ABSTRACT

A personalized naturally designed mitral valve prosthesis and a method for manufacturing the such to precisely fit a specific patient for which the valve prosthesis is made for, is provided. The method includes measuring size and shape of a mitral valve of the specific patient by using imaging means, building a 3D model of the personalized mitral valve prosthesis, optimizing the 3D model using FEM method and fabricating the personalized mitral valve prosthesis by cutting and connecting the annular ring, leaflets and chords to form a personalized prosthesis mitral valve.

Fig. 19