

## Pituitary MRI Checklist

Dr. Friedman and his neurosurgery colleagues use pituitary MRIs in patients being evaluated for Cushing's disease to determine if a patient has a pituitary tumor and should go to pituitary surgery. Most tumors in patients with Cushing's Disease are quite small, often less than 2 mm. Therefore, high quality pituitary MRIs are crucial in the evaluation of patients with Cushing's Disease.

If you are imaging center or radiologist, please do your utmost to follow the items on this checklist. If you are a patient, please give this checklist to the imaging center and ask if they can follow this protocol.

A dedicated pituitary MRI that focuses on the pituitary and parasellar areas [small field of view (FOV)] and not a brain MRI.

High-resolution (1 mm slices) T1 pre-contrast images through the pituitary in coronal and sagittal planes

Normal-resolution T1 pre-contrast images through the pituitary in the axial plane

High-resolution (1 mm slices) T1 post-contrast images through the pituitary in coronal and sagittal planes

Carefully-timed small FOV coronal dynamic post-contrast imaging at multiple times (e.g. 0, 30, 60, 90, 120 and 180 seconds)

SPGR (if a General Electric MRI) or VIBE (if a Siemens MRI) high-resolution T1 imaging can be done instead of or in addition to dynamic post-contrast imaging.

Fluid attenuated inversion recovery (FLAIR) imaging 10-20 minutes after contrast.

3Tesla MRI is preferred, although a 1.5 Tesla MRI may be okay, if the other criteria are done

Non-moving patient to avoid motion artifacts

Thorough review of all the images by a radiologist with expertise in reading pituitary MRIs

Please provide the patient with two copies of the MRI disk and the written report.

Thank you for your help in providing the best imaging for your patient.