



## Vascular Disease

### DIAGNOSTIC AND FOLLOW-UP IMAGING FOR FIBROMUSCULAR DYSPLASIA: A REPORT FROM THE UNITED STATES FIBROMUSCULAR DYSPLASIA PATIENT REGISTRY

ACC Moderated Poster Contributions

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**Background:** Fibromuscular dysplasia (FMD) is a disease of medium-sized arteries that leads to beading, stenosis, dissection or aneurysm. Imaging for initial diagnosis and subsequent follow-up of patients with FMD has not been well-described.

**Methods:** Imaging data for initial diagnosis based on study date, further evaluation, and follow-up, is reported for 340 patients (pts) with renovascular or cerebrovascular FMD enrolled in the FMD registry from 7 sites in the United States.

**Results:** Among pts with renal artery involvement alone, ultrasound (US) was the most common initial diagnostic modality (77%), followed by catheter-based angiography (66.7%), CT angiography (39.7%), MR angiography (21.4%), and intravascular US (5.6%). Among pts with extracranial carotid or vertebral alone, US remained the most commonly used imaging modality (79.2%); with fewer pts undergoing catheter-based angiography (37.5%). Pts with both renal and extracranial carotid/vertebral involvement underwent more imaging overall, with US (83.8%) and catheter-based angiography (64.1%) the most common. At follow-up, US remained the most common in pts with renal involvement alone (72.3%), extracranial carotid/vertebral alone (86.2%), or both (77.1%). Catheter-based angiography was common for renal alone (38.3%), extracranial carotid/vertebral alone (20.7%), or both (40%). 74.5% of pts with renal FMD underwent carotid/vertebral artery imaging; 83.7% of pts with carotid/vertebral FMD had renal artery imaging. Of pts diagnosed with extracranial carotid FMD, 63.7% also had imaging of the intracranial vasculature.

**Conclusion:** Multiple imaging modalities are used to diagnose FMD, but US remains the most common, at both the time of initial diagnosis and follow-up. The majority of pts with renal artery FMD had imaging of the carotid/vertebral arteries; the majority of pts with carotid artery FMD had the renal arteries and intracranial vasculature evaluated. However, approximately 1/3 of pts with extracranial FMD did not undergo an imaging study of the intracranial circulation to rule out intracerebral aneurysms. Further study is required to determine the optimal diagnostic and follow-up approach in this disorder.