The transverse ray transform of a vector field at a point $x$ in direction $\theta$ is the divergent beam transform of the component of the vector field normal to the direction of the line. It is less studied than the longitudinal transform, but does arise in a few applied problems. We discuss inversion for compactly supported vector fields in three space when the data is collected on a curve outside the convex hull. (Received September 22, 2015)