

**Supplementary Table S3.** Total animal numbers and valid number after exclusion of outliers. The table shows the total number of animals used for every parameter as well as the valid number after excluding the outliers defined by the statistical program SPSS.

Parameter	Young Sham		Young Fx		Young THFx		Old Sham		Old Fx		Old THFx	
	To-tal	Va-lid	To-tal	Va-lid	To-tal	Va-lid	To-tal	Va-lid	To-tal	Va-lid	To-tal	Va-lid
<i>In vivo</i> Total Bone Volume	3	3	6	6	6	6	3	3	6	5	6	5
<i>In vivo</i> Callus Volume	3	3	6	6	6	6	3	3	6	5	6	5
<i>In vivo</i> Share Callus / Total Bone Volume	3	3	6	6	6	6	3	3	6	6	6	6
<i>Ex vivo</i> Total Bone Volume	3	3	6	6	6	4	3	3	6	6	6	4
<i>Ex vivo</i> Callus Volume	3	3	6	6	6	5	3	3	6	6	6	6
<i>Ex vivo</i> Share Callus / Total Bone Volume	3	3	6	6	6	6	3	3	6	5	6	6
Trabecular Number	3	3	6	6	6	5	3	3	6	6	6	6
Trabecular Spacing	3	3	6	6	6	6	3	3	6	5	6	6
Trabecular Thickness	3	3	6	6	6	5	3	3	6	6	6	6
Maximum Bending Moment	6	6	6	5	6	6	6	6	6	6	6	5
Stiffness	6	6	6	5	6	4	6	5	6	6	6	5
Elastic Limit	6	6	6	5	6	6	6	6	6	6	6	6