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Re: A comprehensive toolkit for imaging children who may have been abused: new guidance from the Royal College of Radiologists and the Society and College of Radiographers.

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Sir–Following the publication of the recently updated guidance in the radiological investigation of suspected physical child abuse (1) and the excellent editorial by Dr Strouse summarising this guidance (2), we are writing to specifically update the readership regarding the initial skeletal survey (SS) imaging protocol for suspected physical abuse (non-accidental injury) in infants and young children.

In Part 1 of our pictorial review (3) we emphasised the importance of obtaining a standard set of radiographic projections in every infant or child in whom physical abuse is suspected according to the 2008 guidance (4). With the publication of the updated guidelines in 2017, the number and type of recommended radiographic projections to be obtained are determined by the size of the child: whether a whole limb is to be imaged in one projection or in separate projections, i.e. left upper limb versus dedicated left humerus and left forearm radiographs, will depend on whether the child is 'small' or 'large', respectively. Radiographers experienced in imaging children are deemed to be the best judge of which projections should be obtained based on child size. As a rough guide, a small child could be considered below the age of 12 months, and a large child above the age of 12 months. If there is any uncertainty, discussion with senior radiographers or consultant radiologists is advised. The full list of specific radiographic projections based on child size are detailed in Appendix E of the latest guidance (1).

If a child has presented acutely with a clinically suspected bony injury and good quality diagnostic radiographs have been obtained on admission, they may not need to be repeated at the time of the initial SS. We reinforce that a consultant radiologist should be involved at all stages of the imaging examination and be readily available to check the diagnostic quality of the images obtained (either before or at the time of the SS) to advise whether certain projections need to be repeated (and/or determine the need for additional projections if there is uncertainty about the findings). This can reduce the length of the examination time in addition to the radiation burden which is advantageous for all involved. The latter is particularly important in the context of the initial SS which may now comprise of up to 34 radiographic projections in a large child, including coned projections. This should be an area of future research – whether the increase in radiation dose confers additional diagnostic benefit to the identification of skeletal injury and the diagnosis of physical abuse.

In conclusion, it is important that readers using our pictorial reviews as reference (3,5) are aware of these specific changes to the imaging protocol when

investigating suspected physical child abuse in their own departments, and we strongly encourage all involved in the care and investigation of these children to read and follow the updated guidance.

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