Elliptic measure is an analogue of the harmonic measure and it allows us to represent the solution to a Dirichlet problem by integrating the boundary function. The study of the relationship between the elliptic measure $\omega$ and the surface measure $\sigma$ of the boundary, in particular under various geometric assumptions of the domain, goes back to 100 years ago. In this talk we focus on the converse question: Assume that $\sigma \ll \omega$, in a qualitative or quantitative sense, what conclusions can we draw about the geometric properties of the domain? (Received January 23, 2018)