Australasian Radiopharmaceutical Trials network

ARTnet Camera Validation Program FAQ

What is the ARTnet Camera Validation program?

This program utilises the ARTnet phantom to document PET or SPECT camera performance.

The ARTnet phantom assessment can be used for either:

(i) a 'general' assessment of an imaging device (SPECT or PET camera) to document basic performance under standard conditions, not attached to any particular trial, or
(ii) a 'specific' assessment designed to determine the suitability of imaging equipment for an individual clinical trial.

The general assessment might be performed to validate a camera (or several cameras) at a site as a potential partner in future unspecified clinical imaging trials, whereas the specific assessment would focus on the defined needs of a particular clinical imaging trial in question.

Why is the camera calibration process useful?

The main purpose of the ARTnet camera validation program is to facilitate standardisation of imaging data collected across sites in a multi centre clinical trial setting. By ensuring calibration of the cameras, this will allow the comparison of semi-quantitative data across sites.

What is the process if I would like my camera/s assessed?

The process for organising to be involved is detailed below:

1. Fill in the ARTnet camera validation request form which is available here.
2. Please send the completed form to secretariat@anzsnm.org.au
3. The ARTnet Project Officer will then contact you to organise delivery of the ARTnet phantom. Please note that the scans are expected to be performed within 2 weeks of phantom delivery.
4. The ARTnet phantom will be delivered by courier to your site at the agreed date.
5. Instructions regarding how to prepare the phantom, how to perform imaging and how to upload the results will be provided by the ARTnet Project Officer once you have submitted your ARTnet camera validation request form. Please note that ARTnet does not supply the radioisotope for the phantom study.
6. Once you have completed imaging of the ARTnet phantom, upload your results to the link provided and email your completed worksheets to the ARTnet Project Officer.
7. The ARTnet Project Officer will advise you of the analysis results (either pass of validation specifications or recommendations to repeat the scan).
8. The Project Officer will organise return of the ARTnet phantom & courier address labels.

ARTnet Camera Validation Program - FAQ

What is the ARTnet phantom?

The ARTnet phantom uses a NEMA-NU2 (2007) IEC body phantom and is suitable for PET or SPECT camera validations. There are instructions included with the phantom that outline how to prepare the phantom, perform the imaging and upload data for analysis.

How is the analysis of the ARTnet phantom performed?

The data from the phantom study will be sent to the core imaging lab who will perform data analysis of the ARTnet phantom and provide a short report to ARTnet. ARTnet will then issue the validation certificate to the site. ARTnet will hold the report data received from the core imaging lab for a minimum of 2 years.

What is the cost?

The cost of camera validation may vary depending on the specific requirements of a clinical trial. The fee that ARTnet charges is to cover direct ARTnet costs including transportation of the ARTnet phantom, co-ordination of the program and a fee for analysis of the data at the core imaging lab.

As an indicative cost, to perform camera calibration with the ARTnet phantom using FDG the standard cost is $1861.20 (+GST) for one PET camera. There will be an additional fee for repeat analysis if site data 'fails' specification of $524.40 (+GST).

You will be informed of the cost for your individual request prior to proceeding with the validation program. Payment is required within 4 weeks according to the invoice payment terms. You will receive your certification statement within 4-6 weeks of data upload and after your invoice has been approved for payment.

What information do I receive after my camera has been assessed?

You will receive ARTnet certification for the camera that was assessed. This certification confirms that the camera meets calibration standards. If there are specific requirements for a clinical trial, this may also be noted in the certification. You will receive the certification within 4 weeks of upload of your data.

What do I do if my camera does not attain the accreditation requirement?

You will be contacted and given information on why the camera did not reach the accreditation standard. This may require repeating the ARTnet phantom study for an additional fee of $524.40 (+GST).

ARTnet Camera Validation Program - FAQ

How long is the camera calibration valid for?

As a guide, ARTnet recommends re-certification every 2 years. If however there has been a major hardware or software upgrade to your camera that may influence semi-quantitative values, then the camera calibration may need to be repeated sooner than this. There may also be trial-specific requirements stipulated in the protocol of a clinical trial that may supersede these recommendations.

Do I need to repeat the process for each different clinical trial?

No – there should be no requirement for repeating the ARTnet phantom for each trial providing the camera and the isotope that was used in your original ARTnet calibration have not changed, and there has been no major change to the camera hardware or software since the ARTnet phantom study was performed. If you have a specific trial requirement and are uncertain if your current certification is valid, please contact us for further advice.

Can I use my own phantom to complete the camera validation?

Yes – if you would like to use your own phantom then complete the ARTnet camera validation request form and make a note in the Other Comments.

What happens if I do not complete the camera validation within 2 weeks of receiving the ARTnet phantom?

An extended phantom use fee of $250 + GST will be charged if your camera validations scans are not completed, and data uploaded within 2 weeks of receiving the ARTnet phantom. The exact volume of the phantom will need to be accurately measured prior to imaging.