

## Guidance on image storage and use, for vascular ultrasound scans

Ultrasound is an imaging modality and in many investigations recording and storing images taken during the examination form part of the record and report for that examination. The images recorded serve a number of purposes:

- They are a record of findings showing disease and measurements taken, as well as demonstrating normality.
- They are an aid to reporting and report composition and they should back up the written report.
- They serve to verify and confirm the written report, for example, in tracking discrepancies found in MDT meetings and to allow a second opinion to be given.
- They allow for review in a training/preceptorship situation and in follow-up patients under going surveillance.
- They provide assurance of the quality and findings of an examination
- They provide evidence that the examination was carried out to a competent standard and that local and national guideline and protocols were followed.
- They may be used in teaching, reporting unusual cases and audit/quality control.

Following guidance from the Royal College of Radiologists in 2011<sup>1 2</sup>, any recorded images are now considered to form part of the patient record, together with the written report of the investigation. They therefore need to be stored and treated as patient record documents. The recommendation of the National Ultrasound Steering Group is that there should be a permanent electronic record of all imaging studies<sup>3</sup>. The period for which images are available depends on a number of factors, but the minimum storage time is three years with an optimum of five years<sup>2</sup>. Guidance is provided by the Royal College of Radiologists. Ideally all images are stored on the Trust Picture Archiving and Communications System (PACS) This has a number of benefits and is considered best practice:

- Images are immediately available for use in case discussions, Multi Disciplinary Team (MDT) meetings etc.
- The problems of storage and retrieval are removed from the local department.
- It solves the problem of “lost images”.
- The length of storage and required back-up will be consistent with organisational requirements and will be the responsibility of the Trust or employing organisation.

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- MDT review is supported due to the Vascular ultrasound imaging results being easily available for comparison with other imaging investigations the patient has had.

Compatibility and availability of Digital Imaging and Communications in Medicine (DICOM) output and compatibility with networking to a PACS system should be considered during procurement of new equipment. The support of managers and referring clinicians should be made for access to PACS where this is not already available. Reference should be made to the guidance given in the references below.

### Criteria for stored images

Vascular ultrasound is a dynamic study and a single image may not convey the information obtained during real-time imaging. However, appropriately annotated recorded images are a part of, and contribute to the patient record. With these considerations in mind, the following guidance is given:

- For each scan type, local guidelines/protocols should provide guidance as to which images should be stored for each examination.
- Images should be as clear as possible for the purpose of demonstrating the view/pathology shown including measurements where appropriate.
- All stored images should be clearly and adequately labelled including patient identification date and time of examination and hospital/department/provider identification..
- The written report should document image quality where this has adversely affected the quality of the diagnosis e.g. poor visualisation.
- Any images that display pertinent clinical findings should be stored.

### Medico-legal issues

- As stated above, all recorded images form part of the patient record and may be used as evidence in relation to the management of a patient's case. The sonographer has the professional responsibility to record appropriate images that support the written report.
- At all times, patient related images should be treated with the confidentiality that patient medical data requires and treated in accordance with the Data Protection Act 2018<sup>4</sup> and principles of General Data Protection Regulation (GDPR)<sup>5</sup>.
- For ultrasound imaging, the consent to make visual recordings with ultrasound is

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implied in the consent to undergo the examination and does not need to be separately obtained <sup>6</sup>.

- Where images are to be used outside the immediate patient environment e.g.: for teaching or research presentation, they must be suitably anonymised <sup>7</sup> and consent obtained according to local organisational policy.
- Where there is any possibility that a patient may be identified from images or a case report, permission should be obtained from the patient. This is particularly important to consider before publication in a journal or other publicly available form <sup>7</sup>.
- Storage devices for transport of images should be appropriately protected/encrypted in line with local organisational policy.

## References

1. RCR position statement on the Records Management Code of Practice for Health and social care 2016: application of the Code to radiology records retention protocols December 2017  
[https://www.rcr.ac.uk/sites/default/files/position\\_statement\\_records\\_management\\_code\\_practice.pdf](https://www.rcr.ac.uk/sites/default/files/position_statement_records_management_code_practice.pdf)
2. Guidelines and standards for implementation of new PACS/RIS solutions in the UK (2011) The Royal College of Radiologists.BFCR(11)4  
<https://www.rcr.ac.uk/publication/guidelines-and-standards-implementation-new-pacsris-solutions-uk>
3. Ultrasound Clinical Governance: National Ultrasound Steering Group (2008)  
<https://www.bmus.org/static/uploads/resources/ClinicalGovernanceInUltrasound-061108.pdf>
4. Data Protection Act 2018  
<http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>
5. Changes to Data Protection Requirements under the General Data Protection Regulation (GDPR) 2017  
<https://www.nhsemployers.org/-/media/Employers/Publications/Changes-to-data-regulation-under-GDPR.pdf>
6. Guidelines for professional ultrasound practice The Society & College of Radiographers and the British Medical Ultrasound society.  
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[https://www.bmus.org/static/uploads/resources/Guidelines\\_for\\_Professional\\_Ultrasound\\_Practice\\_v3\\_OHoz76r.pdf](https://www.bmus.org/static/uploads/resources/Guidelines_for_Professional_Ultrasound_Practice_v3_OHoz76r.pdf)



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7. Taking and using visual and audio recordings of patients: Guidance from the BMA Ethics Department: (Feb 2019) <https://www.bma.org.uk/advice/employment/ethics/confidentiality-and-health-records/visual-and-audio-recordings-of-patients>