Letter From the Guest Editor: Errors and Malpractice in Radiology

It is a great pleasure for me to introduce this issue of *Seminars in Ultrasound, CT, and MRI* dedicated to Errors and Malpractice in Radiology.

Since the early 1970’s, physicians have been subjected to an increasing number of medical malpractice claims. Radiology is one of the specialties most liable to claims of medical negligence. Approximately 4% of radiologic interpretations rendered by radiologists in their daily practice contain errors. Fortunately, most of these errors are of such minor degree, or if serious are found and corrected with sufficient promptness, that they do not cause injury to patients. There is thus the need to analyze the extent and causes of the phenomenon, which would also help to identify the most effective measures in terms of clinical risk management.

In the opening article, my colleagues and I focus on the concept of error and malpractice in Radiology. An error is a deviation from the expected norm, regardless of whether it results in any harm. Errors may be categorized in a variety of ways, and we have methods in place to facilitate their identification so that steps can be introduced to minimize their occurrence. Malpractice refers to professional misconduct, which requires proof of an unreasonable lack of skill or fidelity in performing professional or fiduciary duties. The radiologist is liable for all aspects of his practice, including decisions and actions, indications for a diagnostic or therapeutic procedure, information to the patients, instrumentation, and maintenance of his competence, and continuous education.

Next Mahmoudreza Fardanesh and Charles White provide an overview related to the misdiagnosis of lung cancer. Lung cancer may be missed on either chest radiography or computed tomography (CT). The majority of medicolegal action regarding missed lung cancer involved chest radiographs (90%), whereas CT and other studies attributed to the remaining 10%. Factors contributing to overlooked lung cancer can be attributed to observer performance, lesion characteristics, and technical considerations.

Catherine S. Giess et al review factors affecting the detection and diagnosis of breast cancer to improve radiologic interpretation, benefit patients by earlier cancer detection, and lessen medicolegal exposure from a missed or delayed cancer diagnosis. Detection, assessment, and management of breast abnormalities require diligence, skill, and expanding experience with the often subtle features of breast cancer on mammography, ultrasound, and magnetic resonance imaging.

The next article by Ylenia Mandato et al focuses on the malpractice issues related to methods for functional alimentary tract examinations: swallowing act study, 3-dimensional endoanal ultrasound, defecography, and defecography in magnetic resonance.

Alfonso Reginelli et al describe the pitfalls in the execution and interpretation of plain abdominal film and CT enteroclysis. Errors in interpretation of plain abdominal film can arise from difficult observing patterns that somewhere are small and not well recognizable. There is no standardized method for reading a CT-enteroclysis image: it is better to begin by analyzing axial and frontal views in the dynamic mode; if an anomaly is detected on the axial views, oblique multiplanar reformations should be used.

Daniel Souza and Stephen Ledbetter review the diagnostic errors that may occur in the evaluation of nontraumatic aortic emergencies (aortic dissection, intramural hematoma, penetrating atherosclerotic ulcer, aortic rupture, and impending rupture), which are serious potentially life-threatening conditions that are most often encountered in the emergency department.

In the next article, Giacomo Sica et al highlight the most frequent types of diagnostic errors occurring in the evaluation of polytrauma patients. Although, since 1970, the mortality rate that affects polytrauma patients has decreased from 40% to 10%, preventable deaths because of human and system errors account for up to 10% of fatalities in patients with otherwise survivable injuries cared for in level I trauma centers, and despite the use of multidetector CT has increased the diagnostic quality by reducing the number of missed diagnoses in polytraumatized patients, errors remain a common phenomenon in emergency room setting, also in radiological practice.

Emanuele Casciani et al review the most common emergencies in pregnancies focusing the attention on errors in images. The topics covered are divided into gynecological...
and nongynecological, and for each pathology, the possible errors have been dealt with the diagnostic pathway, the possible technical errors in the execution of the exam, and the possible errors in interpretation of the images.

The next article by Gianpaolo Carrafiello et al review the principal differences between errors and malpractice with particular regard to the issues in Interventional Radiology. Specific topics discussed are the approaches to preventing errors and thus to avoiding the malpractice in Interventional Radiology.

Fabio Pinto et al highlight the medicolegal issues related to the communication of findings of radiologic examinations. Radiologists receive little formal training regarding the structure of the radiology report and its importance as a medicolegal document—failure to communicate, in fact, represents one of the main problems facing the modern radiologists’ activity. Communication must be timely, appropriate, and fully documented.

In the closing article by my colleagues and I, the authors underline that an important goal of error analysis is to create processes aimed at reducing or preventing the occurrence of errors and minimizing the degree of harm. The discovery of any errors presents an opportunity to study the types that occur and to examine their sources and develop measures to prevent them from recurring.

I wish to thank all the authors for their invaluable contribution to this issue of Seminars in Ultrasound, CT, and MRI.

I would like to thank Dr. Howard W. Raymond for giving me the opportunity to serve as guest editor of this issue. I would also like to express my gratitude to Ms. Dana Roth for the editorial assistance and support.

Antonio Pinto, MD, PhD
Guest Editor