## Concentrating solutions for an elliptic equation arising in free boundary problems

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Abstract: We show existence of nontrivial solutions  $u_{\lambda}$  for an elliptic equation with a singular term like  $1/u^{\beta} - \lambda u^{p}$ . We study the concentration of these solutions as  $\lambda$  tends to infinity or to zero.

The results are in collaboration with J. Davila.