis
*R. Sattenberg, R.K. Downs, J.O. Heidenreich*

14.45-15.00 10' Minimally Invasive Lumbar Decompression to Treat Lumbar Spinal Stenosis
*D. Schomer, M. Solsberg, W. Wong, D. Fourney, B. Chopko*

15.00-15.15 10' Posterior Vertebral Arch Cement Augmentation to Prevent Fracture of Spinous Processes after Interspinous Spacer Implant
*G. Bonaldi, A. Cianfoni*

15.15-15.30 10' Revision Surgery of Internal Fixation. Role of Neuroradiology in 86 Patients Operated
*M. Bortoluzzi*

15.30-15.45 10' Tumours with Intraspinal Component
*M. Arantes, H. Romão, M. Honovar, R. Garcia, J.R. Pereira, A.R. Vaz, M. Resende*

15.45-17.00 **Spine 6**
*Chairs*: P. Courthéoux, R. Izzo

15.45-16.00 14' Neuromodulation, a New Frontier for Neuroradiologists
*B. Georgy*

16.00-16.15 10' Spinal Cord Stimulators: Normal Positioning and Postsurgical Complications
*E. Zan, K.N. Kurt, R.B. North, D.M. Yousem*

16.15-16.30 10' Percutaneous Radiofrequency Neurotomy Is Effective in the Treatment of Lumbar Facet Joint Syndrome
*S. Marcia, A. Cauli, S. Marini, M. Marras, E. Piras, G. Mallarini*

16.30-16.45 14' "Regional" Concept of Back Pain and Therapeutic New Proposal
*J. Théron, T. Sola, L. Guimaraens, A. Casasco, P. Courtheoux*

16.45-17.00 14' Current Experience and New Indications of Liposuction in Spinal Pathology
*J. Théron, T. Sola, L. Guimaraens, A. Casasco*

# FRIDAY, 8 OCTOBER 2010
*Plenary Hall Sessions*

09.15-12.30 EUROPA AUDITORIUM

09.15-10.15 **Interventional Neuroradiology**
*Chairs*: S. Bracard, M. Gallucci

09.15-09.45 Future of Neuroendovascular Therapy. Development under Scientific Multi-Disciplinary Approach.
*A. Takahashi*

09.45-10.15 Facing the Emotional Truths of Grief Caused by Complications of Interventional Neuroradiology
*K. Goto*

10.30-12.30 **Stroke: The Brain Is Not the Heart!**
*Chairs*: E. Jacobsen, G. Scotti

10.30-10.50 Neuroradiological Approach to Brain Stroke
*G. Schroth*

10.50-11.10 Advanced Contrast-Enhanced MRI for Stroke Risk Assessment
*B.A. Wasserman*

11.10-11.30 DTI for Stroke Imaging
*K. Yamada*

11.30-11.50 Imaging of Spinal Stroke
*S. Kollias*

11.50-12.10 Endovascular Stroke Treatment: from Fibrinolysis and Aspiration to Thronbectomy and Stenting
*H. Henkes*

12.10-12.30 Penumbra and Extra Corporal Ozone Therapy
*G. Wasser*

## PARALLEL SESSIONS

14.30-17.15 Friday, 8 October 2010 **EUROPA AUDITORIUM**

14.30-16.00 **Stroke 7**
*Chairs*: L. Lemme-Plaghos, M. Negoro

14.30-14.45 10' Bridging Therapy in Acute Ischemic Stroke Patients: An Endovascular Multimodal Step-Up Approach
*S. Vallone, L. Verganti, C. Moratti, M. Malagoli, P. Carpeggiani*

14.45-15.00 10' Mechanical Thrombectomy with the Penumbra Recanalization Device in Acute Ischemic Stroke. A Matched Pair Analysis in Comparison with Intra-Arterial Thrombolysis
*C. Taschner, M. Treier, J. Weber, A. Berlis, M. Schumacher, W. Niesen*

15.00-15.15 10' Aggresive Mechanical Clot Disruption for Acute Ischemic Stroke with Low dose Intra-Arterial Urokinase after Failure of IV Thrombolysis
*S. Kim, H. Kim*

15.15-15.30 10' Early Clinical Experiences with a New Generation Flow-Enabler and Clot Retriever (Phenox Bonnetr)
*S. Felber, Z. Vajda, H. Henkes*

15.30-15.45 10' The Potential of Stent-Trievers: Experience in 180 Acute Ischemic Stroke Treatments
*T. Liebig, H. Lockau, S. Stehle, D. Dorn, S. Prothmann, A. Foerschler, H. Henkes*

15.45-16.00 10' *In Vivo* Evaluation of the First Dedicated Combined Flow Restoration and Mechanical Thrombectomy Device (Solitaire FR) in a Swine Model of Acute Vessel Occlusion
*P. Mordasini, J. Gralla, G. Schroth, U. Fischer, M. Arnold, C. Brekenfeld*

16.00-17.30 **Stroke 8**
*Chairs*: J. Walecki, A. Biondi

16.00-16.15 10' Temporary Bypass Using Enterprise Stent for Treatment of Acute Proximal Middle Cerebral Artery Thrombosis
*W. Mustafa, K. Kadziolka, A. Leautaud, L. Pierot*

16.15-16.30 10' Acute Stroke Treatment with a Self-Expandable, Fully Retrievable Intracranial Stent
*C. Roth, P. Papanagiotou, S. Behnke, S. Walter, A. Haass, W. Reith*

16.30-16.45 10' Carotid Stent Placement in Acute Stroke
*C. Roth, P. Papanagiotou, S. Behnke, S. Walter, A. Haass, W. Reith*

16.45-17.00 10' Asymptomatic Occlusion of Both Common Carotid Arteries Missed on MRA
*A. Karapurkar, N Aditya*

17.00-17.30 25' Cerebral Hyperperfusion Syndrome Following Intracranial Revascularization: Anatomic and Pathophysiologic Considerations
*J. Chung*

14.30-17.30 Friday, 8 October 2010 **ITALY HALL**

14.30-16.00 **Aneurysms 10**
*Chairs*: R. De Blasi, M. Longo

14.30-14.45 14' Microporous Membrane Covered Flow Diverting Stent for Cerebral Aneurysm Occlusion: Initial European Experience and Mid Term Follow-Up
*F. Brassel, M. Schlunz-Hendann, A. Mangold, D. Meila, M. Nolden-Koch*

14.45-15.00 10' Mid Term Experiences with the Silk Stent - Report of 51 Cases
*G. Gál, J. Nepper-Rasmussen*

15.00-15.15 10' Silk Arterial Reconstruction for Intracranial Aneurysms. Multicentric French Study on 51 Consecutive Patients
*J. Berge, A. Bonafé, H. Brunel, E. Chabert, J. Gabrillargues, K. Kadziolka, X. Barreau, L. Pierot, V. Dousset*

15.15-15.30 10' Aneurysms Treatment Using Intracranial Stent (Large Wide-Necked and Giant Aneurysms)
*L. Guimaraens, T. Sola, E. Vivas, A. Casasco, C. Diaz*

15.30-15.45 10' Silk Versus Pipeline for Reconstructive Endovascular Treatment of Intracranial Aneurysms. Technical Differences, Difficulties, Advantages and Disadvantages of Two Types of Flow Diverters
*K. Kadziolka, L. Estrade, A. Leautaud, W. Fathi, L. Pierot*

15.45-16.00 10' Can Flow Divert Stent Devices Prevent Aneurysmal Rupture? Direct CCF Following Intracavernous Carotid Aneurysm Treatment with Silk Stent
*K. Kadziolka, W. Mustafa, L. Estrade, L. Pierot*

16.00-17.30 **Aneurysms 11**
*Chairs*: G. Wilms, L. Simonetti

16.00-16.15 10' Silk Stent in the Treatment of Intracranial Aneurysms-Short and Mid-Term Experience
*M. Moura Guedes, L. Neto, P. Sequeira, J. Guedes Campos*

16.15-16.30 10' Effect of Flow Modification on Aneurysm Induced Mass Effect
*I. Szikora, ZS. Berentei, ZS. Kulcsar, M. Marosfoi, I. Gubucz, PK. Nelson, A. Berez*

16.30-16.45 10' Preliminary Results of Flow Diversion Device (Silk Stent) in the Treatment of Intracranial Aneurysms: 1 Year Follow-Up
*D. Tampieri, M. Cortes*

16.45-17.00 10' 3T MRI in the Evaluation of Brain Aneurysms Treated with Flow-Diverting Stent
*F. Toni, L. Cirillo, Af. Marliani, F. De Santis, C. Princiotta, M. Dall'olio, L. Simonetti, M. Leonardi*

17.00-17.15 10' Single Center Experience with Flow Diverters - Complications or Healing Process
*S. Bakke*

17.15-17.30 10' Endovascular Procedure Evaluation using 3 Tesla Diffusion-Weighted MR Imaging in Patients with Intracranial Aneurysms Treated by Flow Diverter Stents
*A. Biondi, A. Drier, N. Sourour, F. Di Maria, B. Jean, D. Dormont*

14.30-17.15 Friday, 8 October 2010 **BLUE HALL**

14.30-16.15 **Research 6**
*Chairs*: J. Krejza, K. Katada

14.30-15.00 25' Towards New Paradigms for Three-Dimensional Analysis of Neuroradiological Images
*D. Steinman, L Antiga*

15.00-15.15 10' 3-Tesla High-Spatial-Resolution Contrast-Enhanced MR Angiography with Parallel Imaging in Cerebral Venous and Sinus Thrombosis
*M. Lettau, R.J. Barrows, S. Heiland, M. Laible, M. Bendszus, S. Hähnel*

15.15-15.30 10' Time Resolved Angiography: Can It Be Used as a Venous Triggering Technique for Magnetic Resonance Venography ? Faisability, Usefullness in Cerebral Venous Pathology Imaging
*B. Daumas-Duport, N. David, R. Bourcier, E. Calvier, F. Toulgouat, A. Gaultier, H.A. Desal*

15.30-15.45 10' Cerebral Venous Thrombosis: Diagnostic Accuracy of Combined, Dynamic and Static, Contrast-Enhanced 4D MR Venography
*S. Meckel, C. Reisinger, J. Bremerich, M. Wolbers, S. Engelter, K. Scheffler, S.G. Wetzel*

15.45-16.00 10' Dissection of Cranial Cervical Arteries and Dural Sinus Thrombosis
*L. Divano, T. Stadnik, C. Mabiglia*

16.00-16.15 10' Susceptibilty Weighted Imaging (SWI) and Cerebrovascular Disorders
*F. Tsai*

16.15-17.15 **Research 7**
*Chairs*: H. Ghanaati, L. Saba

16.15-16.30 10' Comparison between 4D Phase Contrast MRI and Computational Fluid Dynamics with Patient specific Inflow Boundaries in Unruptured Intracranial Aneurysms
*J. Schneiders, P. Van Ooij, J. Van Den Berg, E. Van Bavel, R. Van Den Berg, A. Nederveen, C. Majoie*

16.30-16.45 10' Intracranial Aneurysms: Magnetic Resonance Imaging and Magnetic Resonance Angiography vs. Digital Subtraction Angiography
*Z. Merhemic, F. Gavrankapetanovic, M. Niksic, E. Avdagic, Z. Kadenic, U. Delic, M.M. Thurnher*

16.45-17.00 10' Comparison of 3D TOF-MRA and 3D CE-MRA at 3T for Imaging Intracranial Aneurysms
*M. Cirillo, F. Scomazzoni, A. Iadanza, M. Cadioli, N. Anzalone*

17.00-17.15 10' Vascular Malformation of the Brain
*R.S. Pakbaz, C.V. Kerber*

14.30-17.15 Friday, 8 October 2010 **INDIGO HALL**

14.30-15.45 **AVMs 1**
*Chairs*: A. Takahashi, G. Gal

14.30-14.45 10' Cavernous Malformations of the Central Nervous System: A Pictorial Essay
*A. Hegde, T. Lim, S. Mohan, W. Lim*

14.45-15.00 10' Embolization of Brain Arteriovenous Malformations with Onyx: Results and Complications
*N. Limbucci, A. Consoli, S. Nappini, F. Ricciardi, S. Mangiafico*

15.00-15.15 10' Double Arterial Catheterization in the Endovascular Treatment of Brain Arteriovenous Malformation with Onyx®
*G.S. Nakiri, R. Riva, D.G. Abub, F. Padovani, M. Khawaldeh, C. Mounayer*

15.15-15.30 10' Intraoperative Neurophysiological Monitoring and Provocative Test during Endovascular Treatment of AVMs
*B. Pabon, S. Vargas, A. Franco, J.F. Arias*

15.30-15.45 10' Use of Cervical Spinal Cord Stimulation to Treat and Prevent Arterial Vasospasm after Aneurysmal Subarachnoid Hemorrhage
*K. Slavin, P. Vannemreddy, E. Goellner, A.M. Alaraj, N. Mlinarevich, K.S. Watson, L.E. Walters, S. Amin-Hanjani, V.A. Aletich, F.T. Charbel*

15.45-17.15 **AVMs 2**
*Chairs*: B. Pabon, S. Kim

15.45-16.00 10' Transvenous Balloon-Assisted Technique in Transarterial Embolisation by Onyx-18 Injection of Intracranial dural Arteriovenous Fistulas
*N. Sourour, A. Biondi, F. Clarencon, F. Di Maria, Y. Guermazi, J. Chiras*

16.00-16.15 10' EVT of an Arterio-Venous Malformation and Dural Arterio-Venous Fistulae with Onyx. A Single Centre Experience
*A Tournade, M Musacchio, A. Lebedinsky, N. Sourour, T. Tajahmady*

16.15-16.30 10' Venous Approach in the Treatment of Cerebral Arteriovenous Malformations: About 5 Consecutive Cases
*R. Riva, M. Manisor, M. Ruggiero, M. Al-Khawaldeh, F. Trivelato-Padovani, C. Mounayer*

16.30-16.45 10' A Late Haemorrhagic Complication in a Cured Arterio-Venous Malformation
*D. Le Feuvre, A. Taylor*

16.45-17.00 10' Imaging of Radiosurgical Planning and Follow-Up of Arteriovenous Malformations treated by Gamma Knife: Ten Years Experience
*P. David, N. Massager, N. Sadeghi, P. Jissendi, D. Balériaux, I. Delpierre, C. Neugroschel, B. Lubicz*

17.00-17.15 10' Slow-Injection Technique Using Warmed Diluted NBCA
*K. Nakazawa, K. Murao*

14.30-17.30 Friday, 8 October 2010 **GREEN HALL**

14.30-16.15 **fMRI 7**
*Chairs*: M. Thurnher, G. Polonara

14.30-15.00 25' A Possible Role of Brodmann's Area 8 in Pre-Surgical fMRI
*J. Valk, N. Van Vucht, P.H. Pevenage*

15.00-15.15 14' Pitfalls in fMRI
*S. Haller, A. Bartsch*

15.15-15.30 10' The Shape of Motor Resonance: Right- or Left-Handed?
*M. Cabinio, V. Blasi, P. Borroni, A. Iadanza, G. Cerri, G. Scotti, A. Falini*

15.30-15.45 10' Functional Connectivity. MRI of Language Network in Patients with Drug-Resistant Epilepsy
*E. Pravatà, C. Briganti, C. Colosimo, D. Mantini, C. Sestieri, A. Tartaro, M. Caulo*

15.45-16.00 10' The Effects of Paradigm Selection and Post-Processing on fMRI Language Lateralization: Threshold-Independent Methods, I
*V. Tóth, G. Rudas, L.R. Kozák*

16.00-16.15 10' The Effects of Paradigm Selection and Post-Processing on fMRI Language Lateralization: Threshold-Dependent Methods, II
*L. Kozak, V. Toth, G. Rudas*

16.15-17.30 **fMRI 8**
*Chairs*: G. Dal Pozzo, F. Caranci

16.15-16.45 25' Neuromarketing: Is fMRI Unveiling Consumer's Unconscious Behaviors?
*L. Hermoye*

16.45-17.00 10' Functional MR Imaging of Patients with Mild Aphasia after Stroke: Activation of Language Network from Acute to Chronic Phase and Preliminary Results of Early Rehabilitation Effect
*C. Ambrosi, F. Mattioli, L. Mascaro, L. Biagi, M. Tosetti, R. Gasparotti*

17.00-17.30 15' The Prognostic Value of fMRI and H1-MRS spectroscopy in the Study of Patients in Vegetative State
*D. Cevolani, M. Maffei, R. Agati, A. Battistini, R. Piperno, M. Leonardi*

14.30-16.30 Friday, 8 October 2010 **MAGENTA HALL**

14.30-16.30 **Encephalopathies 5**
*Chairs*: M. Savoiardo, Z. Rumboldt

14.30-14.45 10' Acute Toxic and Auto-Immune Mediated Encephalopathies
*P. Demaerel*

14.45-15.00 10' Amygdalar MR Changes in Systemic Lupus Patients
*K. Peterová, J. Brabec, R. Svobodová, M Olejárová, J. Závada, M. Fojtíková, Z. Potysová, S.S. Pesicková, A. Vojtechová, V Peterová, P. Petrovický*

15.00-15.15 10' Posterior Reversible Encephalopathy Syndrome - Type of Edema Depends on Serum Albumin Levels
*A. Pirker, B. Voller, L. Kramer, E. Auff, D. Prayer*

15.15-15.30 10' Posterior Reversible Encephalopathy Syndrome with Obstructive Hydrocephalus
*C. Wirojtananugoon, J. Laothamatas*

15.30-15.45 10' Neuroimaging Findings in Osmotic Demyelination Syndrome. A Review of Typical and Atypical Findings
*N. Siddiqui, LCH. Cruz Jr, I. Cravo, G. Zuccoli*

15.45-16.00 10' Diffusion Tensor Imaging and T2 Relaxometry in Primary Sjogren's Syndrome
*L. Tzarouchi, N. Tsifetaki, S. Konitsiotis, A. Zikou, L. Astrakas, V. Botzoris, A. Drosos, M. Argyropoulou*

16.00-16.15 10' Revised Classification Criteria of Wernicke Encephalopathy
*G. Zuccoli, N. Siddiqui, R. Nardone, Y. Saito, I. Cravo, Lch. Cruz Jr., R. Sechi*

16.15-16.30 10' Wernicke's Encephalopathy: The Best Way to Make Early Diagnosis
*D. Machado, A. Bocchio, A.M. Rosano', M. Oggero, N. Milloz, G. Doveri, T. Meloni*

14.30-17.00 Friday, 8 October 2010 VIOLET HALL

14.30-16.15 **Foetal MRI - Round Table**
*Chairs*: A. Rossi, N. Girard, M. Resta

14.30-14.45 15' Normal Fetal Brain
*P. Griffiths*

14.45-15.00 15' Fetal Brain Injury
*A. Righini*

15.00-15.15 15' Fetal Supratentorial Malformations
*O. Glenn*

15.15-15.30 15' Anomalies of the Posterior Fossa and the Spinal Ord. Fetal MRI
*C. Hoffmann*

15.30-15.45 15' Advanced Techniques for Fetal Brain in Utero
*E. Grant*

15.45-16.15 30' **Discussion**

16.15-17.00 **Foetal MRI 2**
*Chairs*: A. Rossi, N. Girard, M. Resta

16.15-16.30 10' Imaging Findings and Utility of Fetal Central Nervous System MRI
*G. Papaioannou, D. Loggitsi, I. Kampas*

16.30-16.45 10' Development of the Hippocampal Region Demonstrated by Fetal MRI
*D. Bajic, N. Canto Moreira, J. Wikström, R. Raininko*

16.45-17.00 10' In Utero Tractography of Callosal Agenesis
*G. Kasprian, C. Mitter, Pc. Brugger, M. Schmid, R. Wasicky, F. Stuhr, D. Prayer*

14.30-17.30 Friday, 8 October 2010 WHITE HALL 1

14.30-15.45 **Brain Tumors 7**
*Chairs*: L. Albini Riccioli, I. Pronin

14.30-15.00 25' Clinical fMRI and DTI. Preoperative Functional Neuroimaging
*C. Stippich*

15.00-15.15 10' Role of Magnetic Resonance Tractography in the Preoperative Planning and Intraoperative Assessment of Patients with Intra-Axial Brain Tumors
*A. Romano, L.F. Calabria, V. Coppola, L. Figa' Talamanca, V. Cipriani, S. Pugliese, L.M. Fantozzi, A. Bozzao*

15.15-15.30 10' Integration of Functional MRI and Intra-Operative MRI Provides a High Degree of Precision and Confidence at Surgical Brain Tumor Resection
*N. Chepuri*

15.30-15.45 10' Exploring Functional Connections in the Living Human Brain with MR Tractography and Intraoperative Subcortical Mapping
*A. Castellano, L. Bello, A. Iadanza, E. Fava, A. Casarotti, C. Papagno, G. Scotti, A. Falini*

15.45-17.30 **Brain Tumors 8**
*Chairs*: W.Y. Guo, A. Ramos, C.O. Ortiz Vasquez

15.45-16.15 25' "Leading Edge" Gamma Knife Stereotactic Radiosurgery for Patients with Recurrent Glioblastoma Multiforme
*M. Brant-Zawadzki, C.M. Duma, B.S. Kim, P.V. Chen, M.E. Plunkett, R. Mackintosh, F. Kamyar, J. Noonan, G.A. Mendez, D. Furman, A. Kim, R.O. Dillman*

16.15-16.30 10' Evaluation of Corticospinal Tract Radiation Exposure by Implementation of Tractography in Gamma Knife Treatment Planning of Cerebral AVMs
*G. Ricciardi, F. Lupidi, R. Foroni, F. Pizzini, A. Nicolato, M. Longhi, E. Piovan, M. Gerosa, A. Beltramello*

16.30-16.45 10' Potential Value of CT Perfusion Maps in Differentiating High Grade Glioma Recurrence from Radiation Necrosis
*E. Fainardi, V. Ramponi, B. Urbini, M. Borrelli, A. Saletti, A. Bernardoni, P. Api, R. Schivalocchi, F. Cartei, M. Cavallo, S. Ceruti, R. Tamarozzi*

16.45-17.00 10' Perfusion Measurement with T1 weighted Magnetic Resonance Imaging in Patients with Primary Brain Tumors - Evaluation of Radiation Necrosis and Tumor Recurrence
*V.A. Larsen, H.J. Simonsen, I. Law, H.B. Larsson, A.E. Hansen*

17.00-17.15 10' CT Perfusion in Diagnosis of Radiation Necrosis
*I. Pronin, M. Dolgushin, L. Fadeeva, A. Podoprigora, S. Serkov, A. Golanov, K. Nikitin, V. Kornienko*

17.15-17.30 10' Role of MR Spectroscopy in Differentiating Radiation Necrosis from Tumor Recurrence, Effects of Radiation Injury and the Application of Prediction Models in Clinical Decision Making
*A Elias, R. Carlos, E. Smith, P.C. Sundgren*

14.30-17.30 Friday, 8 October 2010 **WHITE HALL 2**

14.30-15.30 **Brain Heart 1**
*Chairs*: A. Beltramello, S. Roosendaal

14.30-14.45 10' Early CT Signs in Out-of-Hospital Cardiac Arrest Survivors: Temporal Profile and Prognostic Significance
*J. Inamasu, S. Miyatake, M. Nakatsukasa, K. Kobayashi, M. Honda*

14.45-15.00 10' Global Change of Cerebral Hemodynamics in Patients with Chronic Heart Failure
*C. Nasel, E. Stift, T. Sykora, T. Kircher, B. Filka, G. Reiter, H. Frank*

15.00-15.15 10' The Relationship between Leukoaraiosis and Heart Function
*H. Seo, S.H. Kim, Y.H. Lee*

15.15-15.30 10' Neuroimaging Findings after Pediatric Cardiac Arrest
*G. Zuccoli, A. Panigrahy, C.R. Fitz, D. Willaman, E.L. Fink*

15.30-17.30 **Trauma 1**
*Chairs*: A. Taylor, D. Zimatore

15.30-15.45 10' Importance to Forensic Aims of Virtual Autopsy Obtained Using Tridimensional Multi-Slice Computed Tomography (3D-MSCT) in the Study of Fatal Single Gun-Shots Wounds to the Head
*T. Tartaglione, L. Filograna, S. Gaudino, M. Sciandra, R. Calandrelli, C. Colosimo*

15.45-16.00 10' Non-Accidental Pediatric Central Nervous System Trauma
*R. Zimmerman*

16.00-16.15 10' Neuroimaging Findings in Abusive Head Trauma
*G. Zuccoli, A. Panigrahy, R. Berger*

16.15-16.30 10' Long-Term Consequences of "Minimal" Traumatic Brain Injury: The Role of MRI and 99mTc-SPECT
*G. Bommarito, R. Manara, D. Cecchin, N. Jelcic, M. Dam*

16.30-16.45 10' Change of Regional Cerebral Function in Subjects with Post-Traumatic Stress Disorder (PTSD) Survived the Earthquake of April 6, 2009 in L'Aquila: Preliminary Reports
*A. Catalucci, M. Mazza, F. Fasano, E. Ciutti, M. Anselmi, F. Di Salle, M. Gallucci*

16.45-17.00 10' Quantitative DTI Tractography of the Uncinate Fascicle: Differentiaton between Traumatic Injury and Abnormalities in Vascular Disease and Alcoholism
*T. Kurki, J. Laalo, J. Karhu*

17.00-17.15 10' Diffusion Tensor Imaging and Tractography of Traumatic Brachial Plexus Palsies. Preliminary Experience
*R. Gasparotti, G. Lodoli, M. Frigerio, C. Ambrosi*

17.15-17.30 10' CT Angiography in Brain Death Diagnosis: Clinical Experience in 184 Patients
*M. Musacchio, A. Meyer, I. Manoila, A. Lebidensky, J-C. Zinck, H. Oesterle, N. Stahl, A. Bianchi, T. Tajahmady, A. Tournade*

14.30-17.30 Friday, 8 October 2010 **YELLOW HALL**

14.30-16.30 **Spine 7**
*Chairs*: I.S. Choi, J. van Goethem

14.30-14.45 10' Efficacy of Percutaneous Vertebroplasty with Calcium Solfate: A Preliminary Experience
*S. Marcia, S. Marini, E. Piras, M. Marras, C. Boi, G. Mallarini*

14.45-15.00 10' X-Press BKP: A Preliminary Experience
*S. Marini, S. Marcia, C. Boi, E. Piras, M. Marras, G. Mallarini*

15.00-15.15 10' Preliminary Experience with New Synthetic Ceramic Bone Substitute Cerament™ Spine Support in Vertebral Compression Fracture (VCF): Short Term Follow-Up at 9 Months about 15 Cases
*F. Zeccolini, G. Ambrosanio, P. Vassallo, A. Lavanga, G. Guarnieri, M. Muto*

15.15-15.30 10' Safety and Clinical Efficiency of Percutaneous Vertebroplasty in the Elderly (>/= 80 year-old)
*Y. Guermazi, F. Clarençon, E. Cormier, B. Jean, M. Rose, J. Chiras*

15.30-15.45 10' Percutaneous Vertebroplasty for Osteoporotic Fractures: Experience with High Viscosity Cement Using a Hydrolic Injection Device, the "Confidence" System
*B. Georgy*

15.45-16.00 10' "Primary Care" Vertebroplasty Clinic in a Free-Standing, Radiologist Owned Diagnostic Imaging Center. Diagnosis, Treatment, Prevention, and Follow-Up of VCFS
*H. Hatten, Jr.*

16.00-16.15 10' One Session Multi-Level Vertebroplasty: Indications and Results of 55 Patients
*G. Guarnieri, R. Izzo, P. Vassallo, A. Lavanga, G. Ambrosanio, A. Di Gaeta, M. Muto*

16.15-16.30 10' Risk of Secondary Vertebral Fracture Following a Vertebroplasty and Predisposing Clinical Factors
*E. Piovan, M. Rossini, L. Idolazzi, S. Adami, A. Beltramello*

16.30-17.30 **Spine 8**
*Chairs*: M. Muto, R. Tamarozzi

16.30-16.45 10' Preliminary Experience with Vertebral Body Stenting System VBS Synthes for the Treatment of Osteoporotic Vertebral Compression Fracture (VCF): a Follow-Up at 12 Months About 20 Cases
*G. Ambrosanio, F. Zeccolini, E. Capobianco, G. Guarnieri, M. Muto*

16.45-17.00 10' Technical Approach of Spinal Fracture with Osseofix
*G. Grillea, S. Carlino, V. Galasso, E. Venditti, S. Metanbou, A. Tarantino, L. Testaverde, A. Gioiosa, G. Garreffa, C. Colonnese, M. Bartolo*

17.00-17.15 10' Radiofrequency (RF) Kyphoplasty in Comparison to (BKP) Balloon Kyphoplasty: A Prospective Evaluation
*R. Pflugmacher, R. Bornemann, K. Kabir, D.C. Wirtz, T. Randau*

17.15-17.30 10' Percutaneous Anterior Column Stabilization of Focal Metastatic Lesions of the Spine: The Value of Plasma-Mediated Radiofrequency Ablation before Cement Injection
*B. Georgy*

# SATURDAY, 9 OCTOBER 2010

*Plenary Hall Sessions*

09.15-13.00 **EUROPA AUDITORIUM**

09.15-10.15 **Neuroradiology of Trauma**
*Chairs*: R. Zimmerman, A. Beltramello

09.15-09.35 Minor Brain Trauma: Pathology, Imaging and Clinical Aspects
*D. Chakeres*

09.35-09.55 Vascular Trauma
*U. Limaye*

09.55-10.15 Traumatic Intradural Arterial Aneurysm(s): Etiologies, Clinical Manifestation and Treatment Strategies: Experiences in Thailand (and Some SE Asian Countries)
*S. Pongpech*

10.15-12.00 **Case Discussion**
*A. Osborn with M. Thurnher*

12.00-13.00 **Closing Ceremony**

Welcome to Istanbul 2014
*Saruhan Cekirge*

Farewell
*Marco Leonardi*

MEET THE EXPERT

| TUESDAY, 5 OCTOBER 2010 | | RED HALL |
|---|---|---|
| 14.30-15.30 | Education, Training and Credentialing of Neuroradiologists Around The World<br>*Anton Hasso* | |
| 15.30-16.30 | A Life in Neuroradiology<br>*Michael Huckman* | |
| **WEDNESDAY, 6 OCTOBER 2010** | | **RED HALL** |
| 14.30-15.30 | Reflections on Therapeutical Approaches<br>*Luc Picard* | |
| 15.30-16.30 | A Personal Approach to Interventional Neuroradiology<br>*Anton Valavanis* | |
| 16.30-17.30 | Conversation with Bill Dillon: Diagnosis and CT-Guided Treatment of Spinal Pain, Including Spontaneous Intracranial Hypotension<br>*William Dillon* | |
| **THURSDAY, 7 OCTOBER 2010** | | **RED HALL** |
| 14.30-15.30 | A Life in Neuroradiology<br>*Ugo Salvolini* | |
| 15.30-16.30 | Conversation with Anne Osborn<br>*Anne Osborn* | |
| **HOW I DO IT SESSION** | | **BLUE HALL** |
| 16.00-17.30 | Small Vessel Ischemic Disease: Pathophysiology, Diagnosis, and Clinical Impact<br>*Nick Bryan, Michel Bilelo* | |
| **FRIDAY, 8 OCTOBER 2010** | | **RED HALL** |
| 14.30-15.30 | Conversation with Katsuya Goto<br>*Katsuya Goto* | |
| 15.30-16.30 | How to Deal with Technical Improvement and Progress in Interventional Neuroradiology<br>*Günther Erich Klein* | |
| 16.30-17.30 | A Life in Neuroradiology<br>*N.K. Mishra* | |

bomas. In addition the cystic part usually is in the inferior part of the orbit bulging the inferior eyelid and not the superior as in our case. The main difference is however the complete absence of globe in congenital cystic eye. Extraocular muscles are usually absent or hypoplastic. Meningoencephalocele presents with a cystic structure in the superomedial canthal area and is caused by a defect of the cranio-orbital bones.

Congenital cystic eye is also commonly associated with other malformations, such as contralateral microphthalmia with cyst and nonocular abnormalities, including facial midline malformations. Intracranial abnormalities are rarely described in literature, such as agenesis of corpus callosum, basal encephalocele and midbrain deformity. Nonocular abnormalities are more frequent when there is bilateral ocular involvement.

In our case MRI helped making the diagnosis and by depicting correctly the two components of the lesion and the absence of intracranial extension can have an important role in preoperative management. In addition, it is essential to rule out brain anomalies, like the corpus callosum hypoplasia observed in our patient.

15.15-15.30 10'

**Evaluation of Middle Interhemispheric Variant of Holoprosencephaly (Syntelencephaly) by Diffusion Tensor Imaging and Fiber Tractography**

E. Zan, E. Pasaoglu, N. Bulakbasi
*Meditom Imaging Center; Ankara, Turkey*

*Purpose*: The middle interhemispheric variant of holoprosencephaly (HPE) is a rare malformation characterized by failure of separation of cerebral hemispheres in the posterior frontal and parietal region. Our aim is to demonstrate the structural changes in white matter tracks by diffusion tensor imaging (DTI) and fiber tractography.

*Approach/Methods*: Three pediatric patients with seizures and developmental delay were evaluated with conventional MR imaging and DTI. Images were acquired using 8-channel SENSE head coil on 3 T whole body MR scanner equipped with explorer gradients (40 mT/m). Diffusion tensor imaging sequence was obtained by using single-shot spin-echo echo-planar sequence (SE-EPI), with diffusion gradients applied in 16 noncollinear directions and $b = 800$ s/mm$^2$ (shortest TR; 60 ms TE; 2 NSA) in 6 min.

Sixty axial slices were acquired with 224 x 224 mm field of view and 2 mm slice thickness. A 3D TFE T1 sequence also was acquired for background imaging. Diffusion tensor imaging data were analyzed by using fiber track package (release 2.5.3.0.).

Fiber tracking was performed by line propagation method using minimum FA value of 0.15, maximum angle change of 27 degree and minimum fiber length of 10 mm.

*Findings/Discussion*: The posterior frontal and parietal lobes were fused with normal interhemispheric separation of the basal forebrain, frontal and occipital poles. In all cases the body of corpus callosum was dysgenetic, septum pellucidum was absent and anterior cerebral artery was unpaired. Anterior interhemispheric fissure and falx were present. Subepandymal nodular gray matter heterotopia was evident. The sylvian fissures were connected abnormally across the midline. The midline 3rd ventricle was intact in all cases and thalamus, caudat nuclei and lentiform nuclei were located appropriately and separated. Diffusion tensor imaging provided precious information about the relation between the remnant tracts of corpus callosum, atypically located superior longitudinal fasciculus, abnormal interhemispheric connections and distorted upper corticospinal tracts.

*Summary/Conclusion*: MR tractography can demonstrate precisely the structural changes in white matter tracts as well as in their connections influenced by abnormal fusion of posterior frontal and parietal lobes. Diffusion tensor imaging can delineate efficiently the association between effected white matter tracts and heterotopic gray matter. Even though clinically correlated further studies are necessary, DTI can be a promising method to prognosticate developmental achievements of the affected children.

## Metabolic Pathology I

*Chairs*: R. Raininko, P. Ambrosetto

15.30-15.45 10'

**Neuroimaging of Toxic Encephalopathy**

C. Chen
*Tri-Service General Hospital; Taipei, Taiwan*

Toxic encephalopathy refers to neuro-behavior disturbances after exposures to external or internal toxins, which are produced by acquired (in this talk to exclude the inborn error) metabolic derangements. In cases where the brain damages are limited to the cerebral white matters, it is then referred to as toxic leukoencephalopathy. The diagnosis requires a high index of suspicion by the clinicians who see the patients at outpatients in chronic cases and ER or ICU at acute setting. The same suspicion index applies to radiologists who read the imaging. So, it is important for the radiologists to know the possible etiologies, the underlying pathophysiological mechanisms, the important factors that might aggravate the CNS injury, and the role of imaging techniques in exploring the various aspects of brain damages in toxic encephalopathy.

The etiologies for toxic encephalopathy could be categorized into external and internal metabolic factors. External causes include therapeutic drugs (antineoplastic , antibiotics, immunosuppressants and anti-epileptics), recreational substances (MDMA, toluene, cocaine, heroin, N2O, ethanol e.t.c.), environmental and occupational exposure (CO, mercury, methyl bromide, industrial solvents, arsenic, and lead) , and accidental intake of poisonous substances or suicidal attempt (CO, methanol, ethylene glycol, cyanide and hypoglycemics) ; internal causes encompass metabolic derangements that involve liver function (ammonia and mangneses), electrolytes (sodium) and glucose (hyperglycemia) and nutritional deficiency (thiamine and cobalamin). The mechanisms of brain damages after exposure to the toxins remain unclear in most of the cases. However, understanding the basic pathophysiologies may help in interpreting the patterns of brain injuries. For example, there are a couple of external or internal toxins that may cause cellular energy failure either involving the electron transport chains in mitochondria or conversion of carbohydrate to energy. In Wernicke¡¦s encephalopathy with thiamine deficiency, the lesion distributions are typically implicated in gray matters vulnerable to energy failure such as the peri-aqueductal grey matter, dentate nuclei of cerebellum and dorsomedial thalamic nuclei. Similar pattern and mechanism of injuries could be seen in medtronidazole encephalopathy and methyl bromide intoxication. While tissue hypoxia as a result of the deprivation of oxygen supply or the usage of glucose as energy source in CO intoxication, cyanide poisoning or hypoglycemia caused by suicidal intake of hypoglycemics, the lesion distributions are more or less embroiled in the basal ganglion, thalami and sensorimotor cortex. When targets of toxins are considered, particularly in toxic leukoencephalopathy, the damages of cellular and tissue components such as myelin (by toluene, for exam-

ple), axons ( by MDMA), oligodendrocytes (by cyclosporine), astrocytes (by methotrexate) as well as blood vessels (by radiataion and Carmustine) determine the patterns of tissue injuries in macroscopic imaging. If we look at the mechanism at subcellular level that involves neurotransmitters, typical examples are MDMA (and cocaine) that block the uptakes of serotonin while MPTP (methylphenyletetrahydropyridine, a synthetic heroin) induces striatal dopamine deficiency and Parkinsonism, and blockage of dopamine transporter by cocaine. Moreover, hyperammonemia in hepatic encephalopathy appears to cause neurotoxicity by interacting with glutamate/glutamine metabolism.

The role of neuroimaging is important both at acute setting and chronic course because it could be the first test that indicates the etiology of encephalopathy and exclude the other non-toxic causes. The brain injuries seen on neuroimaging in toxic encephalopathy are generally symmetrical (in energy failure) but sometimes it could be multi-focal (in levamisole/5 FU leukoencephalopathy). Diffusion weighted images may sometimes help in differentiating vasogenic from cytotoxic edema and in predicting prognosis although both vasogenic and cytotoxic lesions could be reversible. MR spectroscopy has the potential of revealing the status of energy failure (showing lactic acidosis) and derangement of neurotransmitters (glutamate and glutamine in hepatic encephalopathy). Quantitative analysis of white matter injures which may otherwise not be detected on conventional MRI can be shown using diffusion tensor imaging or magnetization transfer technique. Cognitive functional impairments such as working memory can be assessed with BOLD-based functional MRI. In this mini-course, a pictorial illustration of neuroimaging findings in toxic encephalopathy will be presented.

15.45-16.00 10'

### Efficacy and Safety of Iron Chelating Agent Deferiprone in Patients with Pantothenate Kinase-Associated Neurodegeneration (PKAN)

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*Objective*: To assess the efficacy and safety of iron chelating agent Deferiprone in patients with Pantothenate Kinase-Associated Neurodegeneration (PKAN) by 1) measuring iron concentration in the globus pallidus on brain MRI, and 2) evaluating the changes in the scores of Burke-Fahn and Marsden Dystonia Rating Scales (BFMDRS) and health-related quality of life scales (SF-36 and CHQ-PF50) after 6-month therapy. Safety endpoints include haematological examinations. Background: PKAN is a rare autosomal recessive disorder associated with brain iron accumulation. The disease has onset in early childhood with dystonia as predominant feature, associated with retinopathy, parkinsonism, ataxia, spasticity. Brain MRI changes are virtually pathognomonic of PKAN. The diagnostic changes seen on T2-weighted images include a central hyperintense signal in the medial globus pallidus (GP), surrounded by a region of signal hypointensity, called the "eye of the tiger sign". At present, no cure is available. PKAN is caused by a defect in the pantothenate kinase 2 gene (PANK2) that encodes a pantothenate kinase that is specifically expressed in the brain and is essential for coenzyme A biosynthesis. Phosphopantothenate, the product of pantothenate kinase, normally condenses with cysteine in the following step of coenzyme A synthesis. High cysteine concentration has been found in the GP of patients with PKAN. This abnormal deposition might account for the regional iron accumulation seen in these patients and may be responsible for oxidative damage in these regions. Rationale of the study: Oxidative damage has generally been implicated in pathologies associated with organ iron overload and in some neurological disorders in which iron accumulates in specific areas of the brain. In systemic iron overload, the use of iron chelators has an unquestionable therapeutic record, particularly in the treatment of hemochromatosis and more recently in preventing or reversing iron-provoked cardiac failure in thalassemia. Major contributions to the recent success in the treatment of iron overload are the advent of non-invasive techniques for assessing organ iron overload and the introduction of MRI measurements of iron accumulation in organs such as liver, heart and brain. Recent data suggest a radiological and clinical improvement with iron-chelating treatment in patients affected by Friedreich disease histopathologically characterized by iron accumulation in heart muscle, dentate nuclei and spinal cord. This evidence led to the suggestion that chelation of labile iron from selective brain deposits may be a possible treatment for PKAN and other neurological disorders. In PKAN, despite the evidence of iron accumulation in GP, the pathophysiological role of iron accumulation as causative factor in neuronal damage remains to be established. Furthermore, the notion that accumulated iron can directly lead to oxidative damage is still to be proved. In addition, the design of an orally active iron chelator not interfering with basic functions is a demanding task. Deferiprone is an iron chelating agent effective in promoting iron excretion and in preventing the progression of iron accumulation. Design-setting: PhaseII two-center clinical trial study. Methods: We conducted an open oral administration of Deferiprone (25 mg/kg/day) in 9 patients (3M/6F, age range:10-38) with genetically confirmed diagnosis of PKAN. Subjects were imaged on a Siemens Magnetom Avanto 1.5 T system before and after chelating treatment. In order to detect iron deposition in the GP, T2* Relaxometry was performed with a multi-echo gradient echo sequence (GRE) (12 echo times 5/55 msec). R2* maps were calculated measuring the signal decay of the multi-echo GRE sequence and estimate the mean value of iron concentration for each nucleus and for each time point. The differences in iron concentration between the two time points, i.e. the different R2* values, were compared using a paired two-tailed t-test. Clinical assessment, including standardized videotape recording and evaluation of dystonia with the BFMDRS, was repeated every two months; evaluation of health-related quality of life was conducted before and after treatment. Blood cell count was performed weekly, complete haematological assessment was performed every two months. Results: One patient dropped out because of neurotropenia. Deferiprone was overall well tolerated. There was no change of the clinical status and in the scores obtained at the BFMDRS and at the SF-36 scales before and after treatment. T-test showed a significant reduction of iron content in GP after treatment ($p = 0.0468$). Conclusions: Our data demonstrate the effect of Deferiprone in removing iron from specific brain areas in PKAN, without clinical amelioration. This might depend on the small number of patients

# Palazzo della Cultura e dei Congressi - Violet Hall
# Tuesday, 5 October - 14.30-17.15

# COMMUNICATIONS

## Malformations 1

*Chairs*: C.Y.S. Chen, C. Carollo

14.30-15.00 25'

Introductory Lecture

**The Encephalopathic Child**

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Encephalopathy is a common paediatric emergency associated with a high risk of morbidity, mortality and long term neurodevelopmental delay in survivors. Prompt diagnosis of the cause of encephalopathy enables the paediatrician to deliver specific medical or surgical treatment that will facilitate a better short and long term outcome. Diagnostic imaging plays a pivotal role in diagnosis.

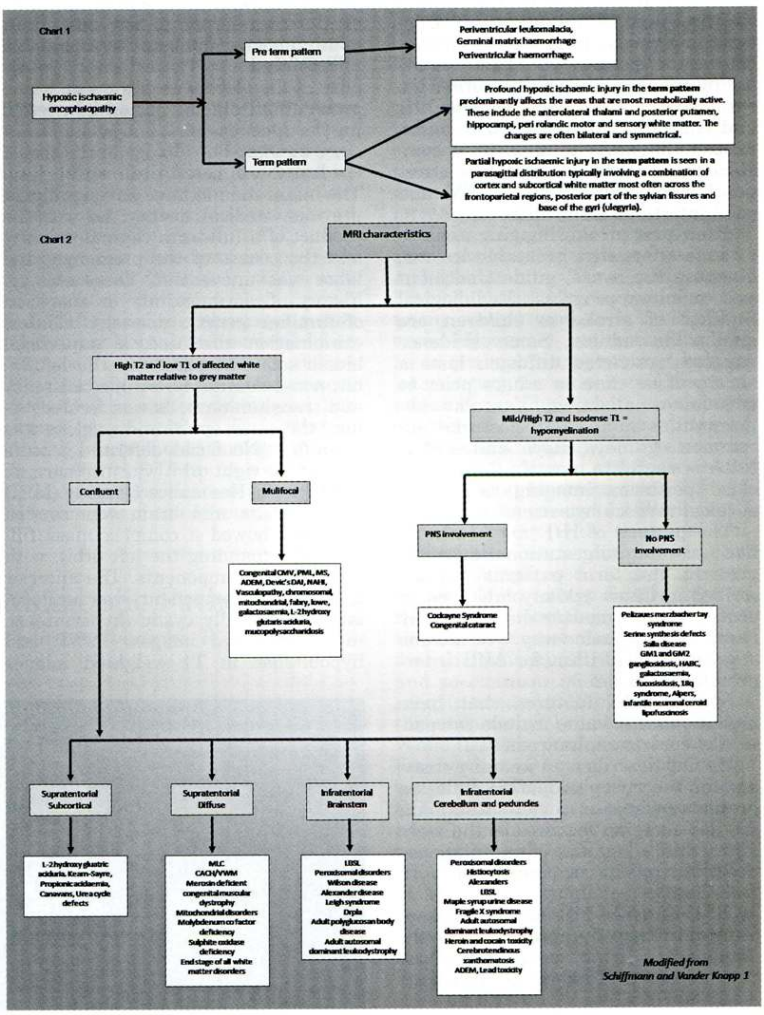
Encephalopathy has many causes. The differential diagnosis includes non accidental injury,trauma, metabolic syndromes, meningo-encephalitis, toxins, hypoxia, demyelination, stroke, haemorrhage and tumours.

We describe an approach that helps us formulate an imaging strategy using US, CT and MRI. The key information that helps both clinician and radiologist narrow the broad differential diagnosis includes the age of the child, nature of symptom onset, past medical history, birth history, genetic factors, exposure to toxins, as well as social and immunological factors.

Ultrasound can be used to diagnose periventricular/germinal matrix haemorrhage, birth asphyxia, some congenital malformations and tumours. It is an easily available and can be performed with minimal or no disturbance of the sick neonate. However, cranial US has a low sensitivity in term babies with hypoxic-ischemic injury.

CT is widely available and often used in the acute setting as the initial investigation. It is of crucial importance to do this investigation as quickly as possible. An unenhanced CT is most often adequate. Contrast should be given when complications of meningitis and or venous thrombosis is suspected. CT is sensitive in the detection of haemorrhage, fractures, stroke, some forms of malignancy and congenital malformations. It is limited relative to MRI in the detection of white matter disease as well as neuronal necrosis.

MRI is the most sensitive for white matter disease and hypoxia/infarction. It should not be delayed by other imaging eg:- CT /US. A basic protocol should include T1,T2,DWI,FLAIR and gradient echo sequences. More advanced protocols for specific diagnosis include sequences specific for neonates and older children. T1 volume in epilepsy, MRA/MRV for vascular anomalies, proton density for non accidental injury, MR perfusion for a vasculitis or moya moya, MR spectroscopy and gadolinium enhanced sequences. The pattern of injury may be classified as symmetrical or asymmetrical. A symmetrical pat-



tern is more commonly seen in birth injury, metabolic and toxic causes of encephalopathy. Stroke, infection, trauma and malignancy tend to have an asymmetrical pattern of injury. There is overlap between these two patterns of injury. In non accidental injury (NAI) the primary manifestations of intracranial injuries are subdural haematoma, cerebral oedema, hypoxic ischaemic encephalopathy (HIE), cortical contusions and shearing injury. The features of a subdural haematoma that raise concerns of NAI are described. Cortical contusions in accidental trauma are often accompanied by a fracture. If the head is stationary they occur at the site of impact. If the head is moving a contre coup injury may occur. Contusions tend to occur in the frontal/temporal lobes and parasagittal cortex adjacent to the falx. Infection resulting in meningo-encephalitis can be viral, fungal or bacterial. CT is often the first line of investigation. Contrast is given to diagnose the complications of meningitis. These incude hydrocephalus, abscess, cerebritis, thrombosis, infarction, ventriculitis and empyema. MRI is used to assist further diagnosis of meningitis complications, herpes encephalitis (temporal lobe predilection), ADEM and para-infectious cerebellitis

Paediatric stroke imaging aims to exclude alternative treatable lesions, diagnose the cause, guide treatment and monitor progress. Radiological findings of stroke in children are similar to adults. Some evidence suggests restricted diffusion lasts a shorter time than in adults prior to pseudo-normalisation. Vascular abnormalities in paediatric stroke are common eg:-moya moya and AVMs. MRA is useful to identify these. Cerebral perfusion imaging can assist surgical revascularisation.

The pattern of HIE maybe classified according to gestational age. The preterm and term patterns are described in Chart 1.Many inherited or acquired white matter disorders may result in encephalopathy. We include a practical algorithm for MRI interpretation.Chart 2

Special MRI features that have high diagnostic value include the pattern of contrast enhancement.1

Having described an imaging strategy for the encephalopathic child we present a pictorial review describing the key imaging features of the wide differential diagnosis of encephalopathy in the paediatric population.

*References*

1 RSchiffmann, MS van der Knaap. An MRI based approach to the diagnosis of white matter disorders. Volume 72,Number 8, February 2009. 750-75

15.00-15.15 10'

**Congenital Cystic Eye with Corpus Callosum Hypoplasia**

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*Introduction*: Congenital cystic eye is a rare congenital malformation resulting from partial to complete failure in the invagination of the optic vesicle, which takes place at the fourth week of gestation. The cystic structure represents the primitive optic vesicle that failed to undergo differentiation into its adult components. The condition has also been called "anophtalmia with cyst". Association with intracranial abnormalities is known, although its etiology remains unknown. So far MRI features of this entity were only sparcely reported in the literature.

*Case Report*: A 3 month-old male child was referred to our outpatient ophthalmology clinic due to a probable microphthalmos. The external appearance of the globe was of a cystic lesion protruding from the left orbit, stretching the upper eyelid. It had been present since birth and no change in the size of the lesion was noted, even with crying. The infant did not have any significant previous medical history; he was the product of a full-term vaginal delivery and the course of the pregnancy and labor was uneventful. There was no history of consanguinity or suspicion of familiar genetic diseases. Clinical examination disclosed a superficial bluish soft tissue mass in the left orbit, non-pulsatile, cystic in consistency and transluminant. It was located behind the upper eyelid and no globe was identified. No facial deformities were noted. The right orbit was also normal.

Magnetic Resonance Imaging (MRI) of the orbits and brain was carried out and showed a complex mass filling and expanding the left orbit, with two distinct components. The anterior and lateral component was unilocular and typically cystic (hyperintense in T2 weighted images (T2WI) and hypointense in T1 weighted images (T1WI)), measuring 2.4x1.4x1.7cm, without contrast enhancement. The lens was not seen. In the medial and posterior left orbit there was a solid component, isointense on T1WI and heterogeneously hyperintense in T2WI in relation to cerebral grey mater and with mild contrast enhancement. An enhancing tubular structure was also noted and was compatible with embryonic fibrovascular tissue in Cloquet's canal topography. The bony orbit appeared expanded but without signs of bone erosion. The left optic nerve and chiasm were clearly thinner than the contralateral. No evidence of fat or calcification was seen within the lesion. Brain images showed hypoplasia of the inferior genu and of the rostrum of corpus callosum. The brain examination was otherwise normal. The absence of globe and attachment of optic nerve stalk to the cyst ruled out a possibility of microphthalmos with cyst. The lack of intracranial communication of the cyst, as well as the enhancement pattern of soft tissue mass, excluded meningoencephalocele. A diagnosis of congenital eye cyst was done based on the radiological findings. However we could not have histopathological confirmation because the patient has not been yet operated.

*Discussion*: The absence of primary optic invagination results in failure of ectodermal elements to develop. The aetiology of congenital eye cyst is still unknown due to its rarity. The presence of inflammatory cells in the solid component suggests an inflammatory cause. No related genetic changes had been described. Progressive enlargement of the cyst is possible and may be due to fluid production by glial tissue.

Recently Shields and Shields in 2004 classified congenital cystic eye under neural cysts, the other associated with ocular mal-development being microphthalmos with cyst and those associated with brain and meningeal tissue, cephalocele and optic nerve meningocele, respectively.

Microphtalmos with cyst develops from incomplete closure of the fetal cleft. The eyes are microphthalmic and have uveal, retinal and lens colo-