**Supplement 2**

**A statement of educational, scientific and research activities for the neuroradiologists**

**in Latvia**

Neuroradiology as a special part of radiology is a clinical specialty which consists at the Latvian university hospitals of three main branches: diagnostic, educational and research. The clinical diagnostic comprises conventional and innovative neuroradiological investigations and interventions, tutorials, interdisciplinary councils and conferences, including outpatient and out-clinic consultations. Diagnostic neuroradiology is a team work consisting of several steps: prescription of investigation, choice of protocol, investigation, imaging study and preliminary conclusion, exchange of viewpoint with clinicians- neurologists, neurosurgeons, psychiatrists etc, finally leading to consensus. Each step of this logical chain is consequential but a special relevance two of them: prescription and exchange of viewpoint with clinicians must be emphasized.

The current Latvian education system in radiology embraces three mandatory consecutive steps: undergraduate training carried out during the 3rd, 5th and 6th study years at the university program „Medicine”, post- graduate 4 year training program in general radiology and continuing medical education (CME). Neuroradiology is the part of training in the program of Diagnostic Radiology. The theoretical and practical training in neuroradiology and credit system is based on requirements of the recommendations from the European Association of Radiology “Radiology Training in Europe” and European Training Charter for Medical Specialists, UEMS. Regular visiting scholarship and exchange programs for fellowship in neuroradiology are performed in the frames of residentship, doctoral programs and CME. CME is a yearly program of educational activities in neuroradiology to guarantee the maintenance and upgrading of knowledge, skills and competence following completion of post-graduate training.  A credit system for CME is utilized. Category 1 points can be earned by attendance at neuroradiological courses, meetings, seminars and conferences with CME approval from national professional authorities. We offer yearly 6-10 CME courses in neuroradiology or joint disciplines at two different educational levels: basic courses aimed at residents, young certificated radiologists and physicians with practical experience in their specialty, and advanced courses in new techniques for experienced physicians and neuroradiologists. Special educational courses, seminars and lectures in neuroradiology for doctors of other specialties (neurologists, psychiatrists, family doctors etc.) have been prepared and carried out by most experienced and dedicated neuroradiologists on the regular basis. Our professors and lecturers are regularly invited speakers at the neuroradiological courses organized by ESNR and ESR: postgraduate training programs during ECR, ECNR, ERASMUS courses etc.

A clinically oriented research in neuroradiology is performed by students, medical doctors and lecturers within the framework of undergraduate, post-graduate training, doctoral works, projects of the Latvian Academy of Science, international grants and interdisciplinary projects. Knowledge of basic elements of scientific methods and evidence base, including statistics is critical for assessment and understanding of published papers and promotion of personal research. Therefore we start to involve students in the scientific work already at the undergraduate level. The 5th and 6th year students who have showed a special interest in neuroradiology may take the opportunity to participate in clinical research trials or perform an independent study. During the post-graduate training the elaboration and presentation of an independent clinically orientated study at the 2nd, 3rd and 4th year is mandatory. One third of the chosen topics are in neuroradiology. To be accepted in the doctoral program the aspirant has to prepare and submit to the commission a package of appropriate documents including detailed annotation of the work, foreruns, publications, etc. In case of a positive preliminary conclusion the applicant have to be passed successfully by the commission a competitive interview. Presently we have 5 doctoral and 4 postdoctoral students in neuroradiology. Currently, the main research branches and themes in the diagnostic and interventional neuroradiology are in our country: (1) Functional MRI in surgery planning and follow-up of glial tumors. (2) Brain perfusion disposition in acute stroke. (3) Brain ageing, early cognitive disturbances and dementias. (4) CSF flow patterns in patients with hydrocephalus and Chiari I malformation. (5) Imaging of toxic brain injury. (6) MRI in multiple sclerosis. (7) Endovascular treatment of intracranial aneurisms. (8) Endovascular treatment of acute ischemic stroke. (9) Endovascular treatment of intracranial arteriovenous malformations. (10) Intracranial angioplasty and stenting.

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