**MRI IN CARDIOLOGY**

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Magnetic resonance imaging (MRI) is a noninvasive test that shows detailed pictures of your organs and tissues. "Noninvasive" means that no surgery is done and no instruments are inserted into your body. These are principally in the use of ECG gating and rapid imaging techniques or sequences.

MRI uses radio waves, magnets, and a computer to create pictures of your organs and tissues. Unlike other imaging tests, MRI doesn't use ionizing radiation or carry any risk of causing cancer.

TYPES

There are two magnet strengths mainly in use in CMR - 1.5 tesla and 3 tesla. The 3 tesla double the amount of information acquired in a scan and offers particular advantages for perfusion. Disadvantage is that they are cost, energy usage requirements, and potentially artifacts degrading the pictures.

USES They are used in the investigation of cardiovascular diseases with clear view or picture. MRA (magnetic resonance angiography) can produce 3D and 4D images of blood vessels and the flow of blood through the vessels.

ADVANTAGE AND DISADVANTAGE . Advantages are: image quality, non-invasiveness, accuracy, versatility and no ionizing radiation. Disadvantages are limited availability, expense, and special skills needed to perform CMR and other types of MR.