• Developing a fast and accurate reconstruction algorithm for single photon emission computed tomography (SPECT)
• Compensates for Poisson noise, Compton scatter, collimator/detector response, and attenuation effects
• Quantitative analysis with regional bias-variance plot, receiver operating characteristic (ROC) study, and Hotelling trace calculation
• Verified with Monte Carlo simulations and compared with the widely used ordered-subset expectation maximization (OSEM) algorithm. Similar image quality is achieved with computational cost improved about 48 times.