Let $K$ be an origin-symmetric convex body in $\mathbb{R}^n$, $n \geq 3$, satisfying the following condition: there exists a constant $c$ such that for all directions $\xi$ in $\mathbb{R}^n$,

$$h_K(\xi) \text{vol}_{n-1}(K \cap \xi^\perp) = c.$$

(here $\xi^\perp$ stands for a subspace of $\mathbb{R}^n$ of co-dimension 1 orthogonal to a given direction $\xi$, and $h_K(\xi)$ is the support function of $K$ in this direction). The fifth Busemann-Petty problem asks if $K$ must be an ellipsoid. We give an affirmative answer to this question for origin-symmetric convex bodies that are sufficiently close to an Euclidean ball in the Banach-Mazur distance. This is a joint work with Maria Angeles Alfonseca, Fedor Nazarov and Vlad Yaskin. (Received July 26, 2018)