Let $m(\xi, \eta, x)$ be a given positive function and consider the Radon transform

$$R_m f(\xi, \eta) = \int f(x, \xi x + \eta) m(\xi, \eta, x) dx$$

for continuous functions $f(x, y)$ that vanish for $y < x^2$. For which $m(\xi, \eta, x)$ is it true that

$$R_m f(\xi, \eta) = 0 \text{ in some neighborhood of the origin}$$

implies

$$f(x, y) = 0 \text{ in some neighborhood of the origin.}$$

We will discuss some old and new results on this and related problems. (Received September 11, 2011)