Program

13 May 2016, Friday

Tutorials

08:00–18:30 Registration

08:30–18:30 Industrial Exhibition open

08:30–13:00 Basic Tutorial
Chairpersons: C. Baracchini, Italy, and L. Olah, Hungary

08:30–10:30 Basic Tutorial: Theory
‘Conference Room A’

08:30–08:55 (T1) Basic ultrasound principles
L. Olah, Hungary

08:55–09:15 (T2) Ultrasound evaluation of carotid stenosis
G. M. von Reutern, Germany

09:15–09:30 (T3) IMT measurement and its clinical importance
A. Csanyi, Hungary

09:30–09:50 (T4) Ultrasonography of the vertebral arteries
C. Baracchini, Italy

09:50–10:00 (T5) Ultrasound criteria of temporal arteritis
E. Azevedo, Portugal

10:00–10:30 (T6) Transcranial Doppler/duplex ultrasonography
E. Bartels, Germany

10:30–11:00 Coffee Break

11:00–13:00 Basic Tutorial: Hands-on
(20 min rotations in groups)
‘Conference Room B’

(Group 1) Carotid artery examination
A. Csanyi, Hungary, and L. Németh Hungary

(Group 2) Vertebral artery examination
C. Baracchini, Italy, and I. Vastagh, Hungary

(Group 3) Transcranial Doppler sonography
Z. Garami, USA and L. Olah, Hungary
(Group 4) Transcranial duplex sonography 1  
*E. Bartels, Germany, and L. Kerenyi, Hungary*

(Group 5) Transcranial duplex sonography 2  
*J. Klingelhofer, Germany, and G. Panczel, Hungary*

(Group 6) Evaluation of collateral circulation – practical demonstration  
*G. M. von Reutern, Germany, and L. Szapary, Hungary*

13:00-14:00  Lunch

14:00-16:00  Advanced Tutorial: Theory  
*Chairpersons: M. Kaps, Germany and E. Vicenzini, Italy*  
*Conference Room A*

14:00–14:15  (T7) Autoregulation and its evaluation by transcranial Doppler  
*M. Reinhard, Germany*

14:15–14:30  (T8) Neurovascular coupling  
*E. Azevedo, Portugal*

14:30–14:50  (T9) Contrast agents in neurosonology  
*E. Vicenzini, Italy*

14:50–15:05  (T10) Microemboli detection  
*B. Malojcic, Croatia*

15:05–15:15  (T11) Role of ultrasound in monitoring of increased intracranial pressure  
*M. Kaps, Germany*

15:15–15:40  (T12) Transcranial imaging planes and cerebral parenchyma ultrasound imaging  
*U. Walter, Germany*

15:40–16:00  (T13) Ultrasonography of peripheral nerves  
*Z. Aranyi, Hungary*

16:00–16:30  Coffee Break

16:30–18:30  Advanced Tutorial: Practical Demonstrations and Hands on  
(20 min rotations in groups)  
*Conference Room B*

(Group 1) Role of ultrasound in monitoring of increased intracranial pressure. Ultrasound examination of the eye  
*M. Kaps, Germany, Z. May, Hungary*

(Group 2) Contrast agents in neurosonology  
*E. Vicenzini, Italy, and G. Panczel, Hungary*

(Group 3) Right-to-left shunt and microemboli detection  
*B. Malojcic, Croatia, and V. Kemeny, Hungary*
(Group 4) Transcranial imaging planes
J. Valdueza, Germany

(Group 5) Cerebral parenchyma ultrasound imaging
U. Walter, Germany, and I. Vastagh, Hungary

(Group 6) Ultrasonography of peripheral nerves
Z. Aranyi, Hungary

20:00 Optional program: Boat tour on the Danube with Dinner

14 May 2016, Saturday

08:00–20:00 Registration

08:45–20:00 Industrial Exhibition open

09:00-10:30 International certification examination in neurosonology: theory
E. Bartels, Germany, and G. M. von Reutern, Germany
‘Conference Room A’

11:00-12:00 International certification examination in neurosonology:
practical exam on healthy volunteers
E. Bartels, Germany, S. Horner, Austria, G. M. von Reutern, Germany, and V. Demarin, Croatia
‘Conference Room B’

ESNCH 2016

13:00-16:15 Oral sessions S1-S3
‘Conference Room A’

13:00-13:50 Opening and the Lecture of Excellence (S1)
Chairperons: N. Bornstein, Israel and L. Németh, Hungary

13:00-13:20 Opening ceremony

T. Freund, Hungary

13:50-14:50 Diagnostic ultrasound – extracranial (S2)
Chairpersons: E. Bartels, Germany and L. Csiba, Hungary

13:50-14:05 The unstable carotid artery plaque
D. Russell, Norway

14:05-14:20 Association of increased common carotid artery wall thickness with rapid progression of asymptomatic carotid stenosis
M. Diomedi, Italy

14:20-14:35 Plaque morphology, plaque perfusion - recent advances in this field
H. Poppert, Germany
14:35-14:50 Ultrafast Doppler ultrasound imaging: a new field of view of the extracranial arteries
   F. Perren, Switzerland

14:50-15:20 Coffee Break

15:20-16:15 Diagnostic ultrasound – intracranial flow and autoregulation (S3)
   Chairpersons: K. Niederkorn, Austria and L. Oláh, Hungary

15:20-15:35 Cerebral flow examinations at transient global amnesia
   C. Baracchi ni, Italy

15:35-15:50 Cerebral autoregulation and brain networks in occlusive processes of the internal carotid artery
   S. Schreiber, Germany

15:50-16:05 Autonomic dysfunction, cerebrovascular coupling and cerebrovascular regulation in cerebrovascular risk
   E. Azevedo, Portugal

16:05-16:15 Better dynamic cerebral autoregulation at early hours of ischemic stroke associates with lower infarct volumes and good outcome
   P. M. Castro, Portugal

16:15-17:15 Poster Session (P1)
   ‘Conference Room A’
   Chairpersons: E. Azevedo, Portugal, V. Kemény, Hungary (P1A), U. Walter, Germany, J. Valdueza, Germany (P1B), F. Sorond, USA, Z. Garami, USA (P1C)

17:15 Meeting of the Commission for International Certification
   ‘Conference Room B’

18:00-20:00 Welcome Reception
   Venue: Exhibition Area of Várkert Bazár

15 May 2016, Sunday

08:00–18:00 Registration

08:45–18:00 Industrial Exhibition open

09:00-15:55 Oral sessions S4-S9
   ‘Conference Room A’

09:00-09:50 Diagnostic ultrasound – brain parenchymal (S4)
   Chairpersons: G. M. von Reutern, Germany and A. Valikovics, Hungary

09:00-09:15 Hunting for stroke mimics and chameleons
   E. B. Ringelstein, Germany

09:15-09:30 Magnetic resonance – transcranial ultrasound fusion imaging
   U. Walter, Germany
09:30-09:40  Safety and tolerability of ultrasound contrast agent in patients with MCA occlusion treated with endovenous thrombolysis and mechanical thrombectomy
F. M. Farina, Italy

09:40-09:50  Role of MES detection by TCD monitoring in cryptogenic stroke evaluation
A. Palmieri, Italy

09:50-10:40  Ultrasound in therapy – effect of different medications and interventions (S5)
Chairpersons: C. Baracchini, Italy and G. Pánczél, Hungary

09:50-10:05  Ultrasound, vascular risk factors and pharmacological interventions
L. Csiba, Hungary

10:05-10:20  Predictors and timing of recanalization in intracranial carotid artery and syphon dissection – ultrasound guided therapeutical decisions
E. Vicenzini, Italy

10:20-10:30  Stent retrievers? Thrombectomy: does it modify the outcome of vertebrobasilar stroke?
F. Perren, Switzerland

10:30-10:40  Early versus late internal carotid artery stenting
N. Rodriguez Villatoro, Spain

10:40-11:10  Coffee Break

11:10-12:10  Ultrasound in therapy – ultrasound guided decisions (S6)
Chairpersons: E. Vicenzini, Italy and L. Szapáry, Hungary

11:10-11:25  Ultrasound guided decisions at invasive cardiovascular procedures
A. Lumsden, USA

11:25-11:40  Cerebral microembolistaion and hemodynamics in patients with left ventricular assist devices (LVAD)
M. Siebler, Germany

11:40-11:50  Classification of intracranial stenoses - a comparison between TCCS, CT and MR angiography
F. Connolly, Germany

11:50-12:00  Internal carotid artery dissection: a 3, 6, 12 months or a lifetime experience?
M. Toscano, Italy

12:00-12:10  Duplex sonography monitoring during anticoagulant therapy in bilateral vertebral dissection: a two cases description
A. Viganò, Italy

12:10-13:10  Lunch
ESNCH EC Meeting during the lunch break
‘Conference Room B’
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Chairpersons</th>
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<tbody>
<tr>
<td>13:10-13:55</td>
<td>Ultrasound in therapy – ultrasound assisted therapeutic methods (S7)</td>
<td>Chairpersons: M. Sturzenegger, Switzerland and L. Kerényi, Hungary</td>
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<td>13:10-13:25</td>
<td>MRI guided focused ultrasound thalamotomy for tremor in Parkinson’s disease</td>
<td>I. Schlesinger, Israel</td>
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<td>13:25-13:40</td>
<td>Sonolysis in prevention of brain infarction during carotid endarterectomy and</td>
<td>D. Školoudik, Czech Republic</td>
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<td>stenting (SONOBUSTER)</td>
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<td>13:40-13:55</td>
<td>Endovascular treatment versus sonothrombolysis for acute ischemic stroke</td>
<td>M. Reinhard, Germany</td>
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<td>13:55-14:50</td>
<td>Ultrasound in the neurological intensive care unit (S8)</td>
<td>Chairpersons: J. Klingelhofer, Germany and A. Csányi, Hungary</td>
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<td>13:55-14:10</td>
<td>Cerebral autoregulation in vasospasm</td>
<td>F. Sorond, USA</td>
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<td>14:10-14:25</td>
<td>Autoregulation monitoring and outcome prediction in neurocritical care patients</td>
<td>J. Klingelhofer, Germany</td>
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<td>14:25-14:40</td>
<td>The importance of TCD examinations of cerebral veins in the neuroICU</td>
<td>J. Valdueza, Germany</td>
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<td>14:40-14:50</td>
<td>Prospective comparative clinical study of non-invasive cerebrovascular</td>
<td>V. Petkus, Lithuania</td>
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<td>autoregulation monitor</td>
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<td>14:50-15:20</td>
<td>Coffee Break</td>
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<td>15:20-16:05</td>
<td>Ultrasound in the cognitive impairment and neurorehabilitation (S9)</td>
<td>Chairpersons: M. Siebler, Germany and B. Malojcic, Croatia</td>
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<td>15:20-15:35</td>
<td>The role of neurosonology in mild cognitive impairment and dementia</td>
<td>N. Bornstein, Israel</td>
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<td>15:35-15:50</td>
<td>Ultrasound subclinical markers in assessing vascular changes in cognitive</td>
<td>V. Demarin, Croatia</td>
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<td>decline and dementia</td>
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<td>15:50-16:05</td>
<td>Ultrasound muscle movement imaging in neurorehabilitation</td>
<td>E. Titianova, Bulgaria</td>
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<td>16:05-17:05</td>
<td>Poster Session (P2)</td>
<td>‘Conference Room A’</td>
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<td>Chairpersons: A. Mrdjen, Croatia, I. Vastagh, Hungary (P2A), M. Reinhard,</td>
<td>M. Reinhard, Germany</td>
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<td>Germany, E. Titianova, Bulgaria (P2B), S. Horner, Austria, T. Rundek, USA</td>
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<td>18:00-19:00</td>
<td>ESNCH General Assembly</td>
<td>‘Conference Room A’</td>
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<td>20:00-24:00</td>
<td>Optional Program: Gala Dinner (with “Sonocup”)</td>
<td>Venue: Exhibition Area of Várkert Bazár</td>
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16 May 2016, Monday

08:00–12:15  Registration

08:45–12:15  Industrial Exhibition open

09:00–12:00  Sessions S10-12

‘Conference Room A’

09:00-09:40  The role of the neurosonology in traumatic brain injuries and elevated intracranial pressure (S10)

Chairpersons: M. Diomedi, Italy and S. Molnár, Hungary

09:00-09:15  TCD and outcome of traumatic brain injuries

M. Vosko, Austria

09:15-09:30  Monitoring of cerebral autoregulation in neurocritical care

M. Czosnyka, UK

09:30-09:40  Transorbital ultrasonography as a monitoring method of idiopathic intracranial hypertension

P. Lochner, Germany

09:40-10:30  Neurosonology update (S11)

Chairpersons: G. Baltgaile, Latvia and V. Demarin, Crota

09:40-09:55  Peripheral nerve sonology

Z. Aranyi, Hungary

09:55-10:10  Genetic and environmental components of carotid structure and function

T. Rundek, USA

10:10-10:20  Standardization of CO2 reactivity estimation is needed!

O. Hensel, Germany

10:20-10:30  MES monitoring, 18-FDG-PET, circulating and histological markers of inflammation in carotid stenosis: an on-going study

M. Del Sette, Italy

10:30-11:00  Coffee Break

11:00-11:55  New trends in neurosonology (S12)

Chairpersons: Del Sette M, Italy and A.V. Alexandrov, USA

11:00-11:15  Ultrasound in the orbit

Z. Garami, USA

11:15-11:30  Smartphone applications in neurosonology: a review

A. Székely, Hungary

11:30-11:45  Correlation of wave intensity analysis in the cervical arteries with intracranial hemodynamics

T. Shiogai, Japan
11:45-11:55  Tomographic Ultrasound: A novel and simple technique to assess carotid plaque burden  
T. Stadlbauer, Germany

11:55-12:15  Closing of the Meeting  
• Final conclusions  
• Awarding of the poster prizes  
• Presentation of the ESNCH 2017 Meeting

List of Posters

Poster Session 1  
(14 May 2016, Saturday)

P1A - Extracranial ultrasound  
Chairpersons: E. Azevedo, Portugal, V. Kemény, Hungary

1  Carotid artery intima media thickness as a marker of vascular disease in ischemic stroke  
P. Methil, India

2  Role of vascular atherosclerosis and other risk factors in development of stroke in rheumathoid arthritis patients  
E. Stumbra Stumberga, Latvia

3  The detection of unstable carotid artery plaques using advanced ultrasound methods  
M. Zamani, Norway

4  Determinants of the unstable carotid plaque on ultrasound and the role of contralateral stenosis  
T. J. Tegos, Greece

5  Free floating thrombus of the carotid artery. Report of three cases  
A. Falcon, Spain

6  Detecting vulnerable plaques in patients with ischemic stroke with CEUS compared to carotid MRI  
M. L. Koch, Germany

7  Duplex sonography of common carotid artery dissection and cerebral infarction at four years after aortic dissection  
S. I. Lee, South Korea

8  Comparative study between novel probe and transcranial Doppler for diagnosis of patent foramen ovale  
H. Mitsumura, Japan

P1B - Intracranial flow & parenchyma  
Chairpersons: U. Walter, Germany, J. Valdueza, Germany

9  Cerebrovenous orthostatic reactivity in patients with Chiari malformation  
R.V. Shakhnovich, Russia
10 Early impairment of cerebral autoregulation is associated with hemorrhagic transformation and cerebral edema in acute ischemic stroke
   P. M. Castro, Portugal

11 Moyamoya disease and subarachnoid hemorrhage: 4-years transcranial Doppler ultrasound follow-up
   M. Toscano, Italy

12 Non-invasive cerebral autoregulation monitoring during cardiac surgery with cardiopulmonary bypass
   V. Petkus, Lithuania

13 Who is the silent killer?
   I-A. Serbanoiu, Romania

14 Ignoring of MCA diameter causes wrong interpretations of CO2 reactivity's
   O. Hensel, Germany

15 Impaired cerebral vasomotor reactivity in subjects with small vessel disease
   J-M. Park, South Korea

16 Monitoring of cerebral blood flow and cerebral embolization by TCD during thoracic surgery
   J. Wojczal, Poland

17 Cerebral blood flow characteristics in patients with post-lumbar puncture headache - does hydration of patients matter?
   M. Nowaczewska, Poland

18 Assessment of the circle of Willis with transcranial duplex before aortic arch replacement
   S. C. Tromp, Netherlands

**P1C - Ultrasound in therapy & neuroICU**
*Chairpersons: F. Sorond, USA, Z. Garami, USA*

19 Multiple neck and brain arterial atheromatous lesions – a neurosonologic challenge
   H. Nicolae, Romania

20 A case of external carotid-external jugular arteriovenous fistula: usefulness of Doppler ultrasound
   A. Naldi, Italy

21 Stroke predictors in patients with carotid stenosis
   A. A. Nikiforova, Russia

22 Blood flow index dynamics in precerebral arteries after staged embolization of brain arteriovenous malformation
   V. B. Semenyutin, Russia

23 Reconsidering blood pressure management in acute stroke based on hemodynamic status
   J. Sargento-Freitas, Portugal
24 Changes of cerebral critical closing pressure during different phases of a cardiac cycle 
H-Y. Hsu, Taiwan

25 Slow-wave TCD- patterns in a hemorrhagic period of cerebral aneurysm rupture 
V. Aliev, Russia

Poster Session 2
(15 May 2016, Sunday)

P2A - Intracranial pressure & brain death
Chairpersons: A. Mrdjen, Croatia, I. Vastagh, Hungary

26 Simple and noninvasive prediction of midline shift by ultrasonographic measurement 
of optic nerve sheath diameter 
H-J. Song, South Korea

27 TCD guided decisions in Intensive Care Units: intracranial hypertension, 
decompensive craniectomy and brain death. 
M. Toscano, Italy

28 Non-invasive absolute intracranial pressure measurements in TBI and intracranial 
hemorrhage patients 
V. Petkus, Lithuania

29 Transcranial Doppler in the diagnosis of brain death, experiences in a second level 
hospital in Mexico 
C. A. Garcia Perales, Mexico

30 Transcranial Doppler ultrasound assessment of intracranial and extracranial arteries 
in patients with brain death 
S. Yu, South Korea

31 Non - invasive intracranial pressure measurements in normal-tension glaucoma and 
healthy subjects 
M. Deimantavicius, Lithuania

32 Hemodynamics and mechanism of medullary infarction in middle- aged patients 
S. I. Lee, South Korea

33 Comparative study between reversible cerebral vasoconstriction syndrome (RCVS) 
and other forms of headache. 
M. Alpaidze, Georgia

P2B - Arteriosclerosis & vertebral artery examination
Chairpersons: M. Reinhard, Germany, E. Titianova, Bulgaria

34 Genetical hereditability of vertebral artery diameter and flow parameters 
F. M. Farina, Italy

35 Evaluation of the association of intracranial artery stenosis and coronary artery 
stenosis, including risk for stroke 
G. Struga, Albania
36 Role of vertebral hypoplasia in posterior ischemic stroke
   C. Kulyk, Italy

37 Vertebral artery injury with cervical vertebral fracture: A fatal case
   A. Catalán, Spain

38 Development of secondary prevention of cerebral infarction by ultrasound
   Y. Sawaguchi, Japan

39 Clinical factors related to degree of peripheral arterial occlusive disease in acute
   stroke patients
   J. H. Lee, South Korea

40 The carnitine-butyrobetaine-trimethylamine-n-oxide pathway and the association
   with cardiovascular mortality in patients with carotid atherosclerosis
   K. Skagen, Norway

41 Vertebral artery dissection cases detected with Doppler sonography
   P. Orosz, Hungary

42 Diagnosis of vertebral artery dissection at V3 segment by ultrasonography
   T. Espinosa Oltra, Spain

P2C - New methods & diagnostic scores
   Chairpersons: S. Horner, Austria, T. Rundek, USA

43 Pulsatility index (PI) and cognitive function in dementia
   Y. Lee, South Korea

44 Pocket-size versus high end ultrasound system for peripheral nerve assessment - a
   feasibility study
   A. Pieroni, Italy

45 Is the RoPE score useful in identifying guilty PFO in asymptomatic brain lesions?
   A. Rocco, Italy

46 Feasibility of 1.6-MHz probe for detection of cerebral blood flow in the poor
   temporal window
   J. M. Hong, South Korea

47 B-mode ultrasonography for the diagnosis and monitoring acute optic neuritis
   P. Lochner, Germany

48 B-mode ultrasound of the pupillary reflex - normal values of 100 individuals
   S. J. Schreiber, Germany

49 Superficial temporal artery flow predicts extra-intracranial bypass function in
   Moyamoya disease
   F. Connolly, Germany

50 Insonation angles by transtemporal insonation of intracranial arteries
   T. Lepic, Serbia

51 Separate evaluation of the effect of light stimulus and letter recognition on the
   posterior cerebral artery blood flow during reading
   K. Szabo, Hungary