

## **SUPPLEMENTAL MATERIAL**

### **Supplemental Results**

#### **Medications**

Cardiac medications were taken in 75% of ApHCM and 54% of ASH HCM patients. 43/100 (43%) ApHCM and 16/50 (32%) ASH HCM subjects took beta-blockers. 9/100 (9%) of ApHCM and 14/50 (28%) ASH HCM subjects took non-dihydropyridine calcium channel blockers (NDCCB). Other cardiac medications (ace-inhibitors, calcium channel blockers, diuretics) or cholesterol-lowering agents were taken in 52/100 (52%) ApHCM and 16/50 (32%) ASH HCM subjects.

#### **Electrocardiogram analysis**

Contemporaneous ECGs were available for review in 90/100 ApHCM patients. 5 had right/left bundle branch block (RBBB/LBBB) precluding T-wave assessment. TWI was present in 84/85(98.8%) which was precordial (100%), as well as lateral (89%) and inferior (31%). The one subject without TWI had V4 ST-elevation (in the context of an apical aneurysm). Maximum T-wave depth correlated with maximum R-wave amplitude ( $r=0.561$ ,  $P<0.001$ ). 47/50 ASH HCM patients had ECGs available for review, with 5 subjects having RBBB/LBBB precluding T-wave assessment. Precordial TWI was present in 10/42(24%), with non-specific TWI in 12/42 (single/non-contiguous leads) and no TWI in 20/42. Overall, the depth of the T-waves was significantly greater in the ApHCM cohort (8[5-10]mm vs 0[0-3]mm,  $P<0.001$ ), as was the maximum R-wave amplitude (22[19-28]mm vs 16.5[9-21]mm,  $P<0.001$ ).

**Supplemental Table 1. Demographic and baseline CMR characteristics of overt and relative ApHCM, ASH HCM and healthy volunteers**

Category	Overt ApHCM	Relative ApHCM	P value	ASH	P values overt ApHCM vs ASH; relative vs ASH	HV	P values overt vs HV; relative vs HV
N	68	32		50		40	
N (%) male	50 (73.5)	27 (84.4)	0.23	29 (58)	0.076 <b>0.012<sup>†</sup></b>	23 (57.5)	0.086 <b>0.014<sup>†</sup></b>
Age at time of scan	58.6±13	55.4 ± 14	0.29	51.8 ± 15	<b>0.013<sup>†</sup></b> <b>0.288<sup>†</sup></b>	42.9 ± 15	< <b>0.001<sup>†</sup></b> < <b>0.005<sup>†</sup></b>
BSA (m <sup>2</sup> )	2.02±0.3	1.97 ± 0.2	0.31	2.01±0.2	0.809 0.375	1.94±0.2	0.112 0.629
Diabetes, n (%)	13 (19.1)	1 (3.1)	0.057	6 (12)	0.223 0.197	0 (0)	< <b>0.005<sup>†</sup></b> 0.237
Hypertension, n (%)	28 (41.2)	6 (18.8)	<b>0.037</b>	14 (28)	0.072 0.471	0 (0)	< <b>0.001<sup>†</sup></b> < <b>0.005<sup>†</sup></b>
Hypercholesterolemia, n (%)	31 (45.6)	9 (28.1)	0.118	10 (20)	< <b>0.005<sup>†</sup></b> 0.269	0 (0)	< <b>0.001<sup>†</sup></b> < <b>0.001<sup>†</sup></b>
LA area indexed (cm <sup>2</sup> /m <sup>2</sup> )	14.4 (12-17)	13.3 (12-16)	0.42	11.6 (8 – 15)	< <b>0.001<sup>†</sup></b> <b>0.007<sup>†</sup></b>	12.3 (11 -13)	< <b>0.001<sup>†</sup></b> < <b>0.005<sup>†</sup></b>
LVEDVi (cm <sup>2</sup> /m <sup>2</sup> )	72.2 (67–81)	74.0 (67-84)	0.52	79.1 (67 – 87)	0.078 0.441	76.4 (70–82)	0.081 0.510
LVESVi (cm <sup>2</sup> /m <sup>2</sup> )	15.6 (11–20)	17.2 (14–22)	0.083	19.1 (14 – 27)	<b>0.012<sup>†</sup></b> 0.482	24.2 (21–30)	< <b>0.001<sup>†</sup></b> < <b>0.001<sup>†</sup></b>
LVEF (%)	78.0±7	75.4±6	0.053	74.2 ± 9	<b>0.012<sup>†</sup></b> 0.468	67.2±6	< <b>0.001<sup>†</sup></b> < <b>0.001<sup>†</sup></b>
RVEF (%)	67.6 (63–72)	62.5 (58–69)	<b>0.018</b>	60.7 (52 – 66)	< <b>0.001<sup>†</sup></b>	57.1 (42 – 48)	0.061 0.257

<b>SV (ml)</b>	111.7 (101–130)	109.8 (95–133)	0.74	114.5 (93 – 133)	0.813 0.714	99.2 (84–115)	<b>0.038</b> <sup>†</sup> <b>0.008</b> <sup>†</sup>
<b>Indexed mass (g/m<sup>2</sup>)</b>	89.2 (74–103)	66.4 (59–75)	<b>&lt;0.001</b>	72.4 (57 – 91)	<b>&lt;0.005</b> <sup>†</sup> 0.065	52.2 (44–58)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>MWT (mm)</b>	20.1±4	12.5±2	<b>&lt;0.001</b>	18.5 ± 4	<b>0.025</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>	8.8±2	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Apical cavity systolic obliteration (mm)</b>	25.8 (0–32)	18.6 (14–23)	0.28	8.7 (5 – 12)	<b>&lt;0.005</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>	3.5 (2–5)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Presence of aneurysm (%)</b>	27 (39.7)	3 (9.4)	<b>&lt;0.005</b>	1 (2)	<b>&lt;0.001</b> <sup>†</sup> 0.130	0 (0)	<b>&lt;0.001</b> <sup>†</sup> <b>0.048</b> <sup>†</sup>

† P<0.05

**Supplemental Table 2. Perfusion, mapping, and late gadolinium enhancement parameters of overt and relative ApHCM vs ASH HCM and healthy controls.**

Category	Overt ApHCM	Relative ApHCM	P value	ASH	P value overt/relative	HV	P value overt/relative
<b>N</b>	68	32		50		32	
<b>Perfusion defect present</b>	68 (100)	32 (100)	-	45 (90)	<b>0.028</b> <sup>†</sup> 0.29	0 (0)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Apical perfusion defect</b>	68 (100)	32 (100)	-	18 (36)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>	0 (0) 0 (0)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Basal perfusion defect</b>	28 (41.2)	10 (31.3)	0.31	45 (90)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>	0 (0) 0 (0)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Global stress MBF (ml/g/min)</b>	1.63 (1.4 – 1.9)	2.04 (1.7 – 2.2)	<b>&lt;0.001</b> <sup>†</sup>	1.9 (1.6 – 2.3)	<b>&lt;0.005</b> <sup>†</sup> 0.35	2.75 (2.3 – 3.2)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Global rest MBF</b>	0.76 (0.6 – 0.9)	0.69 (0.6 – 0.8)	0.34	0.82 (0.6 – 1.1)	0.076 <b>0.024</b> <sup>†</sup>	0.87 (0.8 – 1.0)	<b>0.005</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Global MPR</b>	2.18 (1.7 – 2.6)	2.70 (2.4 – 3.5)	<b>&lt;0.001</b> <sup>†</sup>	2.23 (1.7 – 2.9)	0.49 <b>0.006</b> <sup>†</sup>	3.15 (2.7 – 3.9)	<b>&lt;0.001</b> <sup>†</sup> <b>0.028</b> <sup>†</sup>
<b>Global subendo:subepi ratio</b>	0.79 (0.7 – 0.9)	0.86 (0.8 – 0.9)	<b>0.005</b> <sup>†</sup>	0.80 (0.7 – 0.9)	0.70 <b>0.016</b> <sup>†</sup>	0.91 (0.9 – 1.0)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.005</b> <sup>†</sup>
<b>Apical stress MBF</b>	1.20 (0.9 – 1.5)	1.57 (1.4 – 1.9)	<b>&lt;0.001</b> <sup>†</sup>	1.89 (1.5 – 2.4)	<b>&lt;0.001</b> <sup>†</sup> <b>0.032</b> <sup>†</sup>	2.73 (2.4 – 3.4)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Apical rest MBF</b>	0.74 (0.6 – 0.9)	0.69 (0.6 – 0.8)	0.432	0.85 (0.6 – 1.1)	<b>0.028</b> <sup>†</sup> <b>0.014</b> <sup>†</sup>	0.91 (0.8 – 1.1)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Apical MPR</b>	1.61 (1.2 – 2.0)	2.27 (1.8 – 3.0)	<b>&lt;0.001</b> <sup>†</sup>	2.30 (1.7 – 2.9)	<b>&lt;0.001</b> <sup>†</sup> 0.926	3.08 (2.6 – 3.7)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>
<b>Apical subendocardial stress MBF</b>	0.82 (0.7 – 1.1)	1.31 (1.0 – 1.8)	<b>&lt;0.001</b> <sup>†</sup>	1.69 (1.2 – 2.2)	<b>&lt;0.001</b> <sup>†</sup> <b>0.049</b> <sup>†</sup>	2.51 (2.2 – 3.0)	<b>&lt;0.001</b> <sup>†</sup> <b>&lt;0.001</b> <sup>†</sup>

<b>Apical subendocardial rest MBF</b>	0.69 (0.6 – 0.9)	0.68 (0.6 – 0.8)	0.62	0.83 (0.7 – 1.0)	<b>0.022<sup>†</sup></b> <b>0.031<sup>†</sup></b>	0.90 (0.7 – 1.1)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.005<sup>†</sup></b>
<b>Apical subendo:subepi ratio</b>	0.64 (0.5 – 0.8)	0.77 (0.7 – 0.9)	<b>&lt;0.001<sup>†</sup></b>	0.84 (0.7 – 0.9)	<b>&lt;0.001<sup>†</sup></b> 0.614	0.91 (0.8 – 1.1)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>Apical subendocardial stress flow lower than rest n(%)</b>	25 (36.7)	3 (9.4)	<b>&lt;0.005<sup>†</sup></b>	4 (8.9)	<b>&lt;0.001<sup>†</sup></b> 0.87	0 (0)	<b>&lt;0.001<sup>†</sup></b> <b>0.048<sup>†</sup></b>
<b>Apical:basal stress MBF ratio</b>	0.66 (0.5 – 0.8)	0.75 (0.6 – 0.9)	<b>0.009<sup>†</sup></b>	1.08 (0.9 – 1.4)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>	1.14 (1.0 – 1.3)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>Subendo apical: basal stress MBF ratio</b>	0.57 (0.4 – 0.8)	0.71 (0.5 – 0.9)	<b>0.017<sup>†</sup></b>	1.13 (0.9 – 1.6)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>	1.00 (1.0 – 1.1)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>Global T1</b>	1057.1 (1025 – 1073)	1010.4 (991 – 1036)	<b>&lt;0.001<sup>†</sup></b>	1023.5 (1002 – 1049)	<b>&lt;0.005<sup>†</sup></b> 0.083	999.7 (982 – 1020)	<b>&lt;0.001<sup>†</sup></b> <b>0.045<sup>†</sup></b>
<b>Global T2</b>	49.0±2	46.8±2	<b>&lt;0.001<sup>†</sup></b>	48.3±2	0.23 <b>0.036<sup>†</sup></b>	48.2±2	<b>0.024<sup>†</sup></b> <b>0.031<sup>†</sup></b>
<b>Global ECV</b>	26.6±3	25.0±3	<b>0.028<sup>†</sup></b>	26.0±3	0.34 <b>0.039<sup>†</sup></b>	24.9±2	<b>0.015<sup>†</sup></b> 0.93
<b>LGE present n (%)</b>	60 (88.2)	12 (37.5)	<b>&lt;0.001<sup>†</sup></b>	21 (42)	<b>&lt;0.001<sup>†</sup></b> 0.818	0 (0)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>LGE g FWHM</b>	23.8 (14 – 37)	0.0 (0 – 7)	<b>&lt;0.001<sup>†</sup></b>	0.0 (0 – 14)	<b>&lt;0.001<sup>†</sup></b> 0.42	0.0 (0 – 0)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>LGE % FWHM</b>	17.4 (11 – 24)	0.0 (0 – 5)	<b>&lt;0.001<sup>†</sup></b>	0.0 (0 – 15)	<b>&lt;0.001<sup>†</sup></b> 0.57	0.0 (0 – 0)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>
<b>Apical LGE relative enhanced area (%) FWHM</b>	30.0 (19 - 41)	0.0 (0 - 20)	<b>&lt;0.001<sup>†</sup></b>			0.0 (0 - 0)	<b>&lt;0.001<sup>†</sup></b> <b>&lt;0.001<sup>†</sup></b>

ApHCM = apical hypertrophic cardiomyopathy, ASH = asymmetrical septal hypertrophy, HV = healthy volunteer, MBF = myocardial blood flow, MPR = myocardial perfusion reserve, ECV = extracellular volume, LGE = late gadolinium enhancement

<sup>†</sup> P <0.05

**Supplemental Table 3. Comparison of CMR parameters between pure and mixed phenotypes of apical hypertrophic cardiomyopathy**

	Pure ApHCM	Mixed ApHCM	P value
N	39	29	
N (%) male	28 (71.8)	22 (75.9)	0.707
Age at time of scan	61.0±13.7	55.4±12.4	0.084
BSA (m <sup>2</sup> )	2.04±0.3	1.99±0.3	0.444
LA area indexed (cm <sup>2</sup> /m <sup>2</sup> )	13.8 (12-17)	14.8 (13-17)	0.539
LVEDVi (cm <sup>2</sup> /m <sup>2</sup> )	71.4 (66-78)	73.1 (68-85)	0.343
LVESVi (cm <sup>2</sup> /m <sup>2</sup> )	16.2 (12-21)	15.3 (11-18)	0.224
LVEF (%)	76.6±1	79.8±6	<b>0.043</b> <sup>†</sup>
RVEF (%)	68.6 (65-72)	66.5 (62-72)	0.400
SV (ml)	110.5 (102-121)	115.2 (100-144)	0.292
Indexed mass (g/m <sup>2</sup> )	79.3 (72-94)	100.7 (84-122)	<b>&lt;0.001</b> <sup>†</sup>
MWT (mm)	19.7±4.1	20.7±3.2	0.248
Apical cavity systolic obliteration (mm)	25.8 (0-30.8)	25.9 (7-32)	0.656
Presence of aneurysm (%)	16 (41)	11 (38)	0.796
Apical perfusion Defect, n (%)	39 (100)	29 (100)	-
Basal perfusion Defect, n (%)	14 (36.8)	14 (48.3)	0.347
Global stress MBF (ml/g/min)	1.65 (1.4-1.9)	1.62 (1.4-1.8)	0.611
Global rest MBF	0.76 (0.6-0.9)	0.74 (0.6-0.9)	0.573
Global MPR	2.09 (1.7-2.8)	2.23 (1.9-2.5)	0.828
Global subendo:subepi ratio	0.81 (0.7-0.9)	0.76 (0.7-0.9)	0.491
Apical stress MBF	1.15 (0.9-1.5)	1.23 (1.0-1.5)	0.446
Apical rest MBF	0.79 (0.6-0.9)	0.71 (0.6-0.9)	0.710
Apical MPR	1.48 (1.2-1.9)	1.66 (1.2-2.1)	0.556
Apical subendocardial stress flow lower than rest n(%)	13 (33.3)	12 (42.9)	0.427

<b>Apical:basal stress MBF ratio</b>	0.60 (0.5-0.8)	0.73 (0.6-0.8)	<b>0.032<sup>†</sup></b>
<b>Subendo apical: basal stress MBF ratio</b>	0.64 (0.6-0.8)	0.63 (0.5-0.8)	0.382
<b>Global T1</b>	1044.6 (1015-1067)	1063.5 (1043-1080)	<b>0.021<sup>†</sup></b>
<b>Global T2</b>	48.8±2.6	49.2±2.1	0.490
<b>Global ECV</b>	26.7±3.6	26.5±3.2	0.802
<b>LGE present n (%)</b>	35 (89.7)	25 (86.2)	0.715
<b>LGE g FWHM</b>	20.8 (12-32)	26.7 (10-38)	0.394
<b>LGE % FWHM</b>	17.3 (9-25)	15.4 (7-21)	0.208
<b>Apical LGE relative enhanced area (%) FWHM</b>	33.0 (21-44)	24.1 (16-32)	<b>0.041<sup>†</sup></b>

ApHCM = apical hypertrophic cardiomyopathy, BSA = body surface area, ECV = extracellular volume, FWHM = full width half maximum, LA = left atrium, LGE = late gadolinium enhancement, LVEDVi = indexed left ventricular end-diastolic volume, LVESVi = indexed left ventricular end-systolic volume, LVEF = left ventricular ejection fraction, MBF = myocardial blood flow, MPR = myocardial perfusion reserve, MWT = maximum wall thickness, RVEF = right ventricular ejection fraction, SV = stroke volume

<sup>†</sup>P <0.05

**Supplemental Table 4. Description of distribution of apical late gadolinium enhancement in different apical hypertrophic cardiomyopathy morphological subtypes**

<b>Distribution</b>	<b>Relative</b>	<b>Mixed</b>	<b>Pure</b>	<b>ApHCM micro-</b>	<b>ApHCM</b>
<b>N (%)</b>	<b>ApHCM</b>	<b>ApHCM</b>	<b>ApHCM</b>	<b>aneurysm</b>	<b>aneurysm</b>
	<b>N=32</b>	<b>N=29</b>	<b>N=39</b>	<b>N=16</b>	<b>N=14</b>
<b>Nil</b>	20 (63)	4 (14)	4 (10)	0 (0)	0 (0)
<b>Subendocardial/patchy</b>	8 (25)	4 (14)	9 (23)	1 (6)	0 (0)
<b>Subendocardial/dense</b>	0 (0)	6 (21)	4 (10)	3 (19)	2 (14)
<b>Transmural/patchy</b>	2 (6)	5 (17)	8 (21)	2 (12)	2 (14)
<b>Transmural/dense</b>	2 (6)	10 (34)	14 (36)	10 (63)	10 (72)

ApHCM = apical hypertrophic cardiomyopathy



**Supplemental Table 5. Univariate associations of clinical and demographic variables with apical stress myocardial blood flow (MBF) in patients with overt and relative ApHCM**

	<b>Regression (beta) coefficient</b>	<b>95% CI</b>	<b>P-value</b>
<b>Age</b>	-0.005	-0.01, 0.00	0.123
<b>Sex</b>	0.143	-0.075, 0.361	0.196
<b>BSA (m<sup>2</sup>)</b>	0.022	-0.38, 0.42	0.915
<b>LA area indexed (cm<sup>2</sup>/m<sup>2</sup>)</b>	0.013	-0.02, 0.04	0.358
<b>Apical cavity obliteration (mm)</b>	0.001	-0.01, 0.01	0.727
<b>MWT (mm)</b>	-0.050	-0.07, -0.03	<b>&lt;0.001<sup>†</sup></b>
<b>Indexed LV mass (g/m<sup>2</sup>)</b>	-0.005	-0.01, -0.00	<b>0.010<sup>†</sup></b>
<b>Presence of apical aneurysm</b>	-0.192	-0.39, 0.01	0.057
<b>LVEDVi (cm<sup>2</sup>/m<sup>2</sup>)</b>	0.007	0.00, 0.01	<b>0.039<sup>†</sup></b>
<b>LVESVi (cm<sup>2</sup>/m<sup>2</sup>)</b>	0.024	0.01, 0.04	<b>&lt;0.001<sup>†</sup></b>
<b>LVEF (%)</b>	-0.027	-0.04, -0.01	<b>&lt;0.001<sup>†</sup></b>
<b>RVEF (%)</b>	-0.015	-0.03, -0.00	<b>0.012<sup>†</sup></b>
<b>Apical rest MBF (ml/g/min)</b>	0.087	-0.49, 0.66	0.763
<b>Global T1 (ms)</b>	-0.005	-0.01, -0.00	<b>&lt;0.001<sup>†</sup></b>
<b>Global T2 (ms)</b>	-0.054	-0.10, -0.01	<b>0.011<sup>†</sup></b>
<b>Global ECV (ms)</b>	-0.022	-0.05, 0.01	0.176
<b>Apical LGE (%)</b>	-0.007	-0.01, -0.02	<b>0.006<sup>†</sup></b>
<b>T-wave depth (mm)</b>	-0.036	-0.07, -0.01	<b>0.017<sup>†</sup></b>
<b>R wave amplitude (mm)</b>	-0.023	-0.04, -0.01	<b>0.001<sup>†</sup></b>

BSA = body surface area, ECV = extracellular volume, LA = left atrium, LGE = late gadolinium enhancement, LV = left ventricular, LVEDVi = indexed left ventricular end diastolic volume, , LVEF = left ventricular ejection fraction, LVESVi = indexed left ventricular end systolic volume, MBF = myocardial blood flow, MWT = maximum wall thickness, RVEF = right ventricular ejection fraction.

†P<0.05

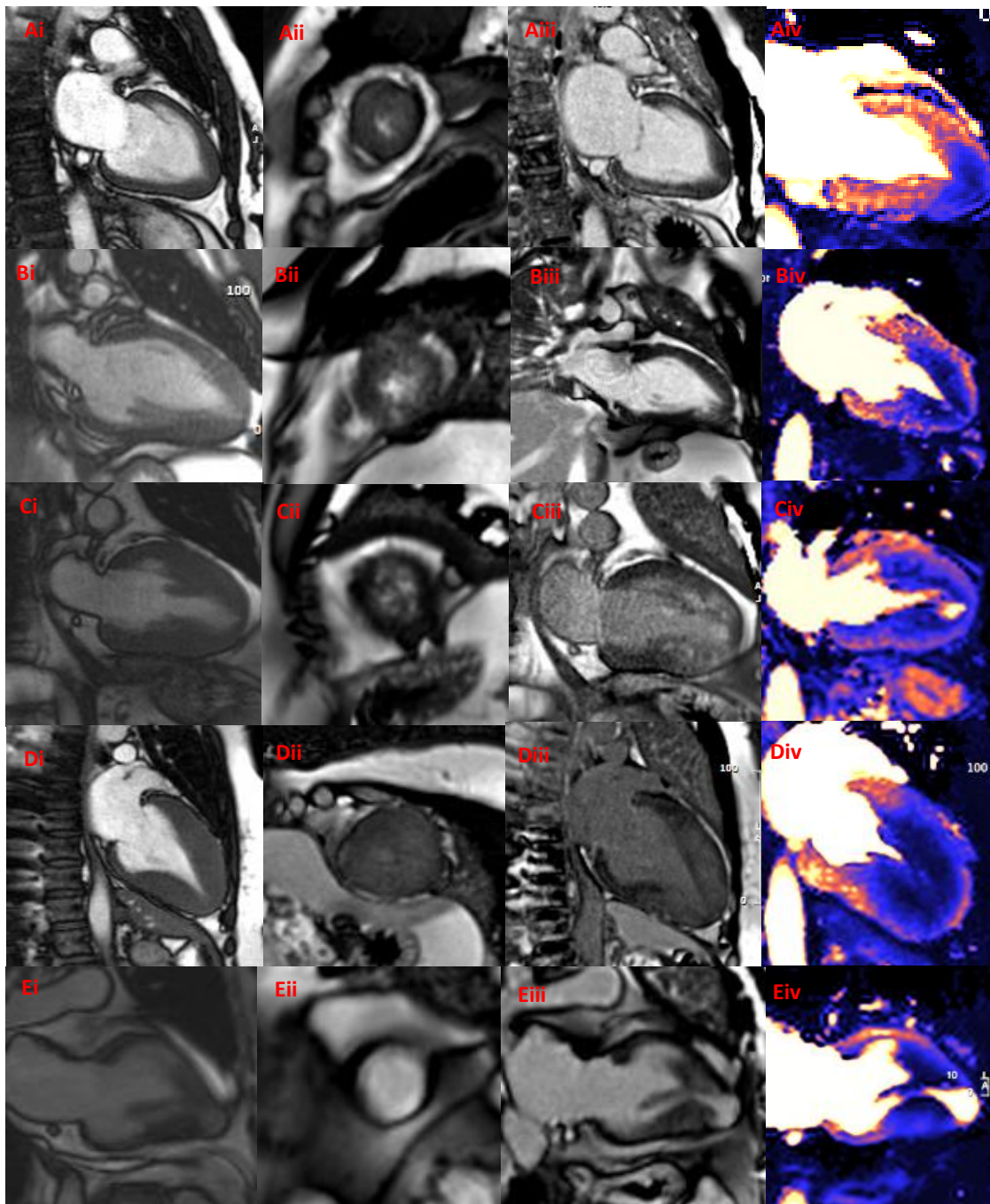
**Supplementary Table 6. Multivariable linear regression model for clinical and demographic variables associated with apical stress myocardial blood flow (MBF) in patients with overt and relative ApHCM.**

<b>Independent variable</b>	<b>Beta (correlation) coefficient</b>	<b>95% confidence interval</b>	<b>VIF</b>	<b>P value</b>
<b>Age</b>	-0.011	-0.02, -0.00	1.476	<b>0.014<sup>†</sup></b>
<b>Sex</b>	-0.060	-0.31, 0.19	1.453	0.627
<b>BSA (m<sup>2</sup>)</b>	-0.359	-0.87, 0.15	1.433	0.162
<b>MWT (mm)</b>	-0.031	-0.06, -0.01	1.961	<b>0.013<sup>†</sup></b>
<b>LVEF (%)</b>	-0.025	-0.04, -0.01	1.222	<b>&lt;0.005<sup>†</sup></b>
<b>RVEF (%)</b>	-0.010	-0.02, 0.00	1.147	0.075
<b>T1 (ms)</b>	-0.001	-0.00, 0.00	2.140	0.717
<b>T2 (ms)</b>	0.004	-0.04, 0.05	1.677	0.871
<b>Apical LGE (%)</b>	-0.004	-0.01, 0.0	1.526	0.107
<b>R wave amplitude (mm)</b>	-0.023	-0.04, -0.01	1.351	<b>&lt;0.005<sup>†</sup></b>

BSA = body surface area, LGE = late gadolinium enhancement, LVEF = left ventricular ejection fraction, MWT = maximum wall thickness, RVEF = right ventricular ejection fraction.

<sup>†</sup>P<0.05

**Supplemental Figure 1. Distribution of apical late gadolinium enhancement.** The 2-chamber cine in end-diastole is provided for reference. No LGE is present in **A** -shown in the apical short axis (**i**) and 2-chamber (**ii**). **B** demonstrates subendocardial/patchy LGE. **C** demonstrates subendocardial/dense LGE. **D** demonstrates transmural/patchy LGE and **E** demonstrates transmural/dense LGE. Corresponding stress perfusion maps shown (**iv**).



LGE = late gadolinium enhancement