

# Rethinking Normal: Benefits and Risks of Not Reporting Harmless Incidental Findings

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## Abstract

The authors explore the benefits and risks of not reporting imaging findings that do not have clinical relevance, with the goal of developing recommendations to reduce their reporting. The authors review the example of incidentally detected, simple renal cysts (Bosniak category I), including medicolegal conditions required for such a shift in reporting practices to be acceptable. The authors propose four potential criteria for not reporting clinically unimportant findings and recommend that these criteria be debated in other contexts, so that they can be refined and implemented.

**Key Words:** Incidental finding, health policy, medical decision making

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## INTRODUCTION

The burden of incidental findings is well known to practicing radiologists and referring physicians [1-10]. On the basis of their imaging appearance and the clinical context of the patient, some are benign and are of no clinical consequence, some are indeterminate, and some are likely to be harmful. Through a series of white papers, the ACR Incidental Findings Committee

has provided guidance on how incidental findings may be classified into these categories [1,3-5,8,10]. The purpose of such guidance was (1) to improve the appropriateness of subsequent care and (2) to improve the consistency of radiologists' reported findings and recommendations across practice settings.

Here we address incidental findings that are of no clinical consequence, as indicated by a radiologist not recommending further evaluation. In this article, we consider the following question: if such an incidental finding has no known clinical consequence, does it merit mention in a radiology report? We contend that the radiologist's report should minimize the traditional descriptive catalog of findings and take a form similar to a consulting physician's report, focusing on the clinical question. In the former, the radiologist, either passively or intentionally, displaces the responsibility of interpreting a finding's importance to the referrer. In the latter, the radiologist shares responsibility for interpreting the finding's importance in the context of the patient's overall health. Although the radiologist could also share such responsibility by stating the importance of such findings, for example, "[finding] is noted, a benign finding" [11], here we consider implications of eliminating reporting of such findings altogether.

A simple renal cyst (Bosniak category I) is an excellent example of a clinically unimportant finding and therefore serves as an ideal example to answer the question of when

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to eliminate reporting of such findings. We first review the prevalence and significance of a simple renal cyst and argue that it could be considered a variant of “normal.” We then explore the benefits and risks of not reporting a renal cyst in an imaging report. Next, on the basis of our benefit-risk assessment, we build criteria for such nondisclosure. Finally, we outline limitations of our criteria and a path toward their future refinement.

### CASE EXAMPLE: BOSNIAK CATEGORY I RENAL CYST

Renal cysts have an age-dependent prevalence on cross-sectional imaging of up to 36% in the eighth decade of life [12-14]. Consider a simple renal cyst that has a benign appearance on the basis of published criteria (Bosniak category I) and therefore does not merit follow-up [1,15-18]. We contend that such a cyst does not reflect an abnormal state and may be considered normal, not warranting mention except in specific circumstances.

Potential benefits of nondisclosure include the following: (1) Simplifying the report and implying that the radiologist accepts responsibility for concluding that the cyst is not important. This would streamline care and minimize “noise” in the medical record. (2) Avoiding the risk of unnecessary follow-up or workup, on the basis of referrers’ possible misunderstandings about the clinical importance of a renal cyst. To our knowledge, the prevalence of unnecessary further workup (which may involve further imaging or subspecialty referral) is not documented. However, this is a common problem that is well known to practicing radiologists, nephrologists, and urologists.

Potential risks of nondisclosure include the following: (1) Failure to raise awareness about a cyst with anatomic significance. For example, during an ultrasound-guided renal biopsy, a nephrologist may discover a large, unreported renal cyst (present on a prior CT scan) and have to change the approach as a result. (2) If a radiologist does not report a definitively benign finding on one test (eg, CT), and the finding is then seen but incompletely characterized on a subsequent test (eg, lumbar spinal MRI), further imaging may be unnecessarily prompted. (3) Failure to raise awareness about an underlying disease process, such as autosomal-dominant polycystic kidney disease (PCKD) in a young adult. (4) Failure to raise awareness about a lesion that may have clinical implications in a high-risk patient. For example, in von Hippel-Lindau syndrome, the pretest probability that a simple-appearing cyst harbors clear cell carcinoma is elevated relative to the general population [19]. (5) A referring physician or patient may suspect that the radiologist did not adequately scrutinize the images.

### CRITERIA FOR NOT REPORTING AN INCIDENTAL FINDING

Accounting for the aforementioned benefits and risks, we propose the following potential criteria for not reporting Bosniak category I renal cysts.

1. The cyst is not the reason for the examination.
2. The cyst has no meaningful anatomic or physiologic consequence (eg, mass effect).
3. The cyst has no excess malignant potential given known or suspected patient-level risk (eg, von Hippel-Lindau syndrome).
4. The cyst is not likely to indicate a nonmalignant disease (eg, PCKD).

### LIMITATIONS OF THE PROPOSED CRITERIA

#### Patient Risk and Referring Physician Burden

A problem may occur in rare circumstances in which such findings later become relevant. Consider a 25-year-old patient who undergoes a CT scan for appendicitis and 10 years later develops renal insufficiency. A nephrologist may refer back to the CT report to determine if renal cysts were present or not. Scattered, small, bilateral cysts were present on CT, but the interpreting radiologist did not believe that they were sufficient to suspect PCKD and did not report them. The nephrologist may incorrectly exclude PCKD as a possible etiology of renal insufficiency.

Are these or similar risks sufficient to recommend universal reporting of benign cysts? There are insufficient data to answer this question. Autosomal-dominant PCKD affects 1 in 800 infants at birth [20]. The proportion of patients less than 50 years of age who have renal cysts is about 7% [14]. Therefore, the rough probability that a young patient with cysts has PCKD may be as high as about 2%. The risk for harm from missing PCKD is much smaller because this may occur only if (1) the diagnosis of PCKD is otherwise unknown, and (2) the radiologist does not believe that the number and distribution of cysts merits consideration of PCKD. Even though this circumstance is unlikely, radiologists should have a low threshold for reporting cysts of potential clinical relevance.

We know that radiologists have heterogeneous practices in cyst reporting [1]. In the scenario just described, radiologists should recommend that referrers request repeat review of the relevant CT examination. This is now typically feasible because of large electronic image archives. Is it reasonable to place this type of burden on the referring physician community? Given the rarity of such circumstances, the burden would be minimal. For

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