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A convex body and a direction determine, by taking orthogonal cross-sections, in particular, a linearly-ordered family of codimension-one convex-bodies-up-to-homothety. We characterize such families as arise in said fashion. Our characterization then allows the construction of convex bodies with approximately universal cross-sections (up to homothety) in a dense set of directions. (Received August 18, 2008)