The separate projection data quantities (amount of radiation along each individual ray) acquired from the scan are used to better approximate the unknown coefficients of the maximum-likelihood expectation-maximization (ML-EM) algorithm.

We then use a series of logic functions to better approximate the attenuation map (originally determined by CT scan). This was done using the average attenuation values of human bone and soft tissue. Finally, the ML-EM algorithm reconstructs the attenuation map and final image. Thus making it possible to reconstruct an accurate internal image of the source of gamma radiation within the patient from only a single scan.

References