

# Two-dimensional and three-dimensional ultrasound of artificial skin

Wortsman, Ximena

Navarrete, Nelson

© 2016 by the American Institute of Ultrasound in Medicine. Wound healing may be a difficult problem, and variable types of artificial skin prototypes have been developed for supporting this process. Using ultrasound, we studied 4 cellulose-derived artificial skin prototypes and assessed their two-dimensional and three-dimensional morphology. These prototypes were identified on ultrasound both on in vitro and in vivo studies. They allowed the sonographic observation of deeper layers on different types of surfaces of the body with good definition on the in vivo examinations performed on healthy skin and cutaneous ulcers. The ultrasound detection of these artificial biomaterials may potentially support the noninvasive monitoring of wound healing.