

(*del Radiology)

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July Reviews

Idiopathic Interstitial Pneumonias: CT Features¹

Idiopathic interstitial pneumonias comprise usual interstitial pneumonia (UIP), nonspecific interstitial pneumonia (NSIP), desquamative interstitial pneumonia (DIP), respiratory bronchiolitis-associated interstitial lung disease (RB-ILD), cryptogenic organizing pneumonia (COP), acute interstitial pneumonia (AIP), and lymphoid interstitial pneumonia (LIP). Each of these entities has a typical imaging and histologic pattern, although in practice the imaging patterns may be variable. Each entity may be idiopathic or may be secondary to a recognizable cause such as collagen vascular disease or inhalational exposure. The diagnosis of idiopathic interstitial pneumonia is made by means of correlation of clinical, imaging, and pathologic

features. The characteristic computed tomographic (CT) features of UIP are predominantly basal and peripheral reticular pattern with honeycombing and traction bronchiectasis. NSIP is characterized by predominantly basal ground-glass opacity and/or reticular pattern, often with traction bronchiectasis. DIP and RB-ILD are smoking-related lung diseases characterized by ground-glass opacity and centrilobular nodules. COP is characterized by patchy peripheral or peribronchovascular consolidation. AIP manifests as diffuse lung consolidation and ground-glass opacity. LIP is associated with a CT pattern of ground-glass opacity sometimes associated with perivascular cysts.

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August: How I Do It

How I Do It: Evaluating Renal Masses¹¹

With modern computed tomography (CT) and magnetic resonance (MR) imaging equipment, the diagnosis of most renal masses is usually straightforward and accurate.

The major question to be answered is whether the mass represents a surgical or nonsurgical lesion or, in some cases, if follow-up studies are necessary. This evaluation

usually can be accomplished if a high-quality examination is performed, if the clinical history of the patient is kept in mind, if conditions that mimic a renal neoplasm are considered and excluded, and if there is an awareness of the potential pitfalls and limitations of CT and MR imaging. In

this article, the authors present their technique in the performance of CT and MR imaging examinations, summarize their approach to the diagnosis of renal masses, review the imaging findings in these lesions, and stress the limitations in renal mass diagnosis.

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September: How I Do It

Obstructive Sleep Apnea in Pediatric Patients: Evaluation with Cine MR Sleep Studies¹

Cine magnetic resonance (MR) imaging sleep studies have become a useful tool in the evaluation of obstructive sleep apnea in children with certain categories of pathologic conditions. In this article, the author describes a program for the use of cine MR sleep studies in the evaluation of children with obstructive sleep

apnea. The following areas are discussed: clinical indications, patient preparation, anatomic considerations, MR technique, technical issues, image interpretation, commonly encountered diagnoses, volume segmentation processing of data, and controversial areas.

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October: Special Reviews

Facing the New Threats of Terrorism: Radiologists' Perspectives Based on Experience in Israel¹

On September 11, 2001, the world changed. The vicious giant of terrorism that was dormant until that date had arisen. After the horrific mass-casualty terror attack on the United States, any and all forms of assault seem

possible. Owing to the complexity of injuries encountered in terror attack victims, fast and accurate imaging plays an essential role in triage and identification of abnormalities associated with injuries. The radiologist be-

comes a crucial part of the first-line team of doctors treating these patients. Knowledge that the best available treatment is given to terror attack victims can enhance the strength and endurance of society against terror. On the basis of the authors' experience with terror events

in Israel, the steps involved in imaging of terror attack patients include conventional radiography, focused abdominal sonography in trauma, computed tomography, and angiography, with the judicious use of supplemental imaging.

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November: How I Do It

Finding Evidence-based Answers to Practical Questions in Radiology: Which Patients with Inoperable Hepatocellular Carcinoma Will Survive Longer after Transarterial Chemoembolization?¹

To some, evidence-based practice (EBP) means the identification of centers that produce evidence reports and technology assessments to support guideline development. To others, EBP is the best research evidence integrated with clinical expertise and patient values. Inherent in the first approach is the implication that only central academic organizations can produce valid, reliable analyses of existing literature, which will then be distributed to ordinary practitioners. The second approach implies that ordinary practitioners can learn to use a stepwise approach and a preprepared set of rules and tools to effectively find the best current literature, appraise it, and then apply local circumstances to these rules and tools in their hospital.

Paul Glasziou, director of the Centre for Evidence-based Practice in Oxford, England, has coined the phrases *top-down EBP* and *bottom-up EBP* to describe these approaches. In this article, the authors describe how knowledge gaps in an ordinary radiology practice can be addressed by using stepwise bottom-up EBP techniques. The following clinical scenario is used: Your hospital's recently appointed chief hepatobiliary surgeon questions the use of transarterial chemoembolization for inoperable hepatocellular carcinoma because of his concerns after reading a recent review article suggesting that there is no clear survival benefit to using this procedure. What would you do? Here is how the authors would do it.

(* del Radiology)
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December: Special Reviews

CT Colonography: Where Have We Been and Where Are We Going?¹

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Over the past decade, computed tomographic (CT) colonography (also known as virtual colonoscopy) has been used to investigate the colon for colorectal neoplasia. Numerous clinical and technical advances have allowed CT colonography to advance slowly from a research tool to a viable option for colorectal cancer screening. However, substantial controversy remains among radiologists, gastroenterologists, and other clinicians with regard to the current role of CT colonography in clinical practice. On the one hand, all agree there is much excitement about a noninvasive imaging examination that can reliably depict clinically important

colorectal lesions. However, this is tempered by results from several recent studies that show the sensitivity of CT colonography may not be as great when performed and the images interpreted by radiologists without expertise and training. The potential to miss important lesions exists; moreover, if polyps cannot be differentiated from folds and residual fecal matter, unnecessary colonoscopy will be performed. In this review, current issues will be discussed regarding colon cancer and the established and reimbursed strategies to screen for it and the past, current, and potential future role of CT colonography.