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Supplemental Information

**Microstructurally Motivated Constitutive Modeling of Heart Failure
Mechanics**

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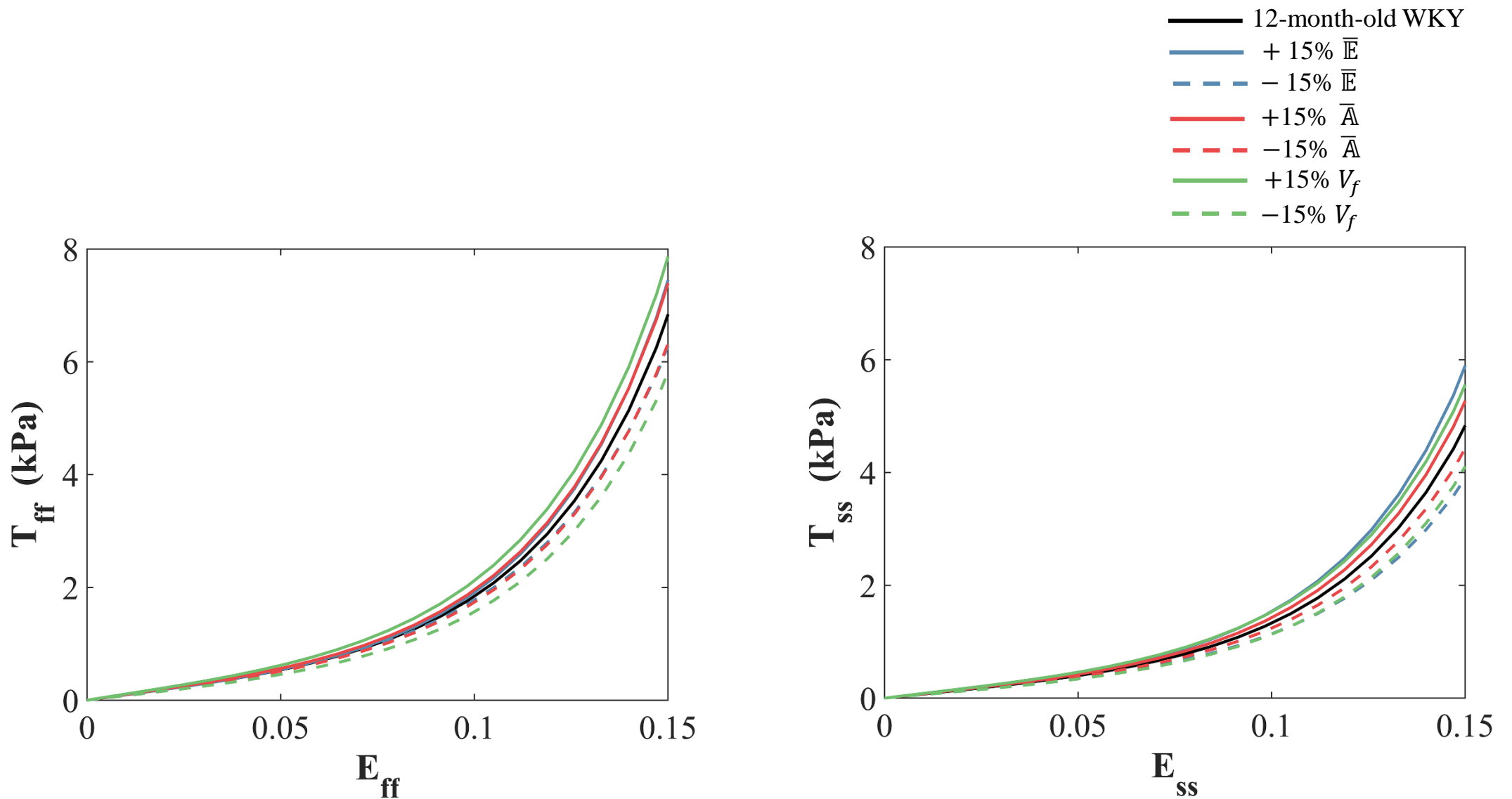


Fig.S1: Influence of the structural parameters on the mechanical behavior of the constitutive model as expressed by stress-strain curves in myofiber (*left*) and sheetlet (*right*) directions for 12-month-old WKY (*solid black line*). The analysis was carried out by changing each of the structural parameters: \bar{E} (*blue*), \bar{A} (*red*) and V_f (*green*) by +15% (*solid lines*) and -15% (*dash lines*), taking one parameter at a time while keeping the remaining parameters unchanged.