

ASPS: Soft tissue measures can optimize face transplant

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(HealthDay)—Soft tissue measurements can predict facial transplant donor-to-recipient match, according to a study to be presented at Plastic Surgery The Meeting, the annual meeting of the American Society of Plastic Surgeons, held from Oct. 11 to 15 in San Diego.

Joseph S. Wallins, from Harvard Medical School in Boston, and colleagues performed 61 three-dimensional (3-D) virtual face transplantations with surgical planning software using reconstructed high-resolution computed tomographs of varying ages and genders. Portions of donor 3-D models were used to fill defects created in recipient models. The resulting post-transplant 3-D models were reviewed by 20 independent reviewers. Nine soft tissue measurements were taken from

each of the virtual face transplantation donors and recipients. Following virtual transplantation, the absolute difference in measurement was related to the resulting degree of disfigurement.

The researchers found that five soft tissue measurements (trichion-to-nasion facial height, endocanthal width, exocanthal width, mouth/chelion width, and subnasale-to-menton) were able to predict a transplant being rated as very disfigured compared with normal or mildly disfigured.

"Although there have been many advances made in facial transplantation, reproducible methods of predicting donor-to-recipient match would be very useful, as it can take many months to locate an appropriate donor," a coauthor said in a statement. "We found that if certain facial measurements were off by as little as 1 millimeter between donor and recipient, they were not the best match for [transplant surgery](#)."

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