MRI and Additive Manufacturing of Nasal Alar Constructs for Patient-specific Reconstruction

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Supplementary Table I. Raw data on cartilage thickness (mm), surface area (mm^2), and volume (mm^3) on 3.0-T MRI in a cadaver and volunteer by 3 observers.

Cartilage Thickness (mm)	Cadaver (MRI)			Gold standard (μ-CT)	Volunteer (MRI)		
Observer 1	Repeat 1	Repeat 2	Repeat 3		Repeat 1	Repeat 2	Repeat 3
Measure 1	1.9	1.5	2.1	1.9	2.1	2.2	2.2
Measure 2	2.2	2.6	2.5	2.5	2.2	2.2	2.1
Measure 3	2.0	2.2	2.4	2.1	3.0	3.0	3.1
Mean	2.0	2.1	2.3	2.2	2.4	2.5	2.5
SD	0.2	0.6	0.2	0.3	0.5	0.5	0.5
Observer 2							
Measure 1	2.0	1.5	2.0	1.9	1.8	2.3	2.4
Measure 2	1.8	2.2	2.8	2.5	2.3	2.6	1.7
Measure 3	2.1	2.3	2.4	2.1	2.7	2.4	2.5
Mean	2.0	2.0	2.4	2.2	2.3	2.5	2.2
SD	0.2	0.4	0.4	0.3	0.4	0.2	0.4
Observer 3							
Measure 1	2.0	1.8	1.9	1.9	1.8	2.0	2.3
Measure 2	1.8	2.1	2.1	2.5	1.9	2.2	1.3
Measure 3	2.1	2.4	2.6	2.1	2.4	3.0	2.3
Mean	2.0	2.1	2.2	2.2	2.0	2.4	2.0
SD	0.1	0.3	0.4	0.3	0.3	0.5	0.6
Cartilage Surface Area (mm^2)							
Observer 1	791	841	864	938	998	1016	1050
Observer 2	739	754	849	938	807	871	905
Observer 3	772	882	849	938	1019	972	925
Cartilage Volume (mm^3)							
Observer 1	551	555	664	420	700	669	792
Observer 2	482	547	620	420	427	626	657
Observer 3	500	621	586	420	575	628	594

Raw data, mean, and standard deviation (SD) are shown for manual segmentations by all 3 observers. The gold standard (μ-CT) is also shown in the middle column. Measures 1-3, as shown in the first column for cartilage thickness (mm), indicate measurements taken at 3 points on the alar cartilage. μ-CT, micro-computed tomography; MRI, magnetic resonance imaging; SD, standard deviation