Clarifying Postcontrast Enhancement Sequences for Implementation and Interpretation of the ACR Ovarian-Adnexal Reporting and Data Systems MRI Risk Stratification and Management System

We read with interest the May 2021 article entitled “Ovarian-Adnexal Reporting Lexicon for MRI: A White Paper of the ACR Ovarian-Adnexal Reporting and Data Systems MRI Committee” [1]. The article describes the creation of a lexicon of reporting descriptors for ovarian and adnexal lesions with the primary aim of improving quality and uniformity of MRI reports. This set of guidelines was developed based on best available evidence and expert opinion. The materials presented are described in detail, are easy to follow, and are richly illustrated by a combination of radiologic images, line diagrams, and tables. We enthusiastically applaud the committee and the ACR for this timely and important work.

We have three questions for clarification. First, the development of the Ovarian-Adnexal Reporting and Data Systems (O-RADS) MRI Risk Stratification System incorporates the use of postcontrast images as part of the MRI protocol. Some institutions, including our own, do not routinely perform a contrast-enhanced pelvic MRI in patients investigated for suspected adnexal pathology or generalized pelvic pain with a preceding negative or equivocal ultrasound. The noncontrast pelvic MRI is an excellent screening tool, is fast and easy to perform, promotes rapid turnaround, and can be conducted as an unsupervised examination. Given the fundamental importance of postcontrast enhancement to the O-RADS-MRI risk stratification, it seems that noncontrast pelvic MRI may now have limited scope. Assuming the need for protocol uniformity and postcontrast enhancement for O-RADS classification, would the O-RADS committee recommend that noncontrast pelvic MRI studies be labeled as “O-RADS 0” in a similar fashion as pelvic ultrasounds without endovaginal assessment? Are there situations in which O-RADS can be applied without postcontrast imaging (such as in the absence of solid tissue and irregular septations)? How would this apply for patients who are unable or unwilling to receive contrast agents?

Second, MRI acquisitions and time-intensity curves described in the article appear to be the method of choice for evaluating enhancement. Can the authors provide information on what software they used for obtaining this perfusion-related data? Was this vendor-specific proprietary software that requires an additional purchasing fee, or are there free web-based cross-platform applications available? If automated software is not available for an individual institution, do the authors have a recommendation for efficient manual calculation (example: specific timing sequences to use), or do the authors recommend manually calculating each of the minimum 15-second interval sequences recommended in Appendix 3?

Finally, the ACR website description of nondynamic contrast enhancement at 30 to 40 seconds postinjection (6b) [2] appears inconsistent with the recent publication with respect to the definition of nondynamic contrast enhancement at 30 to 40 seconds postinjection. Can the authors confirm that the website definition of “less than or equal to the myometrium” as “enhancement of the solid tissue within the adnexal lesion is hypoenhancing to the outer myometrium at 30-40 seconds postcontrast injection” is a comparative typographical error?

Gavin Low, MBChB, MPhil
Department of Radiology and Diagnostic Imaging, University of Alberta, Edmonton, Alberta, Canada

Mitchell P. Wilson, MD, FRCPC, DABR
Department of Radiology and Diagnostic Imaging, University of Alberta 8440-112 Street NW Edmonton, Alberta T6G 2B7, Canada
e-mail: mitch.wilson@ualberta.ca

The authors state that they have no conflict of interest related to the material discussed in this article. Dr Low is a partner, and Dr Wilson is a partnership-track employee.

REFERENCES

Authors’ Response

We thank the readers for their relevant and thoughtful comments on our article “Ovarian-Adnexal Reporting Lexicon for MRI: A White Paper of the ACR Ovarian-Adnexal Reporting and Data Systems MRI Committee” [1]. In response, there are a number of