

Supplementary table 3. Genotype-phenotype associations for individual non-sarcomere protein genes, when only analysing the sub-cohort of sarcomere-positive individuals. P-values reflect the comparison for proportions or means, between the group of patients with versus the group of patients without a rare variant in a given non-sarcomere protein gene.

Phenotype	Gene	Frequency	or	Frequency	or	P-value
		mean±standard deviation - Variant present		mean±standard deviation - Variant absent		
LA diameter at last follow-up (mm)	SCN5A	47.4±4.8		44.1±7.8		0.109
LVOTO (>30 mmHg)	SCN5A	50.0% (9/18)		36.0% (122/339)		0.315
	Ion-channel	43.6% (34/78)		34.8% (97/279)		0.184
MLVWT (mm)	ANK2	19.9±6.2		18.9±4.5		0.377
MLVWT ≥30mm	ANK2	16% (4/25)		2.8% (7/251)		0.007
E/e' ratio	CASQ2	17.5±7.7		10.6±5.2		0.004
NSVT	PLN	100% (1/1)		24.7% (61/247)		0.083

LA: left atria; LVOTO: left ventricular outflow tract obstruction; MLVWT: maximal left ventricular wall thickness; E/e' ratio: ratio between the maximal velocity of the E wave from the pulsed wave Doppler of the transmitral flow and the maximal velocity of the e' wave of tissue Doppler at the mitral annulus; NSVT: non-sustained ventricular tachycardia.