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Extremal Convex Bodies in Liakopoulos's Generalized Dual Loomis–Whitney Inequality.

We characterize equality cases in volume inequalities for sections of convex bodies by certain lower-dimensional linear subspaces. These inequalities, introduced by Liakopoulos, generalize Meyer's dual Loomis–Whitney inequality and provide a generalized dual form of the Bollobás–Thomason uniform cover inequality. Our approach builds on a previous result characterizing equality in Barthe's geometric reverse Brascamp–Lieb inequalities. We show that equalities occur when the convex body is the convex hull of its intersections with certain orthogonal subspaces determined by the Brascamp–Lieb data. This is joint work with Károly Böröczky and Ferenc Fodor.