

Using a Virtual Desktop Connection for home reporting during COVID

This is emergency guidance for remote image reporting, designed to assess the overall usability of your home reporting set-up for reporting CT, MRI and nuclear medicine.

Virtual Desktop Connections usually reduce the transmission bandwidth by using lossy compression. This means that images will be degraded, even before being displayed on your home system. For axial imaging this means potential loss of spatial resolution (number of pixels per image) and contrast resolution (number of values available to display each pixel). These can to some extent be overcome by the use of magnification and windowing.

Before you start, please ensure that:

- You are using a PC or a laptop plugged into a 17" or larger monitor (your HDTV may work) using a HDMI cable – not Bluetooth.
- Your monitor is in a place with gentle lighting and no glare, with contrast and brightness set to maximum.
- Select the best resolution: Desktop -> right click -> display settings -> resolution -> select largest matrix size.
- You open your PACS programme directly from the C:drive browser, rather than via your remote desktop if possible.
- You ask your IT department to install the RIS-PACS link on the remote client. If you cannot access the usual VR then any available free VR can be used, or you can purchase an online VR package for your home machine.

Evaluate your monitor

There is no formally accepted way of evaluating a home reporting solution. However, the GMC and NHSE accept that we are likely to be working outside of our comfort zone and this document represents a method to evaluate our home environment and make the best decision about safety of reporting.

Test Pattern Images

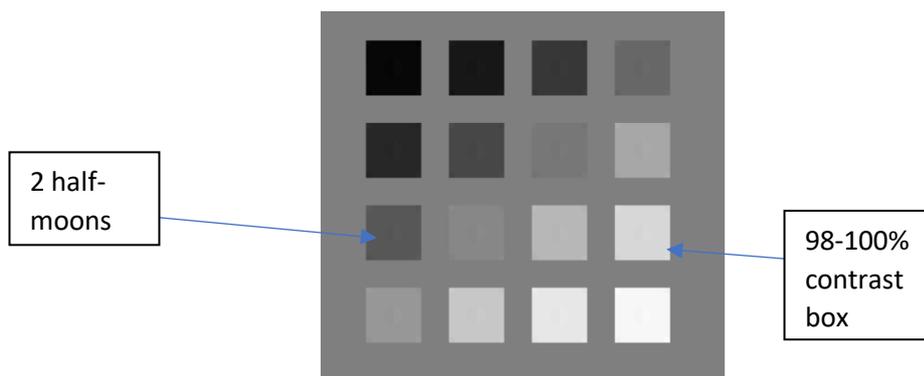
Ask your PACS team to download the images below from the [American Association of Physicists in medicine](#) website and upload them onto your PACS. You must view them via your remote connection on PACS on 1:1 magnification.

1. 2K TG18-QC pattern
2. 2K TG18-CT pattern

Any set-up that passes the tests below can reasonably be used for issuing formal reports for axial imaging. You may want to use magnification and windowing, and image sharpening more than usual, and **a disclaimer is advised at the end of your report.**

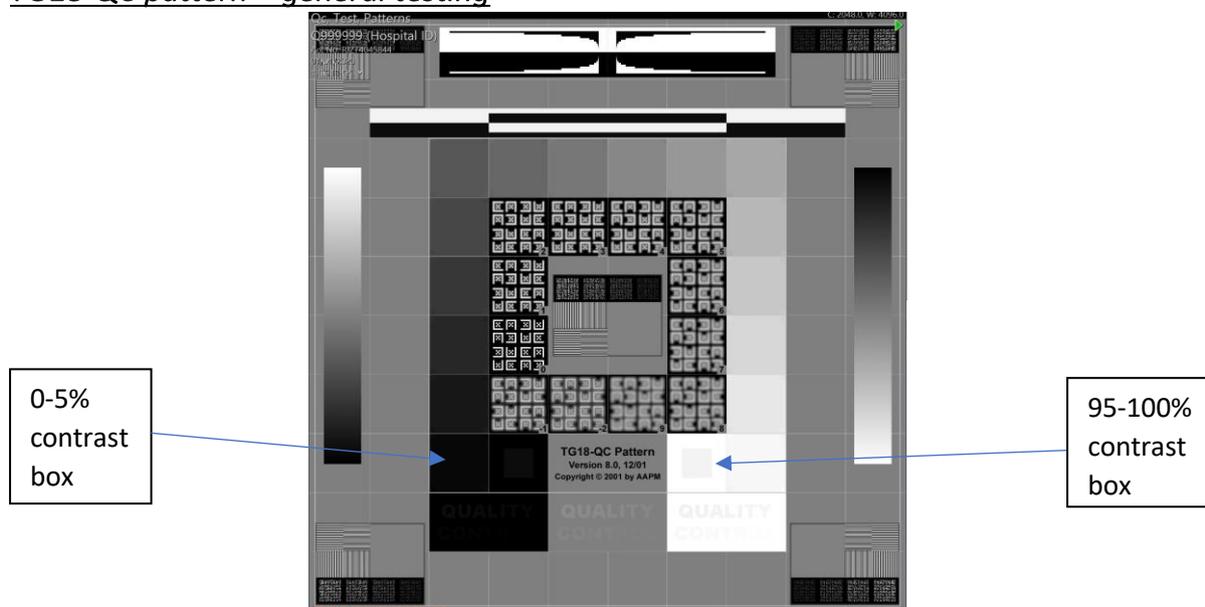
The tests

TG18-CT pattern – greyscale (i.e. Hounsfield Unit) representation



- can you see the central half-moon targets?
- can you see the 4 low contrast objects at the corners of each of the squares?

TG18-QC pattern – general testing



- Are all the lines straight?
- Can you see differences in density 0% to 100% (boxes around the central square)?
- Can you see the low / high density squares in the contrast boxes? The 95-100% is easier to see than the 0-5%.
- Can you read the words Quality Contrast?
- Can you improve contrast in the 0-5% contrast box by magnification and adjusting the display window level?
- Can you see at least 2 pairs of both High and Low contrast resolution lines horizontal and vertical (HCR and LCR) at the 4 corners and at the centre.

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This information is accurate as at 27 March 2020.