Radiologists Reluctant to Disclose Hypothetical Mammography Errors

A survey shows many radiologists may be reluctant to disclose errors to patients. Gallagher and colleagues surveyed 364 radiologists at sites that interpreted mammograms from 2005 to 2006. They viewed a vignette of a hypothetical case in which mammograms were placed in the wrong order, leading radiologists to conclude calcifications were decreasing in number when they were in fact increasing, delaying a cancer diagnosis. Of the 243 radiologists who responded to whether they would disclose the error, 9% answered “definitely not,” 51% answered “only if asked by the patient,” 26% answered “probably,” and 14% answered “definitely.” Responses also varied on the completeness of the information radiologists would disclose. The researchers expressed hope that the findings will help guide more effective communication between radiologists and patients following errors.

U.S. Per-Capita Effective Medical Radiation Dose at 3.0 mSv in 2006

The U.S. per-capita annual effective dose from medical procedures has increased about sixfold from about 0.5 mSv in 1980 to 3.0 mSv in 2006 and is among the highest in the world. Mettler and colleagues extracted data from surveys by the U.S. National Council on Radiation Protection and Measurements and United Nations Scientific Committee on Effects of Atomic Radiation and compared the results with historical information. The researchers noted that potential uses for this information include following and predicting trends, observation of health planning policy effects, and comparing doses from various practices.

Radiologists’ Recommendations for Further Imaging Double Since 1995

Radiologists at one institution were twice as likely to recommend additional imaging in diagnostic reports in 2008 than they were in 1995. Sistrom and colleagues identified the increase using a logistic regression model, examining 11 clinically relevant factors that influence radiologist recommendations. Significant factors included radiologist experience—the tendency to make additional imaging recommendations steadily declined as experience increased—and the presence of positive findings, which increased likelihood of recommendation fivefold. The researchers noted that while the results may not generalize to other institutions, the logistic regression model ensured the results for additional imaging recommendations were accurate by holding all other factors equal. They urged focus on odds ratios from such models—rather than unadjusted percentages—when making inferences about secular effects and those of factors such as modality, radiologist experience, and patient age.

Multipronged Ethanol Ablation Effective for Hepatocellular Tumors Up to 5.0 cm

A single session of high-dose ethanol ablation using a multipronged needle can effectively and safely treat early-stage or recurrent hepatocellular carcinoma (HCC) up to 5 cm in diameter, even for lesions at high-risk locations. In a study of 141 patients with 164 primary or recurrent HCCs, Kuang and colleagues found that complete ablation was achieved within one or two sessions, overall primary technique effectiveness was 95%, with local tumor progression occurring in 16 of 134 patients within a mean follow-up of 25 months after treatment. The incidence of major complications—occurring in 2% of 141 patients—was similar to that of conventional ethanol ablation or radiofrequency ablation, but the complication rate did not differ for tumors in unfavorable versus favorable locations, the researchers noted.
Six-month Growth of Low-Grade Gliomas Predicts Patient Outcome

MR-observed tumor growth over 6 months is an independent predictor of malignant transformation of low-grade glioma (LGG). Brasil Caseiras and colleagues found in a study of 34 patients with LGG that tumor growth over 6 months was a better predictor of time to malignant transformation than either relative cerebral blood volume measurements or baseline tumor volumes; measurements of apparent diffusion coefficient had no predictive value for patient outcome in LGG. MR assessment of short-term glioma growth can help stratify risk of malignant transformation and might influence the timing of aggressive therapy, the researchers concluded. \[\text{Page } 505\]

CT Differentiates between Benign and Clinically Worrisome Causes of Pneumatosis in Children

CT features can identify pneumatosis intestinalis (PI), commonly associated with necrotizing enterocolitis in newborns, and differentiate between benign and clinically worrisome cases in older children. In a retrospective study, Olson and colleagues identified 44 children—mean age of 8.45 years—with PI. The researchers found that soft-tissue thickening of the bowel wall, free intraperitoneal fluid, perientestinal soft-tissue stranding, and extent of pneumatosis were useful in differentiating benign from pathologic cases. Neither a cystic or a linear pattern of pneumatosis was useful for differentiation in children; presence of free intraperitoneal air or portal venous gas does not imply a clinically worrisome cause of pneumatosis, the researchers noted, and more extensive pneumatosis was more commonly associated with benign PI. \[\text{Page } 513\]

CT Enteroclysis Findings May Help Establish Diagnosis of Uncomplicated Celiac Disease

CT enteroclysis may help suggest the diagnosis of uncomplicated celiac disease and may clarify the cause of nonspecific gastrointestinal symptoms in patients with unknown celiac disease. In a retrospective case control study comparing 44 consecutive patients with proven uncomplicated celiac disease with 44 control subjects, Soyer and colleagues demonstrated that, besides the classical reversed jejunoileal fold pattern, CT enteroclysis showed a constellation of findings associated with uncomplicated celiac disease. These findings can be used to diagnose uncomplicated celiac disease in patients with nonspecific gastrointestinal symptoms and apparently normal CT enteroclysis examination results, the researchers concluded. \[\text{Page } 416\]

MR Imaging Helps Predict Extent of Clinically Localized Prostate Cancer

MR imaging could be useful in predicting disease extent in patients with clinically localized prostate cancer. In a study of 158 patients with clinical stage T1c prostate cancer, Zhang and colleagues found that endorectal MR imaging combined with MR spectroscopic imaging demonstrated 80% accuracy in disease staging and 62%–72% accuracy in the prediction of clinically nonimportant cancer. Twenty-nine (18%) patients had extracapsular extension (stage pT3a), two (1%) had seminal vesicle invasion (stage pT3b), and two (1%) had bladder neck invasion (stage pT4). Although the pathologic stage and volume of clinical stage T1c prostate cancers vary widely, MR imaging may have a role in the stratification of these patients for appropriate clinical management, the researchers concluded. \[\text{Page } 425\]

History of Breakthrough Contrast Medium Reaction Not Necessarily Contraindication to Subsequent Injection of Low-osmolality Contrast Medium

In patients with a history of allergic-like reaction to iodinated low-osmolality contrast medium (LOCM), breakthrough reactions are usually similar in severity to the index reaction, and subsequent LOCM injections usually do not induce repeat breakthrough reactions. Davenport and colleagues found, in a study involving 175 patients who had previous contrast medium reactions, that 88% (174 of 197) of subsequent injections in patients with a prior breakthrough reaction did not result in a repeat breakthrough reaction. If previous breakthrough reactions were mild, the risk of developing a severe breakthrough repeat reaction was extremely low (none of 103 reactions in the present study). The researchers concluded that a history of a prior breakthrough reaction to LOCM is not a contraindication to subsequent LOCM injection, but they advised that radiologists should be cautious when administering LOCM injections in patients who have experienced a prior moderate or severe reaction. \[\text{Page } 372\]