

Lattice	PSNR	Variance
CC	32.19	0.000413
BCC	32.19	0.000277
BCC 70	32.19	0.000323
CC	22.19	0.00290
BCC	22.19	0.00142
BCC 70	22.19	0.00147

Table 1: Variance values for the dark grey homogeneous region in the SL dataset for the two noise levels (PSNR 32.19 and 22.19). The variance of the BCC lattice is approximately twice as low as of the CC lattice indicating the better noise suppression properties of the BCC lattice.

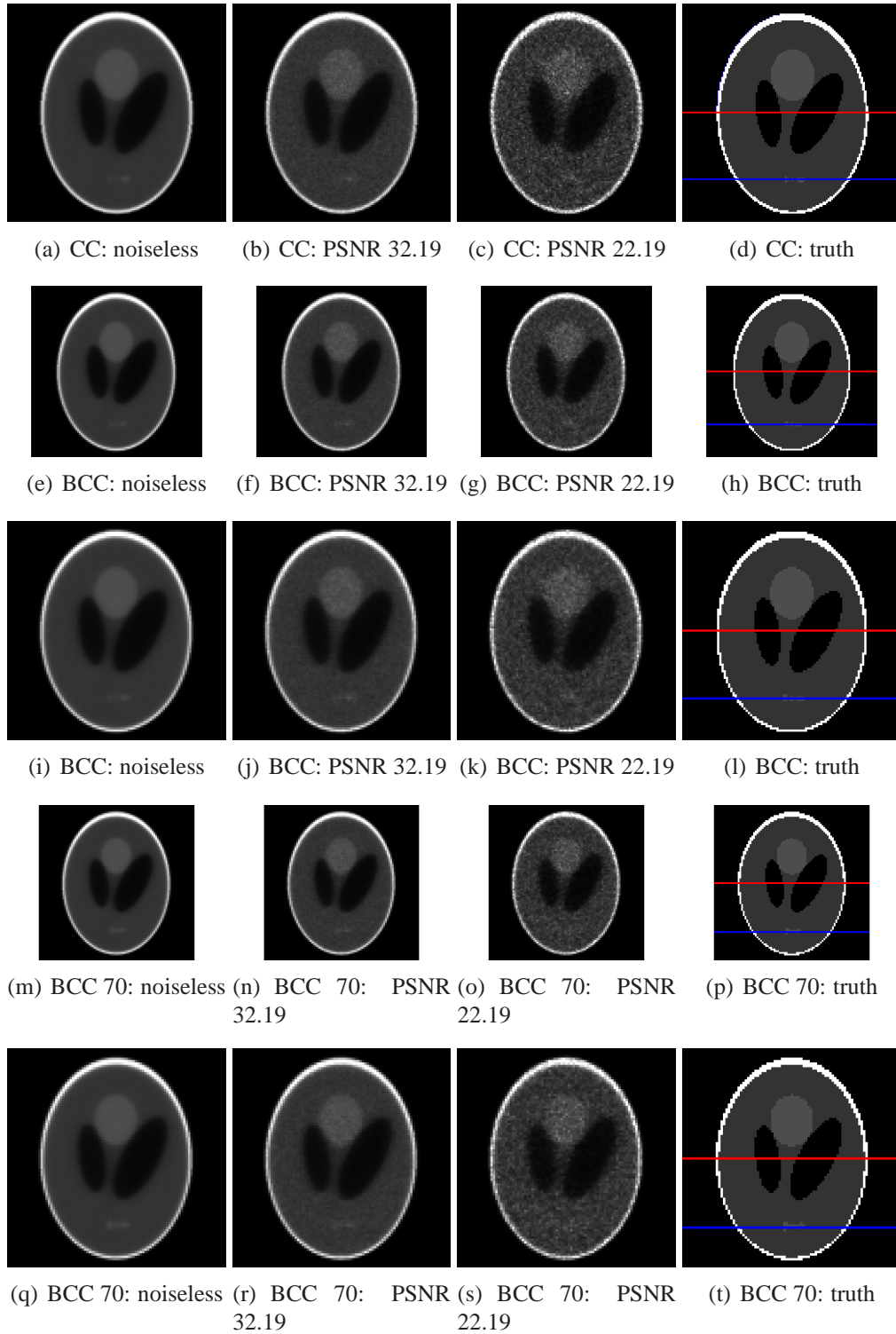


Figure 1: Center slices of the reconstructed volumes after iteration 30. First row: CC lattice after reconstruction from (a) noiseless projections, (b) projections with PSNR 32.19 and (c) projections with PSNR 22.19: Second row: Corresponding slices for the BCC lattice. Third row: Upscaled images of the second row. Fourth row: corresponding slices for the BCC lattice which has approximately only 70% of the samples of the CC lattice. Last row: Upscaled images of the fourth row. The last column shows the corresponding slices of the truth volumes.

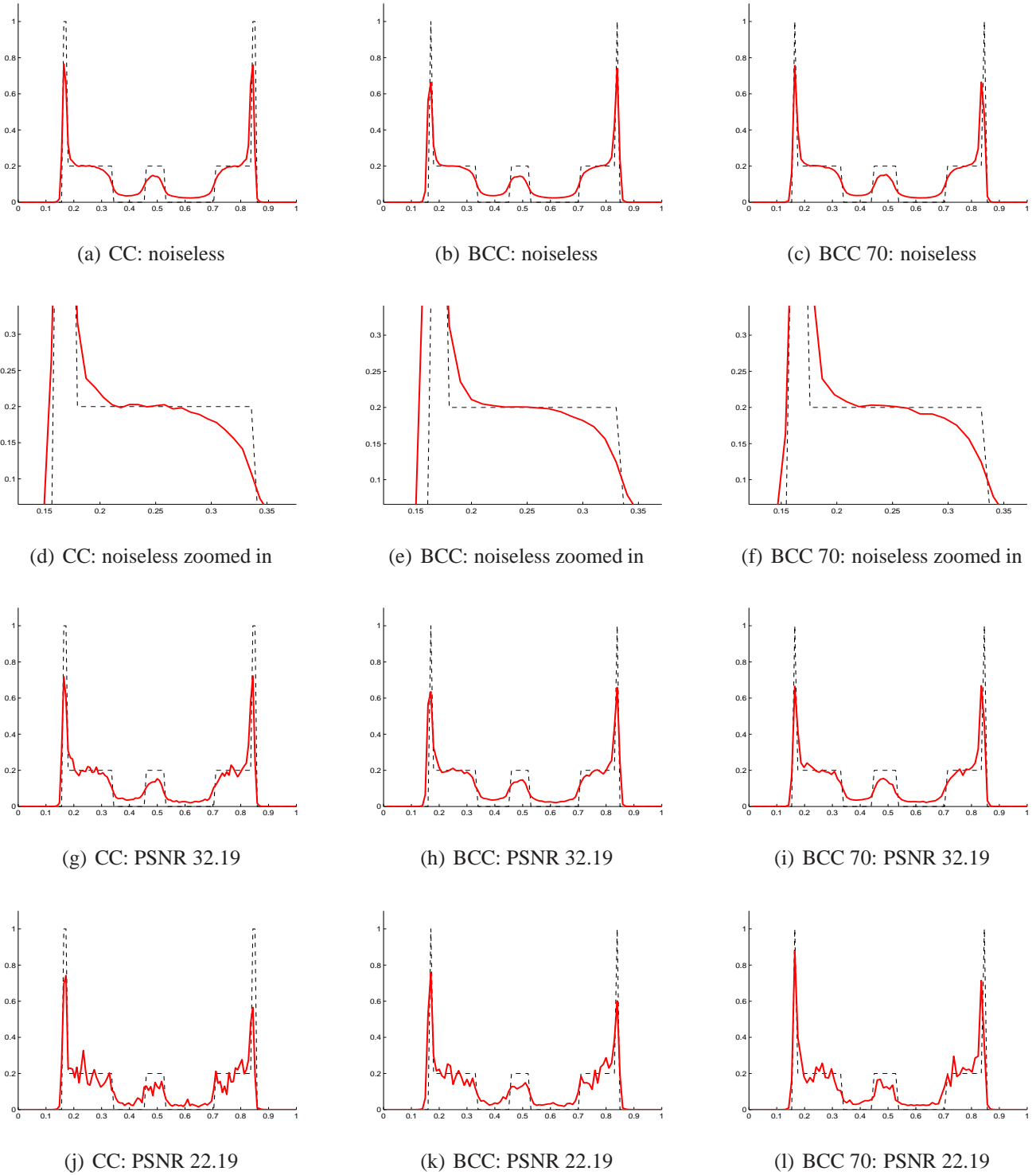


Figure 2: Intensity values (red) of the red horizontal center row of the slices in Figure 1. First column: CC lattice for (a) noiseless projections, (g) projections with PSNR 32.19 and (j) projections with PSNR 22.19. (d) shows the same curve as (a) but zoomed in. Second column: Corresponding curves for the BCC lattice. Third column: Corresponding curves for the BCC lattice with approximately 30% less samples than the CC lattice. The dashed black line indicates the truth.

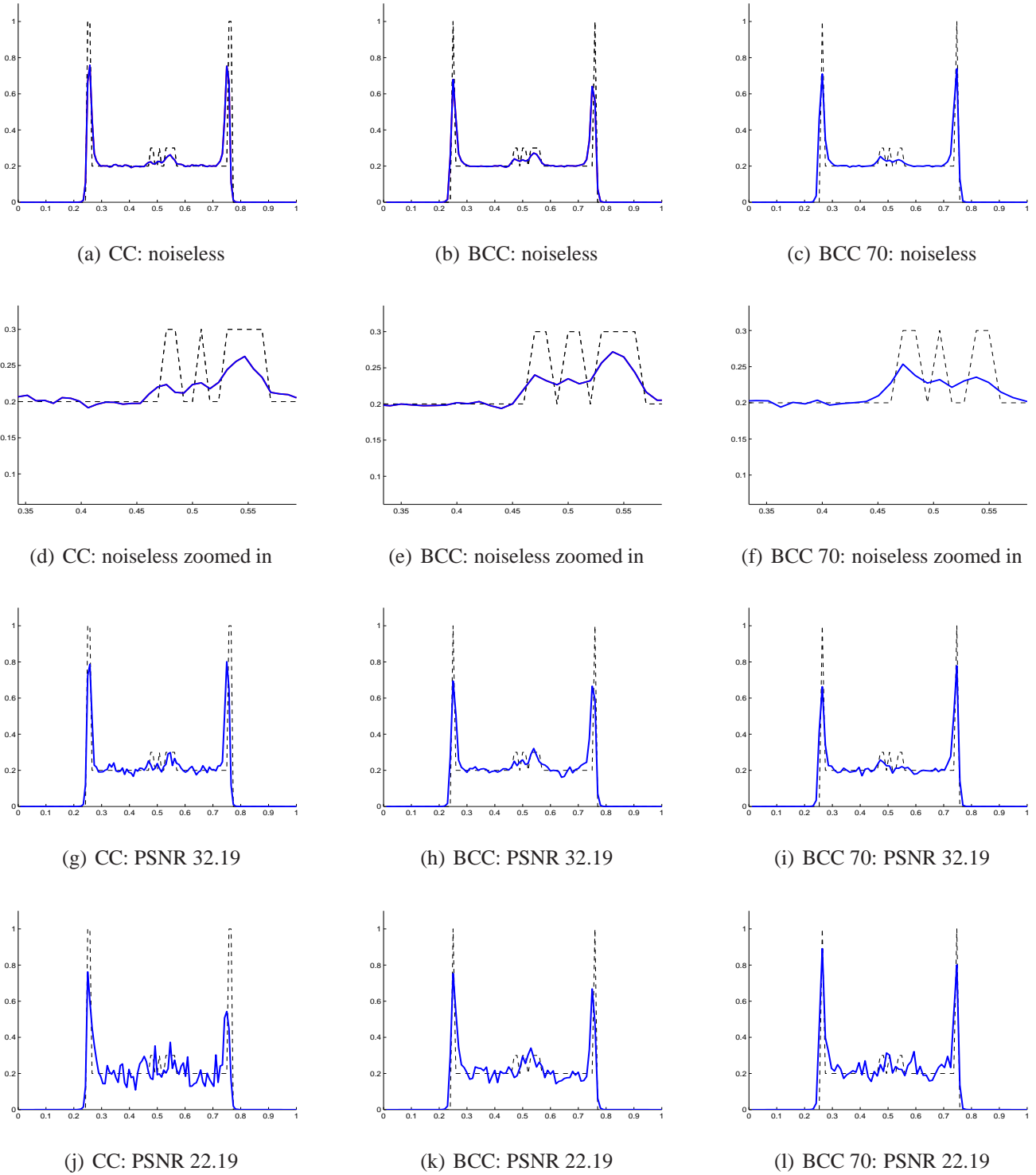


Figure 3: Intensity values (blue) of the blue horizontal row going through the small ellipsoids in the lower part of the slices in Figure 1. First column: CC lattice for (a) noiseless projections, (g) projections with PSNR 32.19 and (j) projections with PSNR 22.19. (d) shows the same curve as (a) but zoomed in. Second column: Corresponding curves for the BCC lattice. Third column: Corresponding curves for the BCC lattice with approximately 30% less samples than the CC lattice. The dashed black line indicates the truth.

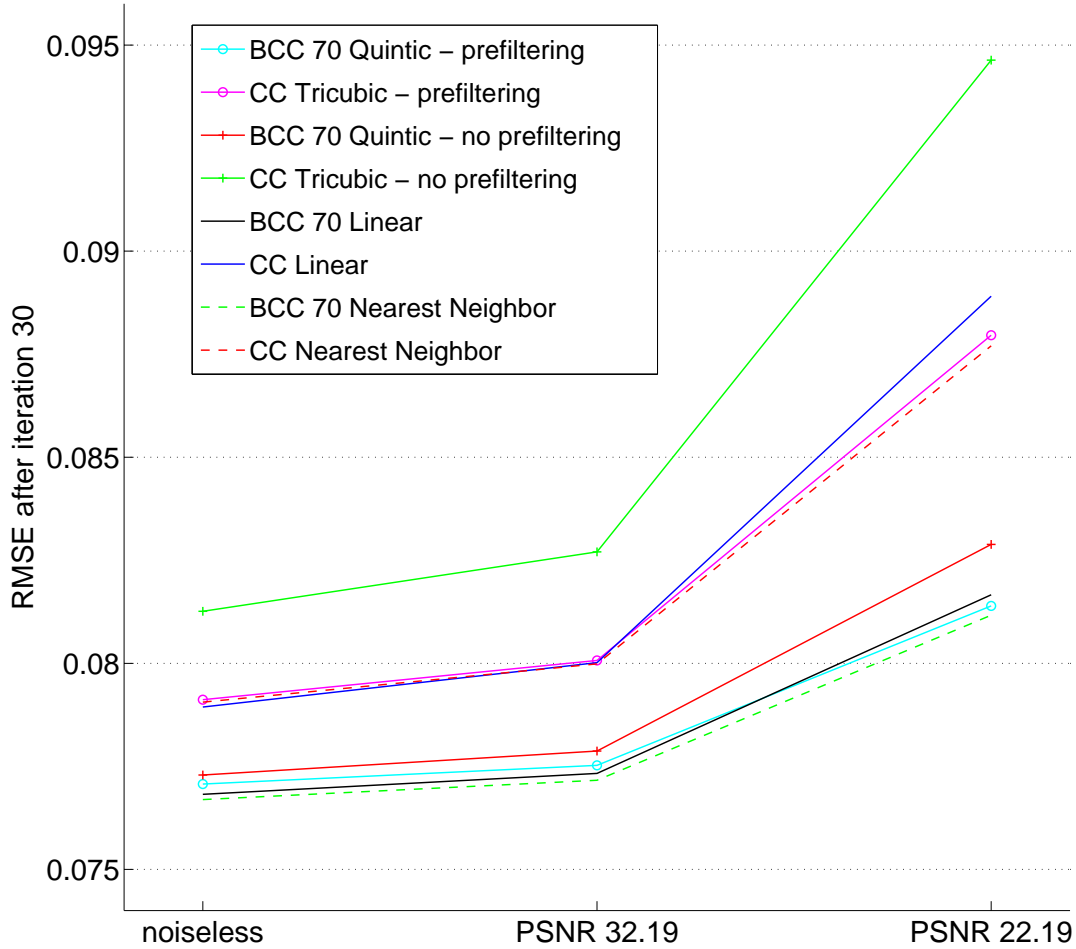


Figure 4: RMSE after iteration 30 for different noise levels (noiseless, PSNR 32.19 and PSNR 22.19) and reconstruction kernels. The volumes were reconstructed on a CC volume of size 128^3 and on a BCC lattice of size $91 \times 91 \times 182$ which is approximately 70% of the CC volume. In all three cases the BCC reconstruction kernels perform better than their CC counterparts and nearest-neighbor interpolation shows the most accurate results for both lattices.

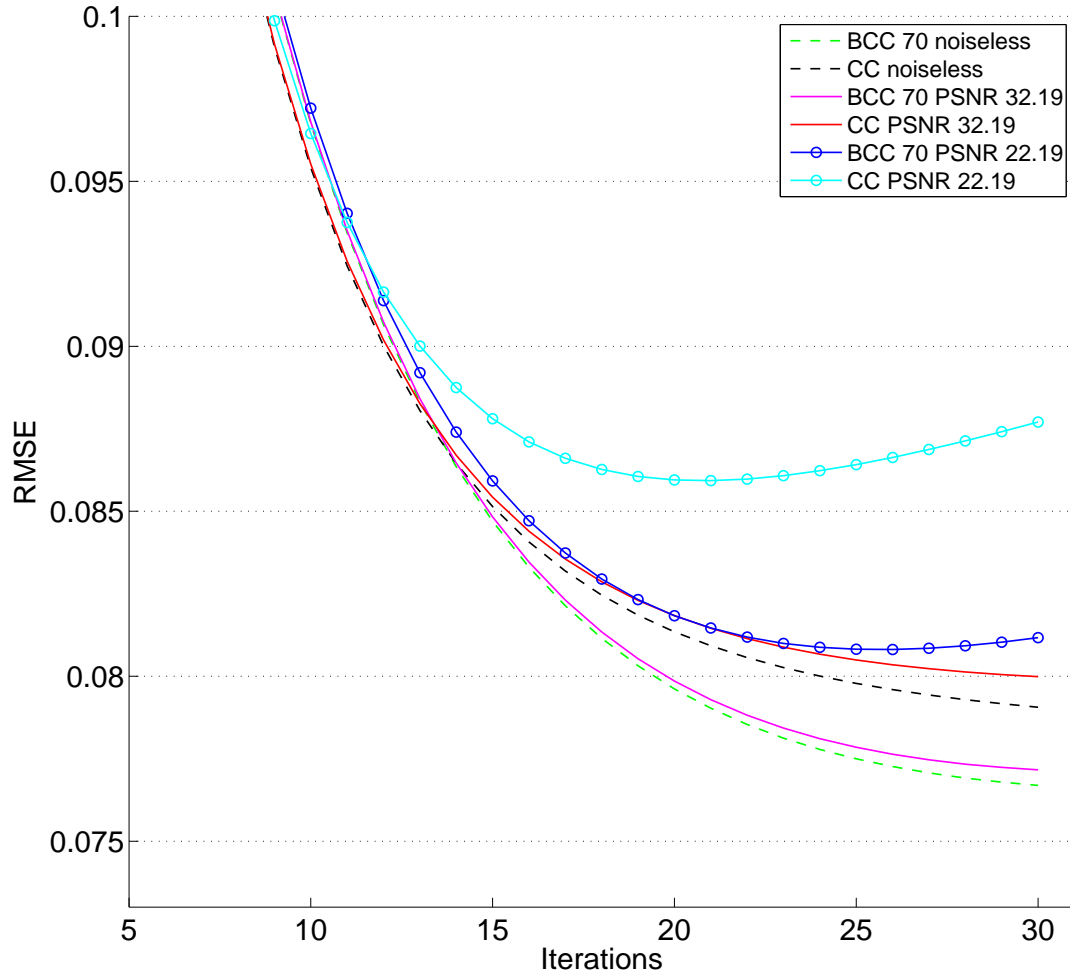


Figure 5: RMSE curves for iteration 10 to 30 for three different noise levels (noiseless, PSNR 32.19, PSNR 22.19) for the BCC and CC lattice. The volumes were reconstructed on a CC volume of size 128^3 and on a BCC lattice of size $91 \times 91 \times 182$ which is approximately 70% of the CC volume. Nearest-neighbor interpolation was used in all six cases.