Radiology

Editorial

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CT Colonography Reporting and Data System: A Consensus Proposal[1]

Computed tomographic (CT) colonography continues to evolve rapidly. Advances in scanning and display technologies, encouraging performance data, and increased utilization necessitate clarification and standardization of results reporting in CT colonography. There are several reasons for this. First and most important, standardized reporting can better assist patients and referring physicians in making management decisions on the basis of the results of CT colonography. The precedent of the mammography Breast Imaging Reporting and Data System, or BI-RADS, schema is a strong incentive to provide a similar structure for CT colonography. Second, as more examinations are performed, the likelihood increases that radiologists interpreting results of a CT colonography examination performed at one center will require comparison to examination results and reports generated at other sites. As has been seen with mammography, a common set of terms facilitates this kind of assessment (1). Third, as utilization of CT colonography increases, our colleagues in other medical specialties, the various third-party payers, and the general public will insist on larger-scale evaluations of examination performance, examination quality, patient outcome, and cost. Here again, a common approach to interpretation will assist us in meeting these demands. Finally, a common scheme for reporting facilitates structured reporting.

The purpose of this communication is to facilitate clear and consistent communication of CT colonography results. The authors—an ad hoc group of investigators active in the area of CT colonography—have collaborated to develop a reporting scheme that is coupled to recommendations for follow-up. Our group, the Working Group on Virtual Colonoscopy, includes members of the American College of Radiology Colon Cancer Committee. On the basis of our collective experience and a review of the relevant literature, we present a practical guide to the interpretation of CT colonography results: the CT Colonography Reporting and Data System, or "C-RADS." Future multidisciplinary collaboration and longitudinal data may lead to a refinement of the terms and concepts we present here; our effort is a starting point in which we attempt to address the needs of current practice.

Adequate training and rigorous quality control of examination performance are essential elements for maximizing the potential of CT colonography; however, these related topics will not be discussed here. Instead, we will focus on the interpretation and follow-up of CT colonography results in three parts: first, a description of terms useful for reporting the size, morphologic features, and location of polyps and masses; second, a description of a classification scheme for colonic lesions and suggestions for follow-up;

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and third, a description of a reporting scheme for extracolonic findings.

Once the group reached consensus on the major points, we circulated a draft version among the group in two subsequent rounds of review. The Working Group made a final endorsement of the contents of this proposal after circulation of a revised document, a group teleconference, and a group meeting held at the 5th International Symposium on Virtual Colonoscopy in Boston, Mass, in October 2004. The terms and categories we present are the products of a deliberative consensus-building process that began in October 2003, after the 4th International Symposium on Virtual Colonoscopy (also in Boston, Mass). A preliminary set of terms for reporting results was circulated to Working Group members, each of whom had participated as faculty in the international symposia on virtual colonoscopy and/or had published in the field of virtual colonoscopy and/or CT colonography. Subsequently, four rounds of comments were solicited. Group members elaborated on differences of opinion through e-mail and phone discussions and in four group teleconference calls.

DESCRIPTIVE FEATURES OF POLYPS AND MASSES

In terms of the relevant CT findings, we define a polyp as a structure with homogeneous soft-tissue attenuation that arises from the colon mucosa, demonstrates a fixed point of attachment to the bowel wall, and projects into the colonic lumen. As a convention, we define a colonic mass as a lesion with soft-tissue attenuation that is greater than 3 cm in its largest dimension.

Morphologic Features

Three general morphologic subgroups of polyps have been described: sessile, pedunculated, and flat (2–5). Sessile lesions are broad based, whereas pedunculated lesions demonstrate a separate stalk. Flat lesions demonstrate plaquelike morphologic features, with less than 3 mm of vertical elevation above the colonic mucosa. Flat lesions have been most recently described, and their clinical importance is a matter of debate. In recent studies—conducted primarily in the United States—of CT colonography in which a conventional colonoscopic technique was used as a reference standard, the prevalence of flat lesions and the likelihood that these lesions harbored cellular atypia were lower than previously suggested (6–8). However, results obtained with more sophisticated, currently nonstandard colonoscopic methods, such as chromocolonoscopy with methylene blue dye, suggest a higher prevalence of aggressive histologic features in a subtype of these lesions, the overall prevalence of which is uncertain. The morphologic features of retained stool are variable; however, angular morphologic features are typical.

Size

For the purposes of colon cancer screening with CT colonography, size remains the most important criterion by which a given lesion should be stratified with respect to the risk that it contains or will subsequently develop into a malignancy (9,10). Size evaluation is especially crucial for screening with CT colonography because smaller lesions may be identified but left in situ for future surveillance.

Currently, lesion size is best defined as the single largest diameter of the polyp head, excluding the stalk. Both supine and prone views, as well as nontransverse multiplanar views and three-dimensional views, should be evaluated to determine which enables the best estimate. Evaluation of the colon and measurement of polyps should be performed by using specific display settings (an approximate window width of 1500 HU and an approximate window level of −200 HU) to impart high contrast to intraluminal polyps and allow discernment of the colon wall from mesenteric fat. Soft-tissue display settings may also be necessary for accurately characterizing lesions, including flat lesions. There can be considerable in vivo variability of the orientation polyps assume within tortuous colonic segments. In recognition of this, reproducibility of lesion measurements becomes critically important. So that consistency can be maintained during surveillance, an important component of the reporting structure involves the inclusion of selected images of lesions on which measurements are clearly shown.

The image display techniques best used for measurement tools in CT colonography are either two-dimensional multiplanar reconstruction views or three-dimensional endoscopic volume-rendered views. At present, both types of visualization are acceptable and complementary depending on the shape and location of the lesion. The interpreting radiologist should bear in mind that the size of irregularly shaped lesions may be underestimated on multiplanar views and that inaccuracy of caliper placement can lead to overestimation of lesion size on three-dimensional views. Readers should be familiar with the measurement tools available on their interpretation systems to maximize accuracy. In the future, automated volumetric measurements of lesions may play a role in clinical assessment, but further investigation of these techniques is required.

Location

Lesion location should be described in terms of the six named segments of the colon: the rectum, sigmoid colon, descending colon, transverse colon, ascending colon, and cecum (2). We do not recommend the inclusion of the hepatic and splenic flexures as separate segments, and we prefer that the term *flexure* be used only as an optional descriptor. It is often difficult to correlate the flexure points observed at CT colonography to corresponding regions observed at endoscopy; hence, the location term *flexure* may have little relevance when patients with lesions whose locations are described with this term are referred for colonoscopic resection.

Lesion Attenuation

Adenomatous polyps can vary in attenuation, but typically they demonstrate homogeneous soft-tissue attenuation. For both polyps and masses, the presence of macroscopic fat is essentially diagnostic of either a lipoma or an inverted diverticulum. In addition, the ileocecal valve commonly demonstrates fat attenuation. For lesions that compromise the bowel lumen, additional relevant features may be present. Regional infiltration of the pericolonic fat may indicate tumor infiltration beyond the bowel wall. According to the modified Dukes (11) and TNM staging systems, radiologists should report the presence of lymphadenopathy, the extracolonic extension of a mass, and the presence of distant metastases if these relevant findings are observed.

Foci of air within a lesion almost invariably indicate retained fecal material and are not worthy of separate reporting (3). Retained stool usually is positioned toward the dependent aspect of the colon on prone and supine acquisitions, but fecal movement may be limited when the material is desiccated, as can occur with the "dry" (stimulatory) cathartic bowel preparations. Fluid and fecal tag-

Lesion Size (mm)—For lesions 6 mm or larger, the single largest dimension of the polyp head (excluding stalk if present) on either multiplanar reconstruction (MPR) or 3D views. The type of view employed for measurement should be stated.

Morphology
- Sessile—broad-based lesion whose width is greater than its vertical height
- Pedunculated—polyp with separate stalk
- Flat—polyp with vertical height less than 3 mm above surrounding normal colonic mucosa

Location
- Refer to named standardized colonic segmental divisions: rectum, sigmoid colon, descending colon, transverse colon, ascending colon, and cecum.

Attenuation
- Soft-tissue attenuation
- Fat

Figure 1. Suggested feature descriptors for polyps and masses. *3D* = three-dimensional.

ging, which render ingested foodstuffs high in attenuation, can help to identify retained stool; validation of these techniques is in progress.

A summary of suggested descriptors for polyps and masses is provided in Figure 1.

CLASSIFICATION AND SUGGESTED FOLLOW-UP OF COLONIC LESIONS

The Clinically Important Polyp and the Rationale for Surveillance

Diminutive lesions.—The target of colorectal carcinoma screening is the advanced adenoma, defined as a lesion 10 mm or larger or a lesion that demonstrates high-grade cellular dysplasia (12,13). However, for the purposes of screening, we suggest 6 mm as the minimum size for reporting polyp lesions. This recommendation is based on the limited clinical importance of diminutive lesions 5 mm or smaller, their slow growth rate, and the poor performance of available detection methods for lesions 5 mm or smaller.

The majority of polyps 5 mm or smaller are hyperplastic and are not thought to confer increased risk for development of colon carcinoma (4,5). The likelihood that a given polyp harbors malignancy is directly related to its size; this risk is estimated to be much less than 1% for lesions 5 mm or smaller (4,14,15). Moreover, it is estimated that it takes 5 or more years for an advanced adenoma to arise from normal mucosa and another 5 or more years for an advanced adenoma to develop into carcinoma (12,15–17). In the context of regular screening at an interval of 10 or fewer years, there is sufficient opportunity to detect the small minority of lesions that will grow to a more clinically important size (1 cm or greater) (18). Finally, for both CT colonography and conventional colonoscopy, performance in the detection of diminutive lesions 5 mm or smaller is limited (6,19–22). As a result, reporting diminutive lesions that are of questionable clinical importance may lead to an undesirable rate of false-positive diagnoses.

Intermediate lesions.—Polyps between 6 and 9 mm are also almost invariably benign in nature, and approximately 30% of such polyps are not adenomas (18,23). Of 6–9-mm adenomas, 95%–97% lack high-grade dysplasia (4,24). Hence, the probability that a 6–9-mm polyp does not represent an advanced adenoma, as defined previously, is approximately 97%. Furthermore, the likelihood that a lesion of this size range harbors invasive carcinoma is less than 1% (4,5). As discussed above, the growth rate of polyps is typically believed to be low. For patients who do not have increased risk factors for development of colorectal carcinoma (eg, no first-degree relative with a history of colorectal carcinoma, no personal history of advanced adenoma or colorectal carcinoma), it is reasonable to recommend interval surveillance when one or two 6–9-mm lesions are detected (24,25).

Prospective data defining the optimal surveillance interval for intermediate polyps have not yet been acquired for CT colonography. However, the published (12,17,18,26,27) experience with colonoscopic follow-up, the observed slow growth rate of polyps, and emerging data indicating that many intermediate lesions regress spontaneously all suggest that surveillance of intermediate polyps can be delayed up to 3 years. We recognize that follow-up for intermediate lesions will be individualized on the basis of several factors, including patient age, sex, comorbidities, and preference and local practice. Reasonable options for follow-up include surveillance with CT colonography and referral to colonoscopy for polypectomy.

There is established precedent in cancer screening to follow lesions deemed relatively low in risk. For example, in mammography, it is accepted that lesions estimated to have less than a 2% chance of harboring malignancy can be followed closely to document stability (28). With colorectal cancer, the biology of disease is even more favorable with respect to surveillance: The expected target of detection is a precursor to malignancy, typically not the cancer itself.

Multiple intermediate lesions.—Patients with three or more synchronous adenomatous polyps have an increased risk of developing advanced adenomas (18). When three or more synchronous 6–9-mm polyps are detected at CT colonography, we recommend referral to colonoscopy for polypectomy, making the presumption that all the detected lesions are adenomas. It is possible to stratify patients in this situation with respect to their subsequent risk of developing advanced adenomas after polypectomy. If histologic evaluation of lesions resected at polypectomy reveals that none was an advanced adenoma and the patient does not have other increased risk factors for development of colorectal carcinoma, then the patient's subsequent likelihood of developing an advanced adenoma within 3 years is approximately 3% (18). In this case, surveillance examination with CT colonography after therapeutic colonoscopy could be performed at an interval of 5 years (12,18).

Lesions 1 cm or larger and colonic masses.—Patients with lesions 1 cm or larger should be referred for colonoscopy. Approximately 10%–25% of these lesions demonstrate either high-grade dysplasia or carcinoma (4,17,18). For detection of colonic masses, the sensitivity and specificity of CT colonography both approach 100% (29,30). Subject to local practice, for obviously malignant masses (eg, those exhibiting annular, constricting morphologic features), direct surgical referral, without confirmation with intervening optical colonoscopy, is a reasonable course of action, as supported by the pub-

lished performance of CT colonography. When CT colonography reveals colonic lesions that warrant intervention, reporting should follow the accepted practice guidelines for communication.

The interval between screening examinations.—At present, we recommend a range of 5–10 years between CT colonography examinations when CT colonography reveals no polyp 6 mm or larger. This advice attempts to balance several lines of reasoning. First, in the largest trial to date—a trial performed by Pickhardt et al (6) in an asymptomatic screening cohort—the performance of CT colonography in the detection of polyps was statistically equivalent to that of conventional colonoscopy. Because the recommended screening interval for colonoscopy is 10 years (18), the results of this trial would argue for an equivalent interval for CT colonography.

However, the techniques employed by Pickhardt et al (6)—namely, fecal tagging, primary three-dimensional evaluation, and segmental unblinding as a reference standard—are recent advances. Two studies that predated the design of the Pickhardt et al study and involved less advanced protocols did not demonstrate equivalent performance (31,32). The variability of these results likely reflects the rapidity with which CT colonography has evolved. In this context, we recommend the broader range of 5–10 years between CT colonography examinations. As further data, especially from studies that incorporate advanced techniques, are published, these recommendations will evolve accordingly.

Classification of Colonic Lesions

In addition to describing the presence and location of reportable colonic lesions, the CT colonography report should include a global assessment of the colon, based on examination quality, reader confidence in colonic findings, and the clinical importance of colonic lesions. In Figure 2, we propose a system for categorizing findings and a recommended course of follow-up. For clarity, the numbering system includes a letter indicating whether the finding relates to the colon (denoted by the letter C before the category number) or to the extracolonic soft tissues (denoted by the letter E before the category number).

A category C0 CT colonography examination is defined as an examination in which confident interpretation of the colonic findings is not possible owing to technical limitations or to a lack of results from prior studies that are required for comparison. In the setting of screening, the radiologist cannot exclude the presence of polyps 1 cm or larger owing to, for example, the collapse of an entire colonic segment. Both incomplete bowel preparation (leading to large amounts of retained fecal material) and insufficient bowel insufflation (leading to segmental collapse) can severely limit the performance of CT colonography (10).

C0. Inadequate Study/Awaiting Prior Comparisons
- inadequate prep: cannot exclude lesions ≥ 10 mm owing to presence of fluid/feces
- inadequate insufflation: one or more colonic segments collapsed on both views
- awaiting prior colon studies for comparison

C1. Normal Colon or Benign Lesion; Continue Routine Screening*[1]
- no visible abnormalities of the colon
- no polyp ≥ 6 mm
- lipoma or inverted diverticulum
- nonneoplastic findings—eg, colonic diverticula

C2. Intermediate Polyp or Indeterminate Finding; Surveillance or Colonoscopy Recommended*[2]
- intermediate polyp 6-9 mm, < 3 in number
- indeterminate findings, cannot exclude polyp ≥ 6 mm in technically adequate exam

C3. Polyp, Possibly Advanced Adenoma; Follow-up Colonoscopy Recommended
- polyp ≥ 10 mm
- ≥3 polyps, each 6-9 mm

C4. Colonic Mass, Likely Malignant; Surgical Consultation Recommended*[3]
- lesion compromises bowel lumen, demonstrates extracolonic invasion

*1: Every 5-10 years.

*2: Evidence suggests surveillance can be delayed at least 3 years, subject to individual patient circumstance.

*3: Communicate to referring physician as per accepted guidelines for communication, such as ACR Practice Guideline for Communication: Diagnostic Radiology. Subject to local practice, endoscopic biopsy may be indicated.

Figure 2. Suggested categorization system for CT colonography findings and follow-up recommendations. *ACR* = American College of Radiology (33), *prep* = preparation.

When CT colonography is performed for interval surveillance of previously documented colonic lesions, comparison with results of prior examinations will be necessary so that lesion growth or regression can be identified. Hence, an otherwise technically adequate examination may be insufficient for complete evaluation if results of prior studies are unavailable. Category C0 examinations are limited for the purposes of colon cancer evaluation, and we recommend further action in the form of either repeat examination or issuance of an addendum (once results of previous studies become available). The timing and nature of appropriate further action should be individualized based on the extent of the technical limitations, the prior-examination history, and patient age. As an example, if CT colonography is performed for surveillance of an intermediate polyp and the affected segment is collapsed, the examination is technically inadequate and a repeat examination should be offered as soon as is feasible.

A category C1 CT colonography examination is defined as an examination at which there is an absence of colonic abnormalities that would increase the patient's risk of developing colorectal carcinoma in the context of regular screenings. Examples include a normal examination or an examination that reveals colonic diverticula, muscular hypertrophy, or a fat-containing colonic lipoma. At category C1 examinations, technical factors permit adequate examination of the entire colon mucosa. If confidently characterized by the interpreting radiologist, retained fecal material does not merit separate description in the report. As discussed above, we recommend 6 mm as a threshold for the reporting of polyps.

After an examination classified as category C1, we recommend routine screening at an interval of 5–10 years. At the radiologist's discretion, the observation

of findings consistent with diverticulitis at CT colonography may lead to a short-term follow-up examination to exclude an underlying neoplasm. When inflammatory changes preclude evaluation of a segment of the colon for cancer screening and no other important findings are present, we recommend reporting the examination on the basis of the visible nonneoplastic findings (ie, as a category C1 examination) and making note in the report of both the limitations of the examination for screening and the recommendation for follow-up examination.

Category C2 denotes an examination at which either one or two 6–9-mm polyps are identified or at which polyp findings are indeterminate. When one or two lesions are confidently detected, a follow-up examination at 3 years to document evolution of polyp size is reasonable, subject to individual patient circumstances. If lesions demonstrate growth at follow-up examination, this should be reported and colonoscopic resection should be considered. The exact course of follow-up will be influenced by lesion size; patient age, comorbidities, and preference; and local patterns of practice. When the radiologist suspects a lesion is present but the lesion is not sufficiently characterized to permit confident evaluation, a follow-up examination at an interval of less than 3 years is reasonable. This recommendation is based on the possibility that the evaluation was limited (eg, by suboptimal bowel preparation or insufflation); short-interval follow-up may increase the reader's confidence that the lesion is present, as well as enable an assessment of its stability. Patients with three or more synchronous 6–9-mm lesions should be referred for endoscopy, because if all of the lesions are adenomas, these individuals have a greater risk of developing advanced adenomas (24,34).

Category C3 denotes an examination at which one or more polyps 1 cm or larger are identified or at which three or more 6–9-mm lesions are identified. The likelihood that a lesion 1 cm or larger harbors either high-grade dysplasia or carcinoma is 10%–25%, with risk related directly to lesion size. As discussed above, the presence of three or more synchronous 6–9-mm polyps may be associated with increased risk for development of advanced adenoma. In both of these situations, endoscopic resection should be performed to remove the lesion(s). In cases in which colonoscopy is not feasible—for example, when distal colonic narrowing prevents the passage of a colonoscope—follow-up options are more complex and include frequent surveillance with CT colonography and surgical resection. Management of these cases should be performed on an individual basis in collaboration with the referring physician.

Category C4 refers to examinations at which a malignant-appearing colonic mass is detected. CT colonography can simultaneously provide important staging information concerning the presence of lymphadenopathy and distant parenchymal metastases and enable the detection of synchronous lesions (35). There is growing anecdotal evidence from several centers of successful direct surgical referral when CT colonography reveals an obvious malignancy.

Important data not incorporated into this reporting system, but of potential relevance to clinical investigators, include numeric assessment of reader confidence. Scalar confidence data are useful for the generation of receiver operating characteristic curves and the analysis of test performance. For clinical research studies, we encourage clinical investigators to report confidence data by using a three-point integer scale in which a score of 1 indicates low confidence in lesion presence; a score of 2, moderate confidence in lesion presence; and a score of 3, high confidence in lesion presence. For clinical reporting, reader uncertainty regarding a specific lesion is incorporated in category C3. With regard to this particular compromise, at present we conclude that simplicity of use outweighs completeness.

Reporting of Extracolonic Findings

Evaluation of the extracolonic structures of the lower thorax, abdomen, and pelvis is integral to the interpretation of CT colonography results. It is also important for the radiologist interpreting CT colonograms to make an overall assessment of the importance of these extracolonic findings because such an assessment provides a concise means by which results can be interpreted. In addition, a global categorization facilitates the analysis of large-scale practice data. It is also important for the interpreting radiologist to remain cognizant of the diagnostic limitations imposed by the reduced x-ray dose and infrequent use of intravenous contrast material that are typical at screening CT colonography.

Only a minority of the extracolonic findings observed at CT colonography are clinically important (6,36). Excessive caution and ambiguity in the description of findings that are almost certainly benign can lead to considerable follow-up examination costs and unnecessary anxiety for the patient. Having said this, appropriate patient care requires that we identify and effectively communicate the presence of clinically important abnormalities.

Our proposed categorization system is provided in Figure 3, and each category is discussed in greater detail below.

The category E0 designates an examination at which technical factors severely limit assessment of the extracolonic soft tissues. This designation is appropriately assigned when image degradation is more severe than that usually observed with screening CT colonography. For example, evaluation of the extracolonic soft tissues of the abdomen and pelvis may be severely compromised by the presence of hip arthroplasty or spinal support hardware. By categorizing an examination as E0, the interpreting radiologist makes a negative assessment of the image quality and sets an upper bound of expectation for the referring physician and patient.

Category E1 denotes a normal examination. Normal variants in anatomy may be present, but these are not expected to directly affect the patient's health status. Examples include the presence of a retroaortic left renal vein or a replaced hepatic artery arising from the superior mesenteric artery.

Category E2 refers to an examination at which there are incidental extracolonic abnormalities, but, because of their low clinical importance, these abnormalities do not merit further diagnostic work-up. Examples include a liver cyst with homogeneous water attenuation and a typical-appearing vertebral hemangioma. In the absence of a known malignancy, these lesions can be confidently characterized at a nonenhanced examination. Although the classification of each extracolonic finding will remain at the discretion of the interpreting radiologist, we emphasize that the prudent use of category E2 is expected to favorably affect the overall cost-effectiveness of CT colonography.

Category E3 denotes an examination that reveals indeterminate extracolonic abnormalities that are likely to be benign. Examples include a renal cyst of homogeneous, uniformly high attenuation that has no other features—such as calcifications or irregular borders—that indicate potential malignancy. At the discretion of the patient and referring phy-

sician, further diagnostic work-up may be indicated. On the basis of published results of assessment of extracolonic lesions, it is reasonable to expect that approximately 30% of extracolonic abnormalities will be assigned to this category (36).

Category E4 refers to an examination at which there are extracolonic findings that, if left untreated, have greater potential to adversely affect the patient's health. Examples include a previously unsuspected abdominal aortic aneurysm or a nonuniformly calcified pulmonary nodule larger than 1 cm. In an asymptomatic screening population, it is reasonable to expect that the prevalence of clinically important findings will be approximately 4%–10% (6,36). When such abnormalities are observed, we recommend that the interpreting radiologist follow accepted practice guidelines for communication.

When a colonic lesion causes abnormalities beyond the boundary of the colon wall, the radiologist should assign clinical importance to the extracolonic findings in context. For example, if a malignant-appearing colonic mass is associated with abnormal infiltration of the pericolonic fat and lymphadenopathy, these extracolonic findings are likely to represent local tumor extension and lymph node metastases and should be assigned to category E4.

In conclusion, our recommendations are intended to facilitate communication of CT colonography results. We have proposed a practical reporting scheme that includes recommendations for the follow-up of colonic polyps that are based on currently available published assessments of the clinical importance and expected growth potential of these lesions. The proposed framework is a starting point in which we attempt to address the need to have a reference guide for interpretation of CT colonography results.

E0. Limited Exam. Compromised by artifact; evaluation of extracolonic soft tissues is severely limited.

E1. Normal Exam or Anatomic Variant. No extracolonic abnormalities visible.
a. Anatomic Variant: eg, retroaortic left renal vein

E2. Clinically Unimportant Finding. No work-up indicated. Examples:
a. Liver, Kidney: simple cysts
b. Gallbladder: cholelithiasis without cholecystitis
c. Vertebra: hemangioma

E3. Likely Unimportant Finding, Incompletely Characterized. Subject to local practice and patient preference, work-up may be indicated. Examples:
a. Kidney: minimally complex or homogeneously hyperattenuating cyst

E4. Potentially Important Finding. Communicate to referring physician as per accepted practice guidelines.
a. Kidney: solid renal mass
b. Lymphadenopathy
c. Vasculature: aortic aneurysm
d. Lung: non-uniformly calcified parenchymal nodule ≥ 1 cm

Figure 3. Proposed categorization system for extracolonic findings. A complete listing of potential extracolonic findings and descriptors is not provided here. A nonexhaustive set of examples is provided for each category.

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