

Evidence Discussion (HD-8.3)

- For suspected Lewy Body Dementia (LBD), a CT or MRI head is appropriate as the initial imaging study.^{1,3}
- To increase diagnostic accuracy of LBD, SPECT modalities are helpful for differentiating LBD from Alzheimer's dementia.^{1,2,3,4}
- Functional imaging of the dopamine transporter (DAT) (Iodine-123 loflupane) using SPECT shows a deficiency in the nigrostriatal pathway in LBD. This is considered a second line imaging test after cross-sectional imaging has excluded other pathology, such as vascular lesions along the nigrostriatal pathway, which can lead to abnormal DAT images with false positive results.^{1,3}
- An abnormal DAT-SPECT scan has a sensitivity of 77.7% and a specificity of 90.4% for probable LBD.³

References

1. Expert Panel on Neurological Imaging, Moonis G, Subramaniam RM, et al. ACR Appropriateness Criteria® Dementia. J Am Coll Radiol. 2020;17(5S):S100-S112. doi:10.1016/j.jacr.2020.01.040
2. Armstrong MJ. Lewy Body Dementias. CONTINUUM: Lifelong Learning in Neurology. 2019;25(1):128-146. doi:10.1212/con.0000000000000685
3. McCleery J, Morgan S, Bradley KM, Noel-Storr AH, Ansorge O, Hyde C. Dopamine transporter imaging for the diagnosis of dementia with Lewy bodies. Cochrane Database of Systematic Reviews. Published online January 30, 2015. doi:10.1002/14651858.cd010633.pub2.
4. Subramaniam RM, Frey KA, Hunt CH, et al. ACR–ACNM Practice Parameter for the Performance of Dopamine Transporter (DaT) Single Photon Emission Computed Tomography (SPECT) Imaging for Movement Disorders. Clinical Nuclear Medicine. 2017;42(11):847-852. doi:10.1097/rlu.0000000000001815,