Figure S1: Details of Phantom models

A

![Image of Phantom models]

B: Schema of organ model

C

<table>
<thead>
<tr>
<th>Model type</th>
<th>Vacant space thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>heart</td>
</tr>
<tr>
<td>Normal model</td>
<td>30</td>
</tr>
<tr>
<td>Disease model</td>
<td>25</td>
</tr>
</tbody>
</table>
Figure S2: Correlation between reference HMRs and difference of HMRs (300s – other collection time)

Early phase:
- 300s-50s: $Y = -0.1506X + 0.2670, r = 0.35, p = 0.035$
- 300s-100s: $Y = -0.03021X + 0.0743, r = 0.11, p = 0.511$
- 300s-200s: $Y = -0.000511X + 0.004179, r < 0.01, p = 0.98$

Delayed phase:
- 300s-50s: $Y = -0.03532X + 0.1546, r = 0.07, p = 0.68$
- 300s-100Y: $Y = 0.004895X - 0.008299, r = 0.02, p = 0.91$
- 300s-200Y: $Y = -0.01512X + 0.02247, r = 0.10, p = 0.55$

300s-25s:
- 300s-25s: $Y = -0.1506X + 0.2670, r = 0.09, p = 0.059$
- 300s-25s: $Y = 0.31112X - 1.01, r = 0.21, p = 0.22$