



## CHIEF CORONER

### GUIDANCE No.1

## THE USE OF POST-MORTEM IMAGING (ADULTS)

### Introduction

1. The purpose of this Guidance is to provide a sound working procedure with minimum requirements where post-mortem imaging is used. The need for Guidance arises out of the fact that coroners have been using imaging in some parts of England and Wales albeit on a limited basis. This Guidance is not intended to be judgmental about the process of post-mortem imaging, merely to provide minimum standards where it is used.
2. In some parts of the country CT scanners (and sometimes MRI scanners) are used by coroners for the purposes of ascertaining the cause of death of an adult. Other countries use them too, for example Japan and the State of Victoria in Australia.
3. CT (computed tomography) imaging is considered by many to be of greater assistance than MRI (magnetic resonance imaging) in ascertaining a cause of death, but there are differing views. The former is also much cheaper.
4. The number of post-mortem examinations (autopsies) in England and Wales is very high compared with other countries with a coroner system. The Luce Review in 2003 found that the autopsy rate was between two and three times the rates of other comparable countries (pp.19,164). Any sensible reduction in the number of autopsies would be welcomed (as the Lord Chancellor has indicated), particularly by bereaved families.
5. The use of images from CT scanning is one possible way of reducing the number of autopsies. Certain faith groups are particularly keen to avoid an autopsy, and many others would be pleased to avoid one.
6. But this is a developing field, so care should be taken that the results from CT scan images are used cautiously and effectively. At the same time it must be recognised that there are limitations on the scope of imaging for ascertaining reliably the cause of death and that there are some differing views about the efficacy of cross-sectional imaging of this type both as an adjunct to invasive post-mortems and as an alternative. Discussion about the limitations of post-mortem imaging and the types of death where it is best used can be found in the texts of the documents referred to below. There are also the questions of cost and availability.

7. The Department of Health is currently considering recommendations for an integrated national cross-sectional autopsy imaging service, based on a regionalised service provided by mortuary-based imaging centres. These proposals come from the Report of the NHS Implementation Sub-Group of the Department of Health Post Mortem, Forensic and Disaster Imaging Group, Can Cross-Sectional Imaging as an Adjunct and/or Alternative to the Invasive Autopsy be Implemented within the NHS? (August 2012):  
<http://www2.le.ac.uk/departments/emfpu/national-documents-1>
8. For further information, including the strengths and weaknesses of imaging as a forensic tool, see the joint statement on Standards for medico-legal post-mortem cross-sectional imaging in adults from the Royal College of Radiologists and the Royal College of Pathologists (October 2012):  
[http://www.rcr.ac.uk/docs/radiology/pdf/FINALDOCUMENT\\_PMIImaging\\_Oct12.pdf](http://www.rcr.ac.uk/docs/radiology/pdf/FINALDOCUMENT_PMIImaging_Oct12.pdf)  
The agreement of the two Colleges was achieved through the good offices of the Coroners' Society of England and Wales.

### **The Coroners Act 1988**

9. Previously, a post-mortem examination might be carried out by a 'legally qualified medical practitioner' (meaning fully qualified under the law, not a lawyer-doctor): Sections 19-21, Coroners Act 1988. Rule 6, Coroners Rules 1984, provided that the post-mortem examination 'should be made, whenever practicable, by a pathologist'. While these provisions did not of themselves encourage the use of post-mortem CT (or MRI) imaging (which presumably was not available at the time these provisions came into force), they did not expressly exclude its use.

### **The Coroners and Justice Act 2009**

10. Section 14 of the Coroners and Justice Act 2009 (in force from 25 July 2013) suggests that 'a post-mortem examination of a body' is not limited to an autopsy and may include CT (or MRI) imaging. This is achieved by section 14(1) and (2) which provides that a senior coroner may 'specify the kind of examination to be made' and may request 'a suitable practitioner' to carry it out. A 'suitable practitioner' is either 'a registered medical practitioner' or 'a practitioner of a description designated by the Chief Coroner as suitable to make examinations of that kind': Section 14(3).

### **Guidance**

11. The following guidance should be followed where CT (or other) imaging is used.
12. Where an examination of the body is required, the coroner must decide in each case with the assistance of a pathologist (and where appropriate a radiologist) what type of examination is appropriate. The coroner will bear in mind, amongst other things, the wishes of the bereaved family or of the deceased (if known). Where in a particular case there is an established religious tenet that invasive autopsy is to be avoided, and Article 9 of the European Convention of Human Rights is therefore engaged, the coroner should be guided in making a proportionate decision by the five propositions of the High Court in the case of *R (Rotsztein) v HM Senior Coroner for Inner London North* [2015] EWHC 2764 (Admin).

13. Where a non-invasive autopsy is requested and a CT scan may be considered potentially useful in all the circumstances, the pathologist must first conduct a thorough external examination of the body. If the pathologist then considers that a CT scan would be inappropriate he should report to the coroner who will decide what type of examination should take place.
14. If the coroner considers that a CT scan is appropriate, a radiographer or trained mortician carries out the scan.
15. A specially trained radiologist (or pathologist specially trained in interpreting post-mortem imaging) analyses the results of the scan.
16. Both pathologist and radiologist must have access to the deceased's medical history (where available) and be informed of the circumstances surrounding the death.
17. Other investigations are performed as appropriate, such as the taking of samples for toxicology and biochemistry. In some cases post-mortem CT coronary angiography, a minimally invasive procedure will also be undertaken as this may assist in establishing a cardiac cause of death that is not evident on plain cross-sectional images.
18. Pathologist and radiologist prepare a joint report for the coroner, with the pathologist taking the lead. The pathologist states a cause of death or proceeds to full or directed autopsy if so instructed by the coroner.
19. Imaging should not be used as the sole type of post-mortem investigation where the circumstances of the death are suspicious or controversial, except where the cause of death is obvious.
20. The coroner must at all times during the process keep possession and control over the body, until it is properly released for burial or cremation.
21. The bereaved family (the coroner's point of contact) must be informed before any scan of the limitations of imaging and that despite the use of imaging a conventional autopsy may still be required. Wherever possible this information must be confirmed in writing before the scan.

### **Cost**

22. A number of limitations, not least cost, preclude coroners from offering post-mortem imaging as a possible alternative to the conventional autopsy in all cases, and certainly not as a free service. But the service may be requested of them and they will have to decide how to respond. Coroners will have to discuss locally how such imaging, if available, can be funded (as well as transport services). If families have to pay, payment should never be made directly through the coroner service.

**HH JUDGE PETER THORNTON QC  
CHIEF CORONER**

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14 January 2016**