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Anna Siano* (asiano@umich.edu), Department of Mathematics, 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Constructing supporting manifolds for non-pseudoconvex domains in \mathbb{C}^n .*

A strongly pseudoconvex domain D is locally biholomorphic to a convex domain. In particular, for every $z_0 \in \partial D$ there exists a supporting manifold, i.e., a complex manifold H of codimension 1 such that (locally) $H \cap \overline{D} = \{z_0\}$. If the Levi form degenerates even only at one point, this need not to be true as an example by Kohn-Nirenberg shows. We will construct an explicit supporting manifold and a local holomorphic peak function as an obstruction to the extendability of holomorphic functions on a class of domains not necessarily pseudoconvex in \mathbb{C}^n . (Received August 03, 2007)