Using a homegrown MRI protocol, researchers found that a loss of myelin in the gray matter of multiple sclerosis (MS) patients’ brains was a strong indicator of disease severity, according to a recent study published online in *Radiology*. While myelin loss in white and gray matter in MS patients has been seen in postmortem pathological studies, this research for the first time establishes its clinical significance in gray matter, thanks to macromolecular proton fraction (MPF) mapping.

"We found with this study that MPF in gray matter is significantly stronger and correlated with the [patient's] clinical status. In other words, it seems a much better predictor of disability in MS patients," lead author Vasily Yarnykh, PhD, an associate professor in the University of Washington's department of radiology, told *AuntMinnie.com*. "From the first analysis, it was quite surprising because MS is typically considered a white-matter disease."

MPF mapping provides information on the content of biological macromolecules, which are large molecules, such as proteins, lipids, and carbohydrates, found in tissues. The imaging technique has been slow to develop because it takes so long to acquire data.
Elastography May Avoid Needless Biopsies of Thyroid Nodules

Thanks to its high negative predictive value, ultrasound elastography with intrinsic compression may be able to reduce by one-third the number of unnecessary biopsies performed on calcified thyroid nodules, according to research published in the October issue of *Ultrasound in Medicine and Biology*.

In a study involving 65 calcified thyroid nodules, a team of researchers led by Dr. Min-Hee Kim of Catholic University in Korea found that elastography yielded 95.8% negative predictive value in detecting malignancy. Furthermore, more than one-third of biopsies on calcified nodules could have been avoided based on elastography results.

"Intrinsic compression elastography can be used in conjunction with B-mode [ultrasound] to reduce the number of [fine-needle aspiration] biopsies of calcified thyroid nodules," wrote Kim and colleagues, who also came from the University of Washington and Pohang University of Science and Technology.

**Twelve Months and Counting Until ICD-10**

This time next year the long awaited conversion to ICD-10-CM will be upon us. MBMS has been working diligently for several years now to ensure all aspects of our organization are fully compliant and ready for the go-live on October 1st, 2015. Personally, I have written several articles, taught numerous seminars and webinars, conducted onsite review courses, etc. One of the most critical elements from an educational standpoint is the development of detailed "ICD-10 Decision Trees". MBMS has created these detailed decision trees based off of our client’s most highly reported diagnosis codes over the last three years. What have you done to get you and your practice ready? If you had to think long and hard, may I suggest that you begin preparing immediately. A valuable starting point may be to review and possibly edit existing templates by using some internal research or by requesting some of MBMS’ Decision Trees. In addition, we will also be hosting webinars to familiarize you and your practice with the biggest change to diagnosis reporting in over 30 years. The hope is that your hospital/facility will also be offering educational options to scheduling staff, technicians, and other pertinent personnel to ensure everyone is prepared. My take: Specificity is the name of the game; not only in the body of the report but also in the medical history. As always, if you have any questions, or would like to receive some of our ICD-10 Decision Trees, please feel free to email me at: lshore@mbms.net.