

Comparison of the image quality of virtual monochromatic images generated by two different algorithms

C.Boso¹, P.Nowik², R. Bujila², V.Crispin¹

¹Instituto Valenciano de Oncología (Valencia, Spain)

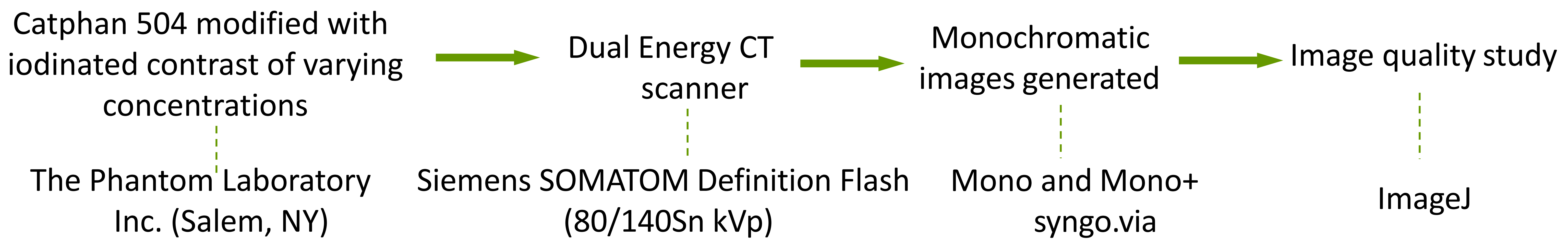
²Karolinska University Hospital (Stockholm, Sweden)



Purpose

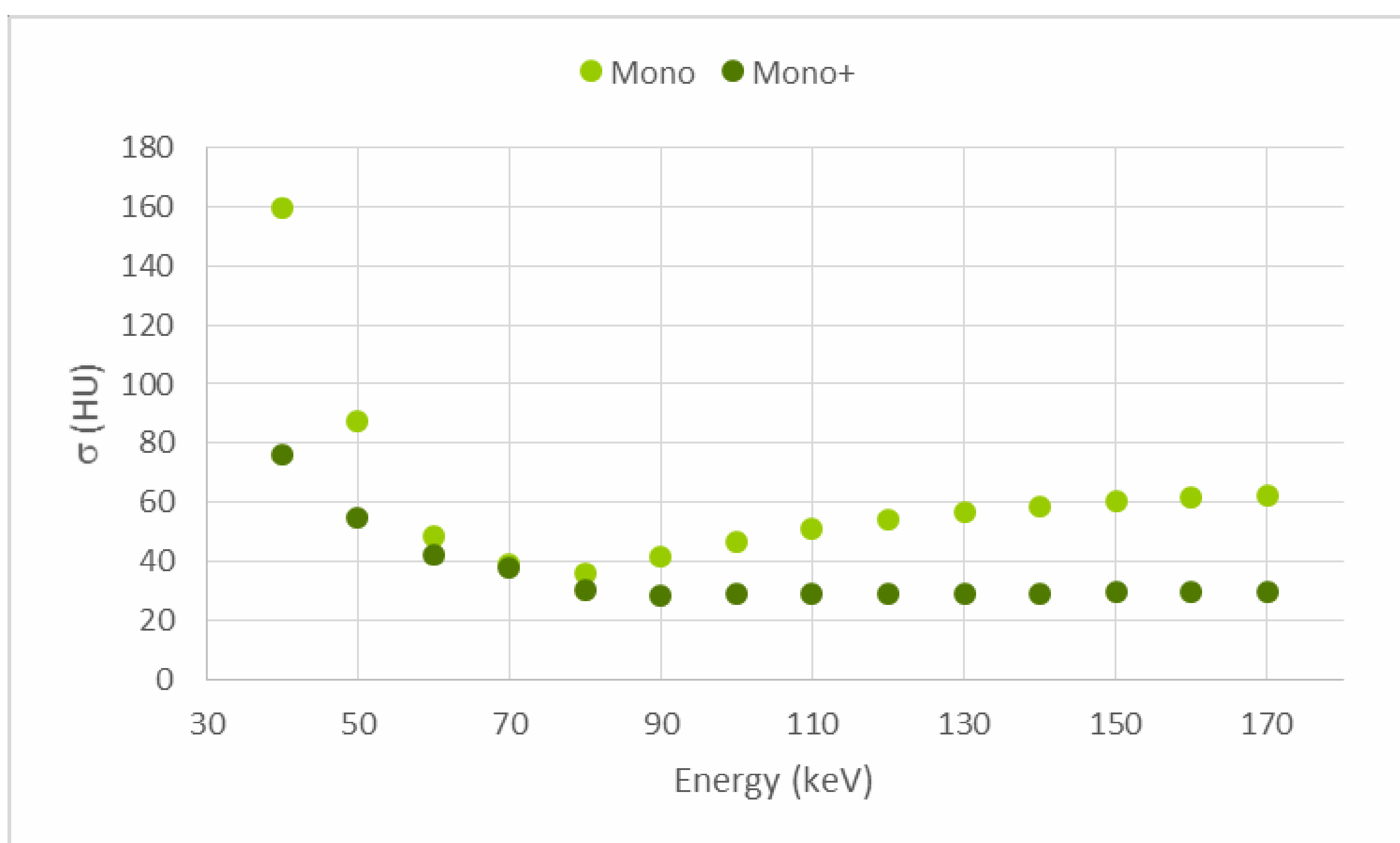
The aim of this work was to study the image quality of virtual monochromatic images generated by two different algorithms (Mono and Mono+), the latter of which includes a noise-reduction feature.

Methods

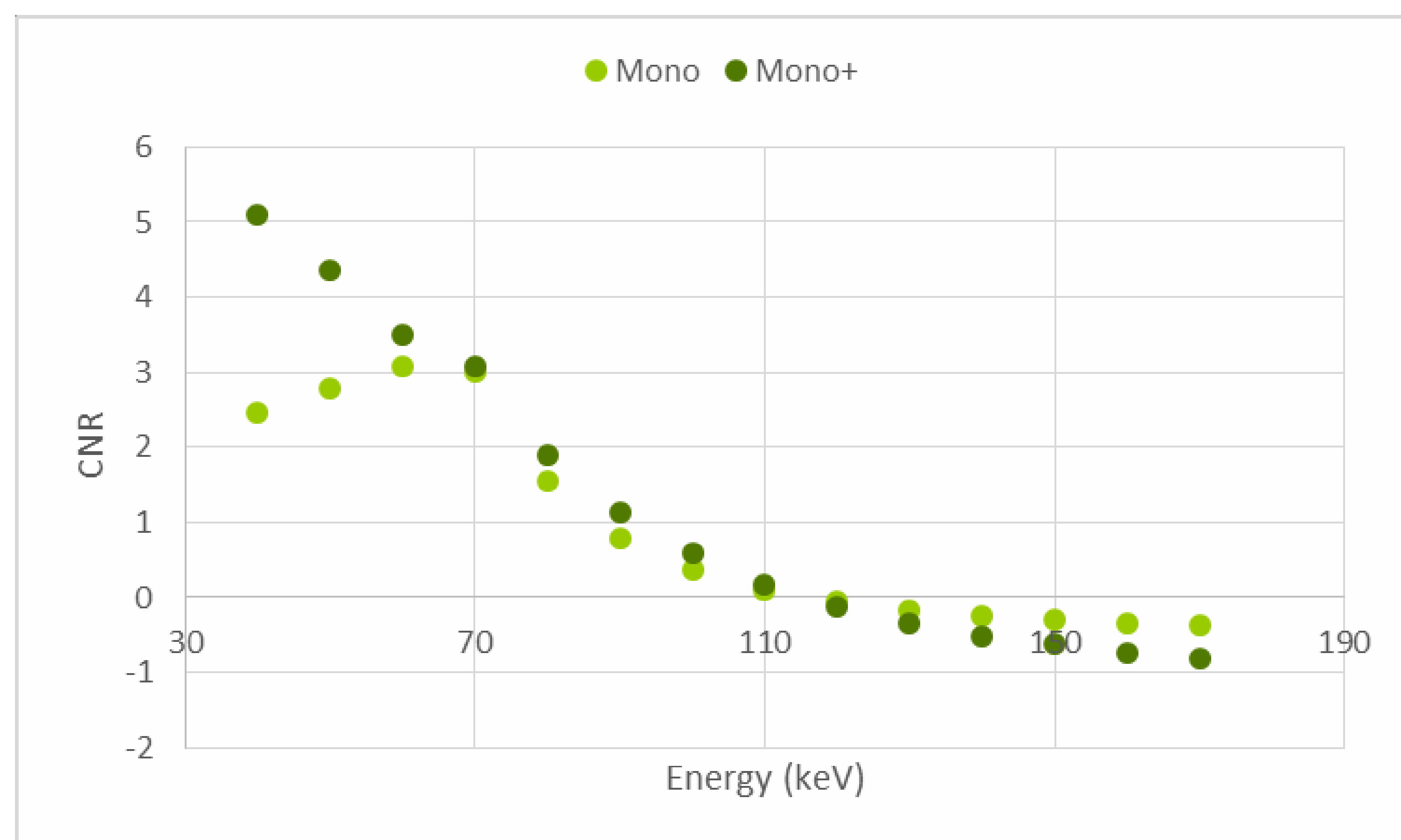


Results

A significant noise reduction was found at low keVs using the Mono+ algorithm, with a maximum reduction of 50% at 40 keV, compared to the Mono images.



The Mono+ images also provided an increased iodine CNR at lower keVs moving the optimum CNR from 60 keV to 40 keV, compared to the Mono images.



Iodine concentration: 4 mg/ml

Conclusion

In general, the Mono+ algorithm was shown to be superior to the Mono algorithm for the creation of virtual monochromatic images, resulting in better image quality, especially for low keVs.