Letter to the editor

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Systematic review and meta-analysis are the cornerstones of evidence-based medicine. Few would deny that a more evidence-based approach has been one of the most significant contributors to progress in medicine over the last two decades. However, the processes that underlie evidence-based medicine depend on the evidence being available for analysis. The meta-analysis “industry” has provided numerous publications and citations for authors, both eminent and otherwise. There can sometimes appear to be a rush to publish a meta-analysis even when only one or two randomised control trials have been presented. This phenomenon is particularly prevalent when the topic in question is “hot” as is the case for use of time lapse photography for determination of embryo quality. This new technology has attracted considerable commercial investment and generated great interest amongst embryologists and fertility specialists as well as patients. Several retrospective studies have suggested that the “best” embryo can be identified using video time lapse photography but, to date, prospective well-designed randomised trials to test this hypothesis have been few in number.

So when we should step back and meta-analyse? With respect to time lapse photography, there are only a small num-

ber of studies available for analysis. The numbers of recruits in the studies are low and there is considerable heterogeneity between studies. One of the three commercially available systems has no support from randomised trials whatsoever. Despite this, the publication in this edition of JARG is a methodologically robust meta-analysis with fairly definitive conclusions. To me, one of the more important parts of this paper is the declaration that further three trials will be completed within the next few months. No doubt a further meta-analysis will then be published, possibly with contradictory findings to this early attempt.

The fundamental question is how best to approximate to truth in science. Perhaps in these rapidly moving areas, the meta-analysis should be placed online and be constantly shifted as new evidence is accrued. The information provided by the meta-analysis may change from study to study and clinicians and scientists around the world could be made aware of the new information within a few hours. Those who seek career progression from publications associated with meta-analysis may need to rethink, but this may be a more useful approach to critical appraisal of evidence in the age of instant communication.

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