

**Queensway Dental Clinic 3D Scanning with Cone Beam Computerised
Tomography (CBCT) referral policy**

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1. Summary of Policy and Protocols for imaging

This service is intended to be used by dentists who wish to refer patients to Queensway Dental Clinic for advanced imaging with 3D CBCT prior to dental implant treatment, orthodontics, oral surgery or other related dental indications.

3D imaging offers a wealth of diagnostic information ensuring precision and safety in all aspects of dentistry from endodontics to implant planning. It provides fast and accurate visualisation of structures such as the ID canal and bone volume. The process allows for the exact measurement of distance between structures. In a more advanced form this generates the images and 3D models used in computer guided surgery.

Traditionally, we have only had local access to medical CT scanners. These scanners are compromised in the dental field by their high dose rates, poor image quality, high patient cost and limited access to viewing software.

In comparison the Dental CBCT Scanners produce higher resolution images with far less artefact and scatter. They can also be collimated so that the dose for a 40mm scan is as low as 28 micro sieverts compared with 450 from a conventional CT (the background dose in the UK is 2.5 micro sieverts per day while a film based OPG is 20).

Background radiation exists across the whole of the UK.

The estimated total background radiation dose should be in the range 2.1 - 7.8 mSv per year, with the average annual dose for people in the UK being 2.5 mSv. However, commercial aircrews and workers in the nuclear industry receive around 4.5 mSv a year. The average annual dose to a person in the UK from radon is 1.3 mSv.



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2. Patient selection for 3D scanning

All patients who are considering a dental implantology for the replacement of a missing tooth/teeth or for complex orthodontic or oral surgery procedures should be considered for 3D imaging.

Prior to the patient having a 3D CBCT scan, the patient will be reviewed by a qualified dentist. This will ensure that the correct positioning is carried out prior to the image exposure and that any radiographic stent is correctly placed during the procedure.

WE WELCOME ALL REFERRING COLLEAGUES TO ATTEND THE QUEENSWAY CLINIC FOR THE 3D SCANNING PROCEDURE WHERE POSSIBLE.



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3. Patient fees for 3D scanning

We can either charge the patient directly or provide a separate invoice to the referring clinician upon request.

The cost of our scans varies between £75 for a 50mm scan to £220 for full mouth double scans that are compatible with NobelGuide™.

We can export data in our own viewer software or as raw DICOM files formatted for NobelGuide™.

Scan Options and Costs:

Single Scan: £75

Variable field of view (allows reduction in patient dose) of 40mm for an area of four or five teeth to 80mm for a full mouth scan.

Double Scan: £220

Full mouth double scan using Nobel protocol for guided surgery.



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4. Imaging assessment guidelines for Nobel Guide Double scan procedure

Information for NobelGuide Users: Fabricate your surgical stent to be thicker than a denture. The sterio-lithographic stents can be quite brittle and difficult to repair. The added bulk of the scanning stent will be translated into the surgical stent.

In partial cases allow the scanning stent to extend over the occlusal and incisal surfaces of the teeth, create windows in these extensions so that the correct seating of the stent can be easily verified.

The imaging stent should be processed in radiolucent acrylic, place about 10 radio-opaque markers into the base. These should be no more than 1mm in diameter (we suggest that you use no larger than a number 2 round bur and fill the hole with thermo-plasticized GP). The markers should be placed in varying positions in space and should not be adjacent to radio-opaque structures in the mouth that may cause scatter. A bite index (made from silicone putty) should be supplied to ensure that the stent seats fully against the tissues during the scan. The index should be fabricated with the incisors edge to edge and about 3mm apart.

Ensure that the stent is gum fit at the try-in stage so that lip support can be correctly assessed. However, at the finish stage the stent should have well extended flanges to allow good location and freedom in the placement of anchor pins.

Queensway Dental Clinic does not report on scans and radiographs provided for referring dentists. To comply with the IRMER 2000 regulations, all radiographs and scans are required to be reviewed and reported into the clinical records by the referring practitioner or by a radiologist. We strongly recommend that all scans and other radiographic examinations be reported upon to rule out the possibility of coincidental pathology.



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5. How to refer

Please use the downloadable PDF referral form for 3D Digital Imaging and fax back to us on 01642 531799 or complete the online referral form. Both can be found on www.queensway.co.uk.

If you require further information please contact Ian Lane on 01642 554667 or ian@queensway.co.uk.



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