A narrowing occurs between the bottom left heart chamber and the main artery to the body (aorta). The narrowing is just above the valve (supravalvular aortic stenosis). The narrowing causes a reduced amount of blood carrying oxygen to the body. It also makes the bottom left heart chamber overwork pushing against the narrowing. This causes the aorta to balloon above the narrowing.

Surgery to correct supravalvular stenosis widens the narrowing by using diamond-shaped patches.

The operation to repair aortic stenosis is done with a median sternotomy (chest) incision.