

**Table 2: Modified World Health Organization (WHO) Classification of Maternal Cardiovascular Risk: Application**

<b>WHO Pregnancy Risk Classification</b> (Risk of pregnancy by medical condition)	<b>Cardiovascular Conditions by WHO Risk Class</b>
<p><b>WHO Risk Class I</b> <i>No detectable increased risk of maternal mortality and no or mild increase in morbidity.</i></p>	<ul style="list-style-type: none"> <li>• Uncomplicated, small or mild               <ul style="list-style-type: none"> <li>○ Pulmonary stenosis</li> <li>○ Patent ductus arteriosus</li> <li>○ Mitral valve prolapse</li> </ul> </li> <li>• Successfully repaired simple lesions (atrial or ventricular septal defect, patent ductus arteriosus, anomalous pulmonary venous drainage).</li> <li>• Atrial or ventricular ectopic beats, isolated</li> </ul>
<p><b>WHO Risk Class II</b> (If otherwise well and uncomplicated) <i>Small increased risk of maternal mortality or moderate increase in morbidity.</i></p>	<ul style="list-style-type: none"> <li>• Unoperated atrial or ventricular septal defect</li> <li>• Repaired tetralogy of Fallot</li> <li>• Most arrhythmias</li> </ul>
<p><b>WHO Risk Class II or III</b> (Depending on individual) <i>Risk as indicated in Class II (above) or Class III (below).</i></p>	<ul style="list-style-type: none"> <li>• Mild left ventricular impairment</li> <li>• Hypertrophic cardiomyopathy</li> <li>• Native or tissue valvular heart disease not considered WHO I or IV</li> <li>• Marfan syndrome without aortic dilatation</li> <li>• Aorta &lt;45 mm in aortic disease associated with bicuspid aortic valve</li> <li>• Repaired Coarctation</li> </ul>
<p><b>WHO Risk Class III</b> <i>Significantly increased risk of maternal mortality or severe morbidity. Expert counseling required. If pregnancy is decided upon, intensive specialist cardiac and obstetric monitoring needed throughout pregnancy, childbirth and the puerperium.</i></p>	<ul style="list-style-type: none"> <li>• Mechanical valve</li> <li>• Systemic right ventricle</li> <li>• Fontan circulation</li> <li>• Cyanotic heart disease (unrepaired)</li> <li>• Other complex congenital heart disease</li> <li>• Aortic dilatation 40-45 mm in Marfan Syndrome</li> <li>• Aortic dilatation 45-50 mm in aortic disease associated with bicuspid aortic valve</li> </ul>
<p><b>WHO Risk Class IV</b> (Pregnancy contraindicated) <i>Extremely high risk of maternal mortality or severe morbidity; pregnancy contraindicated. If pregnancy occurs termination should be discussed. If pregnancy continues, care as for class III.</i></p>	<ul style="list-style-type: none"> <li>• Pulmonary arterial hypertension of any cause</li> <li>• Severe systemic ventricular dysfunction (LVEF &lt;30%, NYHA III-IV)*</li> <li>• Previous peripartum cardiomyopathy with any residual impairment of left ventricular function</li> <li>• Severe symptomatic mitral or aortic stenosis</li> <li>• Marfan syndrome with aorta dilated &gt;45 mm</li> <li>• Aortic dilation &gt;50 mm in aortic disease associated with bicuspid aortic valve</li> <li>• Native severe Coarctation</li> </ul>

\*LVEF = left ventricular ejection fraction; NYHA = New York Heart Association

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