

Image distortion and correction in single photon emission CT

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The task of single photon emission CT (SPECT) is to visualize the physiological function of various organs with the help of radiopharmaceuticals. But the projection data used for image reconstruction are distorted by several factors, making the reconstruction of a quantitative SPECT image very difficult in most cases. These factors include the attenuation and scattering of gamma rays, collimator aperture, data acquisition method, movement of organs, and washout of radiopharmaceuticals. This review article classifies the causes of the distortion in SPECT images and describes correction methods.

Key words: single photon emission CT, image distortion, correction, image processing