

Evidence Discussion – Nuclear Kidney Imaging (AB-4.5)

Renal scintigraphy is used for evaluation of renal perfusion, and function as well as renal anatomy. Regarding anatomy, renal scintigraphy is currently used when there is an allergy to CT or MRI contrast material. The use of IV contrast in CT, as well as MR, is avoided in cases of abnormal renal function and altered GFR. Renal scintigraphy has a role in the diagnosis of obstructive uropathy. It can be used to differentiate true obstruction from non-obstructive simulators causing urinary tract dilation. Nuclear renal scanning is also an excellent modality for the qualitative as well as quantitative assessment of renal transplant function. Because radiation exposure from renal scintigraphy is very low as compared to a CT scan, it maintains a role in the evaluation of pediatric renal anatomy whether normal, anomalous, or pathologic.

References

1. Banks KP, Green ED, Brown RKJ, et al. ACR–SPR Practice Guideline for the Performance of Renal Scintigraphy. (Revised 2017). American College of Radiology.
2. Remer EM, Papanicolaou N, Casalino DD, et al. American College of Radiology Appropriateness Criteria – Renal Failure. American College of Radiology. (Revised 2013).