

Preface



Laszlo Mechtler, MD
Guest Editor

This issue of *Neurologic Clinics* is devoted to the field of neuroimaging, a subspecialty of neurology which is essential and germane to the practice of every neurologist. The complexities of anatomic and functional neuroimaging have increased to the point that general imaging training is now insufficient.¹ This change has allowed an opportunity for certified, well-trained neurologists to specialize in and contribute to this exciting and evolving field. Most neurologists, and many physicians in other fields, advocate that organ-specific imaging is increasingly necessary for optimal patient care. There are neurologists throughout the United States providing neuroimaging expertise in private practice, academic centers, and even within radiology departments. The United Counsel of Neurologic Subspecialties (UCNS) has recently established certification and accreditation specifications in neuroimaging for neurologists as well as for neuroimaging fellowships.

Neurologists are in a particularly strong position to define the appropriateness and interpret the findings of nervous system imaging studies. Neurologists receive extensive training in the anatomy, physiology and pathology of the nervous system and are in particularly fitting positions to define the appropriateness and interpret the findings of nervous system imaging studies. Neurologists are thus uniquely qualified to identify the clinical manifestations of nervous system disease, to tailor imaging studies to the needs of their patients, and to interpret these studies in a context of clinical relevance.² Moving forward, the demands in neurological research and the increasing pressure to provide quality patient services in the most convenient and cost-effective manner are likely to further bolster the role of neurologists in the field of neuroimaging.³

Medical societies such as the American Society of Neuroimaging (ASN), the American Academy of Neurology (AAN), the American College of Radiology (ACR) and the Intersocietal Accreditation Commission (IAC) should continue to define professional and technical standards of excellence for specialty imaging. These standards should then be applicable across specialty boundaries to physicians, clinicians and radiologists alike, with similar organ-specific imaging interests and skill-sets. The result of this effort will insure a level playing field in imaging that allows properly trained physicians, regardless of specialty, to provide appropriate imaging services for their patients. This position is strongly supported by the American Medical Association (AMA), which has repeatedly reaffirmed this as AMA policy in recent years.⁴

The American Academy of Neurology (AAN) supports the responsibilities of its members to use their full range of training and expertise for the benefit of their patients, including providing the technical and professional components of imaging services.⁵ Of course this requires its members to observe all ethical and medical standards of training, and appropriateness in providing imaging services. Neurologists should play a leading role as experts in the development and review of quality and appropriateness parameters in neuroimaging. The AAN has placed increased emphasis on neuroimaging at its annual meetings in recent years. In addition to this, the ASN is an inclusive neuroimaging society that fosters cooperation between all neuroscience subspecialties.

Although the limitations of space prevent this issue from being a comprehensive review of neuroimaging, I felt that updated reviews of MRI technology, MR spectroscopy, positron emission tomography, neurosonology and interventional imaging would be useful for neurologists. Furthermore, four articles in this issue focus on specific disorders such as stroke, brain tumors, multiple sclerosis, and dementia. Finally, a review of neuroimaging in psychiatry, neuro-ophthalmology, and pediatrics complete this issue. The authors of the articles presented herein are among the leaders in their fields and have all done an outstanding job reviewing and presenting the current state of the art for this issue.

I would like to thank the authors for their time, energy, patience, and willingness to make such valuable contributions to this issue. They have succeeded in clearly presenting many complex issues and providing an up-to-date review of topics that are so important in the practice of neurology. I would also like to thank the series editor, Don Mumford, for his guidance and patience throughout the process of preparing this issue. I also want to thank my wife, Katalin; daughters, Julia, Annamaria, and Krisztina, and the families of all the article authors for their support, without which this text could not have been written.

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REFERENCES

1. Atlas SW. Embracing subspecialization: the key to the survival of radiology. *J Am Coll Radiol* 2007;4(11):752–3.
2. Hutchinson M, Chawluk J, Gomez C, et al. Self-referral of imaging does not imply overutilization. *J Neuroimaging* [epub ahead of print, Sept 2008].
3. Preston WG. Neuroimaging practice issues for the neurologist. *Semin Neurol* 2008; 28(4):590–7.
4. American Medical Association. Resolution 208 (A-08): Fairness in medical imaging interpretation. Adopted by the House of Delegates (Reference Committee B). Available at: <http://www.ama-assn.org/ama1/pub/upload/mmm/471/annotateddb.doc>. Accessed August 14, 2008.
5. American Academy of Neurology Professional Association. Position Statement on Principles of Neuroimaging Training, Guidelines and Training. Available at: <http://www.aan.com/advocacy/issues/tools/99.pdf>. Accessed November 13, 2008.