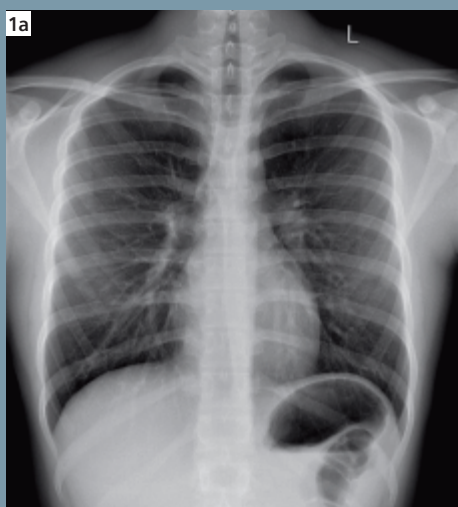


A Brilliant View with DiamondView

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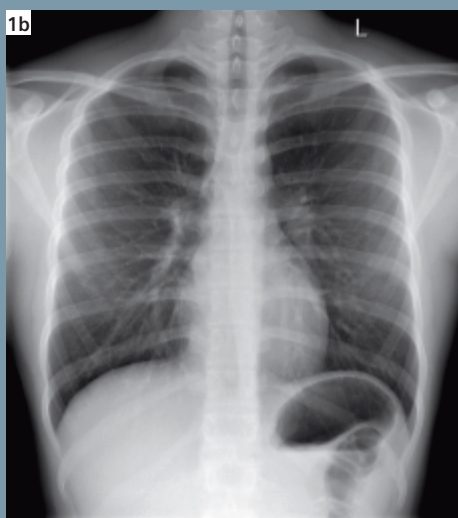


Objectives

Conventional radiography is still a main component of daily routine in the radiology department. To facilitate diagnostic analysis, Siemens created a multiresolution spatial filter processing tool called DiamondView. An independent study was conducted to determine whether this modality could improve image quality and therefore facilitate diagnosis. The study compared the same radiographic images after standard processing and DiamondView processing.

Materials

The image quality was evaluated in a study based on the guidelines of the Commission of the European Communities (CEC) from 1996. Three readers reviewed 102 pairs of standard radiographs of the chest and 100 pairs of the lumbar spine views that were stored routinely by digital technology and postprocessed with DiamondView. The readers evaluated the images based on seven criteria for the lumbar spine views and eleven criteria for the chest images. Separate variables were added as assigned scores for both the standard and postprocessed images by visual grading analysis. Two weeks later, ten randomly chosen image pairs were compared once again by the same readers to analyse any variation of opinion.



Results

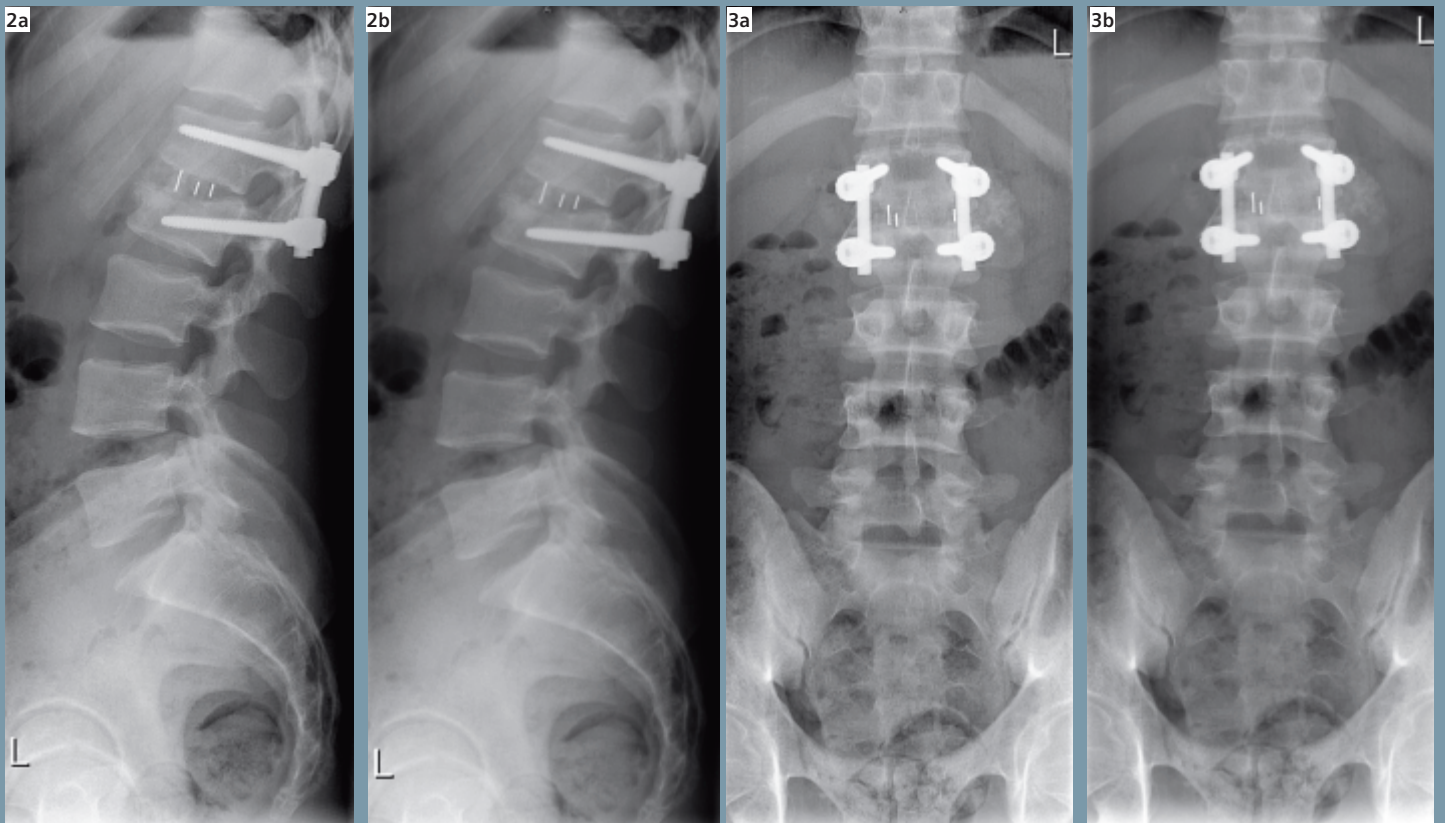
In the comparison of clinical images, this study showed an overall tendency to favor the image quality of DiamondView.

Conclusion

To sum up this study, evaluation of image quality shows a tendency of all readers to favor of DiamondView. The postprocessing tool creates a more homogeneous image by splitting the original image into different scales. An automatically reconstructed image is presented after fading of background noise, but without losing detail in areas of different density. DiamondView delivers in one image more detailed contrast of bone, skin, and soft tissue. The display of the reconstructed image depends on the body region. Therefore predefined parameter sets are offered to the user. The study confirmed the AXIOM Aristos VX product's rapid image acquisition, fast distribution of images to remote locations and exceptional image quality with an improved dynamic range by using the new DiamondView postprocessing.

Contact

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1 [a] Thorax with DiamondView.
[b] Thorax without DiamondView.

2 [a] Lower spine with DiamondView.
[b] Lower spine without DiamondView.

3 [a] Lower spine with DiamondView.
[b] Lower spine without DiamondView.