



姓名 Name

吳奕瑩 Yi-Ying Wu

職稱 Official Title

技術副主任

單位 Department

臺中榮民總醫院 放射線部

Speech Title  
演講主題

Cardiac MRI Pulse Sequences: An Overview of Basic Principles and Technical Considerations

心臟磁振造影脈衝序列：基本原理與技術考量概述

Abstract 摘要：

There are a variety of different pulse sequences that are used in cardiac imaging that can be broadly divided into either black-blood techniques or bright-blood techniques. Spin echo (SE) cardiac sequences are typically black-blood techniques, while gradient recalled echo (GRE) are typically bright-blood techniques and has fast imaging speeds. But GRE is more susceptible to metal induced artifacts.

GRE imaging is employed in the assessment of ventricular function, blood velocity and flow measurements, assessment of valvular disease, myocardial perfusion, delayed enhanced imaging, and magnetic resonance angiography. The base pulse sequence is a balanced steady-state free precession (SSFP) gradient echo method such as TrueFISP. It could use to collect cine studies, typically obtained by repeatedly imaging the heart at a single slice location throughout the cardiac cycle. Trufisp also can combine Inversion Recovery (IR) pulses are used to null the signal from a desired tissue to accentuate surrounding pathology. A common use of this technique is to null the signal from normal myocardium during delayed enhanced imaging. The radiologist and radiation technologist used the pulse sequences to try to best answer the clinical question.