Thank you for your interest in the CTN Scanner Validation Program. A successful validation ensures that your study patients as well as your clinical patients are being scanned on a quantitatively and qualitatively accurate PET/CT.

**Overview**

The CTN’s Scanner Validation Program was established to ensure the quantitative accuracy of PET/CT scanners used in multicenter trials. The phantom was designed as a clinical simulator to evaluate the detection of lesions in an anthropomorphic model. Since inception, the program has collected nearly 500 phantom data sets from nearly 200 imaging sites sampling the spectrum of commercially available PET/CT systems. This data set has allowed the CTN to develop acceptance criteria to determine quantitative acceptance of PET imaging acquired in multicenter studies. Below are the main goals of the program:

- To provide relevant and meaningful assurances to trial sponsors that PET/CT scanners in their trials will perform quantitatively and qualitatively above predetermined standards, rationally set, based upon seven years of data collection and analysis.
- To provide constructive feedback to imaging sites regarding their scanner’s performance characteristics based upon our historical collected data.
- To globally raise the bar for quantitative PET/CT imaging in clinical trials and clinical practice.

**Scanner Validation Process**

Scanner validation requires the use of the unique CTN phantom; i.e., a “clinical simulator” that mimics lesions in the human torso and provides both qualitative and quantitative information in conditions similar to actual clinical imaging settings.

To be validated, staff at imaging centers must successfully complete the steps in the process illustrated below for each PET/CT scanner being tested.

1. **Site /Sponsor requests scanner validation**
2. **Site completes and returns PET/CT Equipment form provided by CTN**
3. **CTN Initiates phantom shipment**
4. **Site performs phantom scan; uploads/sends images and worksheet**
5. **Site returns CTN phantom**
6. **CTN reviews phantom images and worksheet**
7. **Validated; Site receives report and Certificate**

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1 John J. Sunderland and Paul E. Christian; Quantitative PET/CT Scanner Performance Characterization Based Upon the Society of Nuclear Medicine and Molecular Imaging Clinical Trials Network Oncology Clinical Simulator Phantom; J Nucl Med 2015 56:145-152
**Review Analysis**

Two reviewers will perform the image review, including at least one PhD-level physicist specifically trained in scanner validation. If images meet all required parameters, the validation is considered successful. A scanner performance report is prepared and sent to the site along with a Certificate of Validation. This scanner performance report includes an evaluation of the scanner’s lesion detection ability, technical and quantitative assessment. You will also receive a comparative analysis (pictured below) of your scanner to scanners of the same model, along with suggestions, if needed, to improve the quality and/or accuracy of the images.

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**Scanner Validation Fees**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Validation</td>
<td>$2,000 up to 2 scanners $500 each additional scanner</td>
</tr>
<tr>
<td>CTN Phantom Shipping</td>
<td>Shipping fees vary by location</td>
</tr>
<tr>
<td>Re-validation</td>
<td>$1,000 up to 2 scanners</td>
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</tbody>
</table>

Note: If failed more than once, site will be charged for $500 per scanner for an additional attempt. If a previously-validated scanner was validated more than 18 months ago, you will be billed as an Initial Validation.

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**Contact**

**Bonnie Clarke**, Director: bclarke@snmmi.org or 703-667-5120

**Shyanne Mortimer**, Imaging Research Specialist: smortimer@snmmi.org or 703-326-1180

**Tessa Ocampo Johnson**, MBA, CNMT, Program Manager: tjohnson@snmmi.org or 703-652-6795