

Overview of White Papers of the ACR Incidental Findings Committee II on Adnexal, Vascular, Splenic, Nodal, Gallbladder, and Biliary Findings

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This paper summarizes the background, objectives, and process for developing 4 new white papers on adnexal, vascular, splenic, nodal, gallbladder, and biliary incidental findings and CT and MRI. This work was performed under the auspices of the ACR through its Incidental Findings Committee II. This summary should be used as a reference for definitions of terms used throughout these white papers and for understanding the structure and color scheme of flowcharts used in 2 of them.

Key Words: Incidental findings, incidentaloma, ACR, consensus, CT, MRI, ovarian cyst, aneurysm, splenic lesion, adenopathy, gallbladder, biliary

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Although the rapid increase in the use of cross-sectional imaging examinations from the early 1980s to the middle of the first decade of this century has abated, continued improvements in the quality of images, along with concerns about litigation and other factors, have led to a continued increase in the number of incidental findings (IFs) detected [1,2]. Radiologists make recommendations for managing such findings inconsistently, and there is a paucity of guidance from the literature and professional organizations. In 2010, a white paper was published in this journal, representing the work of the ACR Incidental Findings Committee [3], providing recommendations for managing IFs in the kidneys, liver, adrenal glands, and pancreas.

In this issue is the first of 4 new white papers representing products of the ACR Incidental Findings Committee II, constituted to develop recommendations for managing IFs on CT or MRI that (1) are ovarian and paraovarian, (2) are vascular, (3) involve the spleen and lymph nodes, and (4) involve the gallbladder and biliary system. These will be presented in a 4-part series of white papers. This committee again used a consensus method based on repeated reviews and revisions of this document and a collective review and interpretation of relevant literature.

An IF may be defined as an incidentally discovered mass or lesion, detected by an imaging examination performed for an unrelated reason. Although another commonly used term for such a finding is *incidentaloma*, this term is not entirely accurate because not all findings are lesions or “-omas.” Therefore, this term is not used in these papers.

A relative dearth of literature exists on whether and how to pursue IFs, on the basis of the probability that a finding is innocuous or potentially serious. Existing articles describing criteria for detecting, categorizing, reporting, and managing such findings have been inconsistent at best and leave many unanswered questions [1,2, 4-6]. A common perception among both physicians and the public is that it is “better to be safe than sorry.” However, vigorously pursuing IFs is likely to provoke anxiety in patients and their family members, may cause morbidity from adverse effects of the tests or treatments, may lead to unnecessary risks from exposure to radiation, and may be costly [7]. The causes for this medical-cultural approach are open to speculation, but radiologists’ challenge is to balance the risks and benefits of pursuing IFs when making recommendations for further testing or treatment.

The ACR Incidental Findings Committee was formed under the auspices of the Body Imaging Commission of the ACR in 2006. After publication of the first white paper [3] in 2010, there were requests for expansion of the project to other IFs. The Incidental Findings Committee II was composed in 2011 primarily from volunteers from the membership of the ACR who have expertise in the various organ systems addressed.

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PROJECT OBJECTIVES

The objectives of this project were (1) to develop a consensus on sets of organ-specific imaging features for the selected organ systems within the abdomen and pelvis, which will lead to consistent definitions for, and identification of, IFs, and (2) to develop medically appropriate approaches to managing IFs that are diagnostically indeterminate on CT or MRI.

Potential beneficial outcomes of this project are listed in the original white paper of the ACR Incidental Findings Committee [3]; briefly, they include (1) reducing risks and costs from unnecessary examinations, (2) achieving greater consistency in practice, and (3) helping focus and encourage future research.

CONSENSUS PROCESS

From the committee, 4 subcommittees covering the topics enumerated above were established to address findings that were not included in the first white paper. The membership of each subcommittee is listed in the appendix. Each subcommittee was asked to determine the scope of its work and was provided with literature searches from ACR staff members. The ACR also established a SharePoint (Microsoft Corporation, Redmond, Washington) site on which each subcommittee was to post its work for other members of the committee to review. Subcommittee members were directed to develop recommendations and to focus on making their work easily applicable to daily radiology practice, using graphic aids when possible. When this was complete, members of the committee were asked for further comments and discussion, and multiple revisions were made until consensus was reached.

Although many participants on this committee believe that we should find ways to minimize unnecessary risks and costs associated with IFs, our process attempted to arrive at recommendations based on both available literature and personal experience, whether that led to increased or decreased utilization of medical procedures.

There are frequently gaps in the available literature regarding the intervals and the periods of time specific IFs should be followed to determine their clinical importance, when immediate workup or intervention is not necessary. Therefore, one component of this project was to arrive at subjective consensus when inadequate evidence could be found in the literature. We have attempted to clarify when our recommendations are supported by available literature and when they are conclusions based on the committee members' experience.

TERMINOLOGY AND FLOWCHARTS

There is often confusion in the use of the terms: *workup* or *further evaluation*, *follow-up*, *surveillance*, and *screening*. For these white papers, we have adopted the following usage.

Further evaluation implies a need to perform additional tests or procedures relatively soon or contemporaneously (usually within about 2 weeks) after detecting an IF, rather than at a longer defined interval to assess for change. This further evaluation usually does not need to be immediate, nor is it necessarily urgent, so we use the term *prompt* to refer to such evaluations.

Follow-up refers to imaging performed after a suitable time interval or delay for which the purpose is to assess changes in size and imaging features. Thus, follow-up imaging is used to determine if a finding resolves, persists, enlarges, or otherwise changes over a time interval that is dictated by the diagnostic consideration being evaluated, such as differentiating a physiologic versus a possible malignant process or a benign mass from a malignant one.

Surveillance is a term sometimes used to indicate following patients who are at risk for developing malignancies, for example, for the development of hepatocellular carcinoma in a patient with hepatitis C. This usually does not apply to IFs. *Screening* is a term sometimes used to refer to follow-up imaging to assess for the development of new findings, such as metastases. However, it can also apply to examinations to detect diseases in otherwise healthy patients, such as screening for colon polyps with CT colonography. These two terms can be confusing when applied to IFs and are not used in the white papers.

In the flowcharts within these white papers, the algorithms use yellow boxes for steps that involve information to affect management, such as categorization, demographics, history, and the results of studies. Green boxes represent action steps, such as performing a study, following up, or intervening with a biopsy or surgery. Red boxes indicate that the evaluation process should stop, with no further action required, because the lesion can be concluded to be benign.

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APPENDIX

Committee Members

Incidental Findings Committee II: Lincoln L. Berland, MD (chair).

Ovarian/Paraovarian Subcommittee: Maitray D. Patel, MD (chair), Susan M. Ascher, MD, Raj Mohan Paspulati, MD, Alampady K. Shanbhogue, MD, Evan S. Siegelman, MD, Marjorie W. Stein, MD.

Vascular Subcommittee: Faisal Khosa, MD (chair), Glenn Krinsky, MD, Michael Macari, MD, E. Kent Yucel, MD.

Spleen and Lymph Node Subcommittee: Matthew T. Heller, MD (chair), Mukesh Harisinghani, MD, Jeffrey D. Neitlich, MD, Paula Yeghiayan, MD.

Gallbladder and Biliary System Subcommittee: Sunit Sebastian, MD (chair), Cyrillo Araujo, MD, Jeffrey D. Neitlich, MD.

Ex Officio: James A. Brink, MD (chair), ACR Body Imaging Commission.

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