Reproducible GABA and Glx – Scan time considerations

3rd of October, ESMRMB Edinburgh 2015
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Subjects:
- 21 male healthy volunteers (age 24-44 years).
- Each subject scanned twice one week apart

MRI protocol:
- 32-channel head coil,
- TE=68 ms and TR=1800 ms for NR=328

Locations:
- 21ml volume mid anterior cingulated cortex (ACC)
- 12ml volume left Brocas area

Analysis:
- Data partitioned into shorter sections numerically equivalent to scans of progressively increasing duration.
- Quantified with LCModel version 6.3-1H
Results

![Graph showing Coefficient of Variation (CV) across Number of Scans for different regions and conditions: GABA ACC, Glx ACC, GABA Broca, Glx Broca. The table below summarizes the best CV values.]

<table>
<thead>
<tr>
<th>Region</th>
<th>Best CV (%)</th>
<th>@ NR=</th>
<th>Best CV (%)</th>
<th>@ NR=</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>10.4</td>
<td>218</td>
<td>6.0</td>
<td>246</td>
</tr>
<tr>
<td>Broca’s</td>
<td>4.7 (5.6 @ 218)</td>
<td>328</td>
<td>3.2</td>
<td>246</td>
</tr>
</tbody>
</table>