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We consider closure operations defined on the set of ideals of a commutative ring which are defined via various properties on the set of ideals which share the same radical. In particular if  $I$  is a radical ideal and  $\mathcal{P}$  is the set of ideals with radical  $I$ , we say a closure  $c$  is *weakly  $I$ -bounded* if there exists an ideal  $J$  in  $\mathcal{P}$  such that for all ideals  $K \in \mathcal{P}$  such that  $K \subseteq J$ ,  $K^c = J^c$ . A closure  $c$  is  *$I$ -DCC* if for any chain of ideals in  $\mathcal{P}$  the chain induced by the closures of the ideals consists of finitely many ideals. We compare weakly  $I$ -bounded and  $I$ -DCC closures and show that all  $I$ -DCC closures are weakly  $I$ -bounded. However, we give examples of closures which are weakly  $I$ -bounded which are not  $I$ -DCC. (Received January 13, 2015)