



Letter to the editor response

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We thank the authors for their detailed summary of the role for CT histogram analysis for workup of incidentally discovered adrenal nodules. Their letter clearly outlines the benefits and limitations of this technique.

We agree that there may be a niche for CT histogram analysis as a means to diagnose an incidental adrenal nodule as an adenoma on unenhanced or enhanced CT when attenuation is > 10 HU as this could potentially obviate the need for another imaging test [1–3]. Historically, the low sensitivity of this technique has limited adoption into routine clinical practice [4, 5]. New research does suggest that a Gaussian model-based algorithm is superior to standard texture analysis although this initial study was limited by a relatively small number of non-adenomas and absence of pathologic gold standard in almost all non-adenomas [6]. This Gaussian based algorithm, as well as standard CT texture analysis, suffers when images are acquired with modern dose reduction techniques as this may increase image noise. However, mathematical modifications can increase accuracy and specificity [7]. Additionally, the need for a separate workstation or post-processing software has been considered a barrier to more robust implementation of these techniques. Open source software does exist for the modified Gaussian method and can be applied without the use of a separate workstation [8].

In summary, we still consider adrenal protocol CT, with or without washout analysis, to be the preferred test for work-up of incidentally detected adrenal nodules in routine

clinical practice. Further work is necessary to better define the utility of CT histogram analysis, particularly with modern dose reduced CT techniques.

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