



**Fig. 3.4:** Finite-element model results for the case when  $d = 10$  cm,  $\varnothing S = 2.5$  cm,  $\varepsilon_{rel} = 3.20$ , and  $f = 4$  MHz showing (a) the lateral displacement field and (b) the axial displacement field induced by compressive strain applied to the top of the boundary, (c) a generated b-mode image of the pre-compressed tissue domain, and (d) a generated b-mode image of the post-compressed tissue domain. The included lesion is not visible in (c) and (d) as its acoustic properties were no different than surrounding tissues. An anechoic region is visible along the bottom of the domain in (d) which represents tissue outside of the domain visible in (c).