What is NeuroQuant?

- NeuroQuant is a post-processing software to provide supportive evidence of volume loss in brain disorders through quantitative data.

- Modality it uses:
  - Brain MRI on either a 1.5T or 3T MRI scanner (GE, Phillips and Siemens only, not Open MRI)
  - Uses 3D T1, non-contrast, sagittal MRI

- Broad Clinical Assessments:
  - Alzheimer's disease
  - Epilepsy
  - Multiple Sclerosis (MS)
  - Traumatic Brain Injury (TBI)
  - Brain Development
The following reports are provided and compare patient's values with a database of people the same age and sex who have healthy brains:

### Comprehensive Clinical Assessments

Five reports provide analysis for a broad range of brain structures and clinical indications.

<table>
<thead>
<tr>
<th>Color</th>
<th>Report</th>
<th>Clinical Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age Related Atrophy</td>
<td>Age associated neurodegenerative conditions, Alzheimer’s disease, Frontotemporal dementia, Dementia with Lewy bodies, Hippocampal sclerosis</td>
</tr>
<tr>
<td></td>
<td>Hippocampal Volume Asymmetry</td>
<td>Temporal lobe epilepsy, Unilateral degenerative conditions</td>
</tr>
<tr>
<td></td>
<td>Multi Structure Atrophy</td>
<td>Multiple Sclerosis, Age associated neurodegenerative conditions</td>
</tr>
<tr>
<td></td>
<td>Triage Brain Atrophy</td>
<td>Age associated neurodegenerative conditions, Wide assessment of atrophy in brain regions and structures</td>
</tr>
<tr>
<td></td>
<td>Brain Development</td>
<td>Brain development in children ages 3 and up</td>
</tr>
</tbody>
</table>
Why NeuroQuant?

- NeuroQuant, a new product line to drive MR volume.
  - Build a relationship with referring providers we may not already have a strong relationship and enhance relationships we already have
  - Growing population of dementia/Alzheimer's patients

- Targets:
  - Neurologists
  - Geriatric Physicians
  - Primary Care Physicians *(A diagnosis of Alzheimer’s disease is most commonly made by an individual’s primary care physician. [www.alz.org](http://www.alz.org))*

- Additional providers to call on for the other uses of NQ include:
  - Pediatrics
  - DCs/MDs seeing TBI patients
How does it work?

- A special sequence* taken during an MRI Brain are sent to be post-processed with the NeuroQuant software (PACS server housed at CDI SLP).
  - * T1, non-contrast, sagittal MRI

- It takes approximately 5-7 minutes for the results to be sent back to the technologist. The results provide reliable and objective quantitative measurements and images.

- **Cannot process scans retroactively**, NeuroQuant protocols must be engaged at the time the scan is performed, you cannot apply NeuroQuant to already existing exams.
# NeuroQuant®

**Multi-Structure Atrophy Report**

**Patient Information**

<table>
<thead>
<tr>
<th>Patient ID:</th>
<th>Patient Name:</th>
<th>Sex:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acquisition Number:</th>
<th>Referring Physician:</th>
<th>Exam Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2014/02/05 06:13:57 PM</td>
</tr>
</tbody>
</table>

**Morphometry Results (1 of 3)**

<table>
<thead>
<tr>
<th>Brain Structure</th>
<th>Volume (cm³)</th>
<th>% of ICV (5%-95% Normative Percentile*)</th>
<th>Normative Percentile*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Brain</td>
<td>1044.30</td>
<td>66.67 (70.03 - 79.51)</td>
<td>&lt;6</td>
</tr>
<tr>
<td>Lateral Ventricles</td>
<td>53.53</td>
<td>3.62 (0.34 - 2.62)</td>
<td>&gt;96</td>
</tr>
<tr>
<td>Thalamus</td>
<td>10.76</td>
<td>0.73 (0.91 - 1.18)</td>
<td>&lt;6</td>
</tr>
</tbody>
</table>

**Age-Matched Reference Charts**

*Charts and normative values are provided for reference purposes only. Their use for diagnostic purposes has not been approved by any regulatory body.*
Ordering NeuroQuant

- Referring providers need to add “NeuroQuant” to the order. This is being added to our script pads as a box to check in the MRI area.
  - CPT 70551 (MR Brain w/o Contrast)
  - CPT 76377 (3D volumetric image post-processing) – Currently NOT billed for due to CDI’s billing standards

Appointment Information
☐ Call patient to schedule MRI appointment.
☐ Is there previous MRI study information? Date __________________________ Location __________________________

Please read the back of this page for directions to the MRI center.

<table>
<thead>
<tr>
<th>HEAD</th>
<th>MRA/MRV</th>
<th>SPINE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Brain</td>
<td>MR ANGIOGRAPHY</td>
<td>Cervical</td>
<td>☐ Brain</td>
</tr>
<tr>
<td>SCAN TYPE</td>
<td>☐ Head</td>
<td>☐ Brain/Orbits</td>
<td>☐ Brain/Orbits</td>
</tr>
<tr>
<td>☐ Headache</td>
<td>☐ Neck</td>
<td>☐ Orbits</td>
<td></td>
</tr>
<tr>
<td>☐ Hydrocephalus/NPH</td>
<td>MR VENOGRAPHY</td>
<td>☐ IAC/Brain</td>
<td>☐ IAC</td>
</tr>
<tr>
<td>☐ Memory Loss</td>
<td>☐ Head</td>
<td>☐ Sella/Pituitary</td>
<td>☐ Sella/Pituitary/Brain</td>
</tr>
<tr>
<td>☐ MS (rule out)</td>
<td>☐ Other ____________________</td>
<td>☐ L</td>
<td>☐ Brachial Plexus</td>
</tr>
<tr>
<td>☐ Seizure</td>
<td></td>
<td>☐ R</td>
<td></td>
</tr>
<tr>
<td>☐ Stroke</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Trauma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Tumor (rule out)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Other ______________</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ NeuroQuant® - What are you looking to measure?
☐ Fibertracking - What are you looking to measure?
Billing for NeuroQuant

• For the MR portion of the exam, we can and do bill. We would expect payment as long as it meets medical necessity.

• In order to bill the 3D reconstruction codes, there has to be radiologist involvement. With NeuroQuant, this is automated reconstructions and the requirements driven by the 3D CPT code are not being met and/or documented, thus, not we feel the CPT code is not billable.

• The current negotiated post processing NeuroQuant fee that CDI/Insight must absorb. ($30/scan for the first report, $15/scan for the second report)

• Reports are purchased in bulk by corporate, and are allocated back to the markets. Accounting reconciles the actual procedural volumes from central reporting to confirm accuracy.
Other things to know about NeuroQuant

• No capital is required to provide this exam, however:
  – **Radiologist champion is key with this service as with any new service.**
    • CoreTechs provides training webinars for the Radiologists, Technologists and Sales team.
  – There is work from an operations and systems perspective to get this up and running. Subsequent slides detail these steps:
    • Equipment must be verified
    • New protocols are required for each individual exam
    • Staff must be trained
    • Systems must be connected to streamline results delivery
1. Identify a Radiologist champion

2. Is there a need within the referring community? 
   Start discussing with customer targets: ROI potential?

3. Collaborate with your Operations, RSDs and Marketing partners.

4. Have discussions with Markets that have launched the product line. 
   Northern California, Arizona & Puget Sound (Launching Nov 2015)

5. Engage the Product Implementation Team.
Steps to Add NeuroQuant in your Market

1. **Complete New Product Implementation Form**
   - Submit to Regional Marketing Manager who will bring it to the Product Implementation (bi-monthly meetings)
   - Product Implementation Team will review your request. Once approved, a representative from the team communicate to move forward

2. **Contact Shelly Adams at CorTechs Labs to arrange training the radiologists:**
   
   Shelly Adams, VP Sales and Marketing  
   CorTechs Labs, Inc  
   *Tel 858-459-9704; Cell 619-840-2467*  
   *Email sadams@cortechslabs.com*
   
   Include Janice Lund in all meetings, *jlund@cdirad.com*

3. **Determine which reports your radiologists want to offer (see slide 3)**
   - This is required for route configuration and marketing approach
4. **Connect with Regional Marketing Manager to begin marketing tools**
   - This will include specifics on which reports you are offering (different marketing content for different reports).
   - Allow at least 4 weeks for tools to be finalized, printed and delivered to your team.

4. **Establish the modality set up**
   - Arrange for your local Field Service Engineer to work behind the scenes to make sure the scanners are set up to send them images to NeuroQuant.
   - If you don’t have FSE, work with your scanner vendor.
   - There are routes specific to the type of NeuroQuant scan being ordered which processes a report specific to the physicians order.
   - CorTechs Labs will provide guidance for this step.
   - Once the routes are established, Janie Lund will coordinate testing, working in collaboration with Image Services.

5. **Arrange for CorTechs to train your techs**
   - Who will access the NeuroQuant system to print reports?
Steps to Add NeuroQuant in your Market

6. **Configure PACS Routing**
   - CorTechs Labs will work with Janice Lund to configure NeuroQuant system to make sure the report is being sent to the appropriate PACs viewer for the reading rad

7. **Arrange for CorTech Labs to train your sales team**
Discussion

- What questions do you have about NeuroQuant?