



Australasian College
for Emergency Medicine



Image Archive and Review

**Article 2: DICOM (Digital Imaging and Communications
in Medicine) images**

This document has been provided by the ACEM and EMUGs Collaboration Working Group to assist Clinical Leads in Ultrasound in developing ED ultrasound training programs. The suggestions outlined are not required for accreditation for the FACEM Training Program. Due to the variation in size and resources available at sites throughout Australia and Aotearoa New Zealand, the guidance provided in this document may or may not be appropriate for your site.

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Article 2: DICOM (Digital Imaging and Communications in Medicine) images

DICOM images contain metadata (data fields that contain patient identifying information). Clinicians should not be exporting DICOM data and then storing them on their private computers.

JPG, PNG, and TIFF formats can contain metadata, but most DICOM viewers will remove the metadata during export. It's relatively easy to check that this has happened by opening the image using image viewing/editing software (such as Preview, Photoshop, Pixelmator, etc.) and viewing the image properties. Free software is available to anonymise images (e.g. Clip deidentifier, Sonogif).

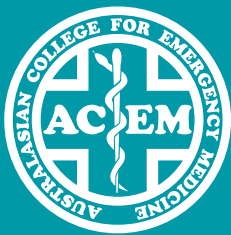
The problem with ultrasound images is that they are often "stamped" with patient information in the header. The most reliable method of exporting images (JPG, PNG, TIFF) or videos (MP4, MOV, AVI) from a DICOM viewer is to:

- 1 Anonymise the study first (not all DICOM viewers provide this feature).
- 2 Use a crop/zoom/shutter feature (whatever is available in the viewer) to ensure the header is not visible.
- 3 Export the images you need in the desired format.
- 4 Check you have done it correctly before sharing the content.
- 5 Ensure that any images are shared in a way that is legal, ethical and that you have the authority and permission to share them.

Just because an image is fully anonymised does **NOT** mean it is safe to publish. It could be something unique or very rare with only a single case in your geographical area. People involved in the case (or potentially a family member or friend) will know by default who the patient is with a serious breach of patient confidentiality and potential involvement of the Privacy Commissioner.

On the other hand, health practitioners should not be fearful of using properly deidentified images for professional activities, including teaching or publications, but it needs to be done properly to protect everyone. The biggest mistake people make is to plug images or videos from a DICOM viewer straight into Word or PowerPoint and then use the CROP function to remove the header. This only hides the header, but the patient identifying information is still there and can be revealed.

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