LUNG IMAGING PROTOCOL

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Disclosure Slide

• No disclosures
Is MR ready to image the lung?

• Yes and No
• Sequences required are not fully developed and sold as a product for MRI
• Most are works in progress
• However, imaging can be performed with standard sequences
Standard Spin Echo or STIR
Perfusion Imaging
Perfusion Imaging
Aortic Collateral Blood Flow to Lung

- Demonstrated that aortopulmonary collateral blood flow (APCBF) can be measured using phase-contrast MRI

- Showed that the degree of APCBF correlates to the severity of lung disease assessed by FEV$_1$%p

Results

Normal APCBF

Increased APCBF
<table>
<thead>
<tr>
<th>MRI Type</th>
<th>Non-BPD</th>
<th>Mild BPD</th>
<th>Moderate BPD</th>
<th>Severe BPD</th>
<th>Severe BPD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UTE MRI</strong></td>
<td><img src="non_bpdu.png" alt="Image" /></td>
<td><img src="mild_bpdu.png" alt="Image" /></td>
<td><img src="moderate_bpdu.png" alt="Image" /></td>
<td><img src="severe_bpdu.png" alt="Image" /></td>
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<tr>
<td><strong>FGRE MRI</strong></td>
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Lung MR protocol - Core

- Axial T2 Weight FSE type of imaging ~5 mm thick
- Axial FGRE type of imaging
- UTE imaging if you have it