

**The effects of mitral stenosis on right ventricular mechanics assessed by three-dimensional echocardiography**

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**Supplementary Table 1: Correlations of 3D right ventricular echocardiographic measures with conventional parameters**

	Age (years)	LVEDVi (ml)	LVESVi (ml)	LVEF (%)	LVGLS (%)	LAVi (ml/m <sup>2</sup> )	MV area (cm <sup>2</sup> )	Mean mitral valve gradient (mmHg)	PASP (mmHg)	TAPSE (mm)	FAC (%)	RAVi (ml/m <sup>2</sup> )
<b>RV EF (%)</b>	r=0.155 p=0.345	r=0.152 p=0.357	r=0.046 p=0.779	r=0.132 p=0.425	<b>r=-0.631</b> <b>p&lt;0.001</b>	r=-0.094 p=0.582	r=0.294 p=0.069	r=-0.279 p=0.086	r=-0.180 p=0.287	<b>r=0.442</b> <b>p=0.005</b>	<b>r=0.549</b> <b>p&lt;0.001</b>	<b>r=-0.332</b> <b>p=0.039</b>
<b>RV GCS (%)</b>	r=-0.080 p=0.630	r=-0.092 p=0.578	r=-0.096 p=0.561	r=0.025 p=0.880	<b>r=0.633</b> <b>p&lt;0.001</b>	r=0.123 p=0.470	r=-0.144 p=0.381	r=0.134 p=0.415	r=0.119 p=0.482	<b>r=-0.366</b> <b>p=0.024</b>	<b>r=-0.432</b> <b>p=0.006</b>	r=-0.298 p=0.065
<b>RV GLS (%)</b>	r=-0.068 p=0.681	r=-0.281 p=0.083	r=-0.197 p=0.229	r=-0.026 p=0.878	r=0.165 p=0.374	r=-0.083 p=0.626	r=-0.241 p=0.139	r=0.156 p=0.344	r=0.159 p=0.347	<b>r=-0.325</b> <b>p=0.047</b>	<b>r=-0.463</b> <b>p=0.003</b>	<b>r=0.389</b> <b>p=0.014</b>
<b>RV EDVi (ml)</b>	r=-0.027 p=0.869	r=0.276 p=0.089	r=0.235 p=0.150	r=-0.025 p=0.882	r=-0.106 p=0.570	r=0.137 p=0.419	r=0.173 p=0.292	r=0.084 p=0.612	r=0.325 p=0.050	r=0.109 p=0.515	r=0.068 p=0.683	<b>r=0.450</b> <b>p=0.004</b>
<b>RV ESVi (ml)</b>	r=-0.099 p=0.551	r=0.147 p=0.373	r=0.156 p=0.342	r=-0.062 p=0.708	r=0.175 p=0.348	r=0.162 p=0.338	r=0.001 p=0.997	r=0.209 p=0.203	<b>r=0.370</b> <b>p=0.024</b>	r=-0.101 p=0.547	r=-0.203 p=0.216	<b>r=0.548</b> <b>p&lt;0.001</b>
<b>RV SVi (ml)</b>	r=0.061 p=0.714	<b>r=0.339</b> <b>p=0.035</b>	r=0.254 p=0.119	r=0.025 p=0.882	<b>r=-0.430</b> <b>p=0.016</b>	r=0.062 p=0.716	r=0.315 p=0.051	r=-0.081 p=0.624	r=0.181 p=0.285	r=0.313 p=0.056	<b>r=0.351</b> <b>p=0.029</b>	r=0.207 p=0.206
<b>REF (%)</b>	r=0.291 p=0.072	r=0.155 p=0.346	r=0.085 p=0.608	r=0.060 p=0.716	<b>r=-0.529</b> <b>p=0.002</b>	r=-0.079 p=0.643	r=0.082 p=0.618	r=-0.257 p=0.115	r=-0.002 p=0.990	<b>r=0.329</b> <b>p=0.043</b>	<b>r=0.348</b> <b>p=0.030</b>	r=-0.058 p=0.726
<b>REF/ RVEF</b>	<b>r=0.347</b> <b>p=0.031</b>	r=0.130 p=0.431	r=0.098 p=0.552	r=-0.003 p=0.987	<b>r=-0.334</b> <b>p=0.067</b>	r=-0.024 p=0.890	r=-0.085 p=0.607	r=-0.178 p=0.279	r=0.108 p=0.526	r=0.164 p=0.324	r=0.155 p=0.347	r=0.148 p=0.368
<b>AEF (%)</b>	r=-0.129 p=0.433	r=0.094 p=0.569	r=-0.007 p=0.967	r=0.116 p=0.481	<b>r=-0.635</b> <b>p&lt;0.001</b>	r=-0.156 p=0.355	r=0.242 p=0.138	r=0.005 p=0.974	r=-0.107 p=0.530	<b>r=0.351</b> <b>p=0.031</b>	<b>r=0.458</b> <b>p=0.003</b>	<b>r=-0.445</b> <b>p=0.005</b>
<b>AEF/ RVEF</b>	r=-0.294 p=0.069	r=0.005 p=0.977	r=-0.060 p=0.719	r=0.078 p=0.637	<b>r=-0.438</b> <b>p=0.014</b>	r=-0.144 p=0.395	r=0.152 p=0.357	r=0.188 p=0.253	r=-0.047 p=0.785	r=0.190 p=0.254	r=0.269 p=0.098	<b>r=-0.421</b> <b>p=0.008</b>
<b>LEF (%)</b>	r=0.149 p=0.365	r=0.170 p=0.300	r=0.135 p=0.413	r=0.015 p=0.928	r=0.130 p=0.487	r=0.071 p=0.678	r=0.226 p=0.166	r=-0.195 p=0.235	r=-0.262 p=0.117	r=0.287 p=0.081	r=0.240 p=0.141	r=-0.255 p=0.118
<b>LEF/ RVEF</b>	r=0.063 p=0.704	r=0.087 p=0.597	r=0.117 p=0.479	r=-0.064 p=0.700	<b>r=0.443</b> <b>p=0.013</b>	r=0.099 p=0.559	r=0.101 p=0.543	r=-0.097 p=0.557	r=-0.238 p=0.156	r=0.087 p=0.603	r=-0.029 p=0.860	r=-0.109 p=0.508
<b>SCS (%)</b>	r=0.202 p=0.217	r=0.074 p=0.653	r=-0.002 p=0.988	r=0.064 p=0.699	<b>r=0.371</b> <b>p=0.040</b>	r=0.070 p=0.681	r=-0.056 p=0.737	r=-0.014 p=0.932	r=0.183 p=0.280	r=-0.210 p=0.206	r=-0.106 p=0.523	r=0.238 p=0.145
<b>SLS (%)</b>	r=0.184 p=0.263	r=-0.115 p=0.486	r=-0.057 p=0.733	r=-0.072 p=0.663	r=-0.238 p=0.198	r=-0.144 p=0.397	r=-0.169 p=0.304	r=0.116 p=0.481	r=0.187 p=0.268	r=-0.020 p=0.905	r=-0.275 p=0.090	r=0.150 p=0.362
<b>FWCS (%)</b>	r=-0.107 p=0.518	r=-0.078 p=0.639	r=-0.108 p=0.511	r=0.058 p=0.724	<b>r=0.587</b> <b>p=0.001</b>	r=0.114 p=0.501	r=-0.106 p=0.521	r=0.159 p=0.332	r=0.142 p=0.403	<b>r=-0.348</b> <b>p=0.032</b>	<b>r=-0.425</b> <b>p=0.007</b>	r=0.286 p=0.077
<b>FWLS (%)</b>	r=0.004 p=0.980	r=-0.308 p=0.056	r=-0.172 p=0.294	r=-0.093 p=0.572	r=0.217 p=0.242	r=-0.065 p=0.701	r=-0.179 p=0.277	r=0.028 p=0.864	r=0.105 p=0.536	r=-0.302 p=0.066	<b>r=-0.474</b> <b>p=0.002</b>	<b>r=0.372</b> <b>p=0.020</b>

Values with a significant correlation are presented in bold.

Abbreviations: LV = left ventricular, EDVi = end-diastolic volume index, ESVi = end-systolic volume index, EF = ejection fraction, GLS = global longitudinal strain, MV = mitral valve, LAVi = left atrial volume index, RAVi = right atrial volume index, TAPSE = tricuspid annular plane systolic excursion, PASP = pulmonary artery systolic pressure, TR = tricuspid valve regurgitation, RVAD = right ventricular area in diastole, RVAS = right ventricular area in systole, FAC = fractional area change, RV = right ventricle, EF = ejection fraction; GCS = global circumferential strain, GLS = longitudinal strain; EDVi = end-diastolic volume index; ESVi = end-systolic volume index; SVi = stroke volume index; REF = radial ejection fraction; AEF = anteroposterior ejection fraction; LEF = longitudinal ejection fraction; SEF = septal ejection fraction; SCS = septal circumferential strain; SLS = septal longitudinal strain; FWEF = free wall ejection fraction; FWCS = free wall circumferential strain; FWLS = free wall longitudinal strain

**Supplementary Table 2: The severity of tricuspid regurgitation in mitral stenosis patients with atrial fibrillation vs. in sinus rhythm**

	No TR	Mild TR	Moderate TR	Severe TR
<b>Sinus rhythm</b>	2 (5%)	15 (38%)	4 (10%)	0 (0%)
<b>Atrial fibrillation</b>	0 (0%)	7 (18%)	7 (18%)	4 (10%)

**p for trend = 0.02**

Data is presented as number of patients (%).

Abbreviations: TR = tricuspid regurgitation