Reviewer’s report

Title: Multidetector CT with 3-dimensional volume rendering in the evaluation of the spine in patients with Neurofibromatosis type 1; a retrospective review of 73 patients

Version: 2 Date: 26 August 2014

Reviewer: Alvin Crawford

Reviewer’s report:

We feel that the concepts of tertiary imaging in this population is of immense value to the surgeon. The use of MDCT imaging elucidates images obtained with MRI and, again, is of immense value to the surgeon and patient. We find little disagreement with this article and have in fact utilized the technique as our standard of management of dysplastic scoliosis secondary to neurofibromatosis (Crawford AH, Lykissas MG, Schorry EK et al. Neurofibromatosis: Etiology, Commonly Encountered Spinal Deformities, Common Complications, and Pitfalls of Surgical Treatment. Spine Deformity Preview Issue (September 2012) 85-94).

Several questions need to be answered, however:

Major Compulsory revisions:
1. Cost and whether value in terms of surgical planning is amortized in terms of cost given the benefit.

Minor Essential Revisions:
1. We recommend to the authors to comment on their knowledge of further refinement, if any, of the technique that would allow for longitudinal assessment of spinal stability. Our experience with this disorder has shown that over time, dural ectasia and/or plexiform neurofibromas oftimes erode the bony structures resulting in eventual catastrophic failure with only the implants remaining. The ability to assess this phenomenon with imaging would be of tremendous benefit to the patient. Given the current standard of pedicle screw instrumentation, this would be of even greater benefit.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
None