Using increasingly granular customer data, firms have improved their targeting capabilities to proactively reach customers who are not even aware of their needs or wants for the product. The mere fact that consumers get targeted by advertisements can affect their inference about the unknown utility from a product. We build a micro-model where multiple firms compete through targeted advertising, and consumers make inferences from targeted advertising about their unknown match value for the product category, as well as the advertising firm’s unobserved quality. We show that in equilibrium, upon being targeted by a firm, consumers make optimistic inferences about the product category, as well as the quality of the firm. With such improved beliefs, a targeted consumer is more likely to engage in costly search throughout the category. We find that the increase in consumer search creates advertising spillover beyond the level of the mere awareness effects of advertising, and firms’ equilibrium level of targeted advertising can be non-monotonic in the targeting accuracy. Also, we show that sometimes it can be optimal for firms to relinquish customer data, and instead engage in non-targeted advertising. The results provide insights into trade-offs between advertising reach and targeting accuracy.