Editor—We read with interest the recent article by Schummer and colleagues regarding the use of pre-procedure ultrasound (US) to facilitate central venous (CV) catheterisation. In an observational study investigating 606 procedures, the authors demonstrate that pre-procedure US is superior to landmark methods. The investigators conclude that pre-procedure US offers an alternative to real-time US and are to be congratulated for adding further support to US as an instrument to further patient safety and improve outcomes.

We would, however, like to raise the following issues. Although some risk factors for difficult insertion have been recorded, we feel the list is not comprehensive. One of the main complications recorded was the incidence of severe haematoma associated with line insertion. CV cannulation can be safely carried out in the presence of coagulopathy, although an increased risk of haematoma formation in the presence of coagulation deficit has been described. We note that the highest incidence of haematoma formation (2.5%) occurred in the landmark group containing the highest number of cardiac patients. We might speculate that cardiac medications, such as antiplatelet drugs, may be implicated. Based on these factors and the importance of haematoma formation as a measured outcome, we are surprised that normal coagulation and platelet count/function were not listed as specific inclusion criteria.

We would also like to draw attention to the issues raised regarding availability and cost. The authors state ‘most practitioners do not have real-time US as an option’. We would suggest that US hardware is widely accessible. A survey of 294 UK anaesthetic departments revealed that 172 of 199 respondents (86%) had ultrasound readily available. The authors also suggest a problem with the ‘perceived expense’ of real-time US and a fear of ‘large investments’ in hardware. This is presented as a reason for investigating the use of pre-procedure US. The US machine used in the study utilises an 18 - 6 MHz linear probe, which is likely to be suitable for real-time cannulation. As US hardware would be required for both pre-procedure and real-time techniques, we fail to recognise pre-procedure US as a significantly less expensive option. Although pre-procedure US may reduce the costs of disposables associated with CV cannulation (such as sterile probe covers and sterile gel) these items cost very little per procedure. The authors identify that ‘unnecessary time expenditure’ is a complaint against real-time US. Their citation regarding this consists of an opinion survey of members of the Society of Cardiovascular Anesthesiologists. The survey demonstrates that only 113 of 1494 respondents (8.5%) were concerned about a possible time delay when using US. No evidence of actual delay with real-time US is provided. Furthermore, a comprehensive technology appraisal conducted by the National Institute of Health and Care Excellence has concluded that US guided cannulation is a cost effective option and is recommended for elective CV catheterisation. For these reasons we feel clinicians should not be significantly concerned regarding the cost, accessibility and time delays of real-time US in CV catheterisation.

Declaration of interest
None declared.

References
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