

Evidence Discussion (PND 4)

- MRI is the imaging study of choice to evaluate the brachial plexus due to superior soft-tissue contrast and good spatial resolution, providing detailed definition of intraneural anatomy as well as localizing pathologic lesions in conditions in which electrodiagnostic and physical findings are nonspecific.¹ A variety of findings may be seen within the brachial plexus on MRI, including increased T2 signal intensity, focal or diffuse enhancement, or enlargement or edema of nerve segments. Furthermore, signal abnormalities or atrophy in muscles supplied by the brachial plexus can help support a plexopathy. MRI is more sensitive than CT at identifying subtle infiltrative lesions regions or areas of enhancement.²
- Regarding fluorine-18-2-fluoro-2-deoxy-D-glucose (FDG)-PET/CT, there is no relevant literature to support the use of FDG-PET/CT in the evaluation of traumatic or nontraumatic brachial plexopathy in the absence of a known malignancy.¹

References

1. Expert Panel on Neurological and Musculoskeletal Imaging; Boulter DJ, Job J, Shah LM, Wessell DE, Lenchik L, Parsons MS, Agarwal V, Appel M, Burns J, Hutchins TA, Kendi AT, Khan MA, Liebeskind DS, Moritani T, Ortiz AO, Shah VN, Singh S, Than KD, Timpone VM, Beaman FD, Corey AS. ACR Appropriateness Criteria® Plexopathy: 2021 Update. J Am Coll Radiol. 2021 Nov;18(11S):S423-S441. doi: 10.1016/j.jacr.2021.08.014. PMID: 34794598.
2. Rubin DI. Brachial and lumbosacral plexopathies: A review. Clin Neurophysiol Pract. 2020 Aug 13;5:173-193. doi: 10.1016/j.cnp.2020.07.005. PMID: 32954064; PMCID: PMC7484503.