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10<sup>th</sup> August 2018

To: Whom it may concern

**Re: MRI for patients with pacemakers and implantable cardioverter-defibrillators – MRI-conditional and legacy devices**

MRI is an unmatched diagnostic test across an expanding range of indications including cancer, neurology, cardiovascular and musculoskeletal disorders, and is now fundamental to diagnosis, treatment planning and monitoring. The consequences of not undergoing MRI when indicated include late and mis-diagnosis, the use of other more invasive tests with less robust performance, more complications and more expense. Many treatments are precluded without MRI planning including neurosurgery and Cyberknife radiotherapy, potentially resulting in worse clinical outcomes for patients. However one in 50 of the UK population over 65 years (approximately 440,000 people) has a pacemaker or implantable cardioverter defibrillator (ICD), traditionally considered contraindications to MRI.

Fortunately two recent developments have changed this situation. It is now industry standard for implantable cardiac devices to be 'MRI conditional', meaning that >95% of devices implanted currently are safe to scan under certain conditions. Alongside this, a large body of evidence has found that legacy 'non-MRI conditional' devices can be scanned safely if pre-defined protocols are followed. The technical debate is now effectively over – for example, Medicare in the US will now reimburse for MRI scans in nearly all pacemaker patients where clinically indicated.

In the UK estimates suggest there are 50,000 scans a year needed for cardiac device patients, but latest data suggest that only around 1000 scans a year are actually being performed. Equity of access would be likely to result in around 1% of adult MRIs being done on pacemaker/ICD patients. There are barriers to change.

The British Cardiovascular Society and the Clinical Imaging Board (the Society and College of Radiographers, the Institute of Physicians and Engineering in Medicine, and the Royal College of Radiologists) jointly believe that patients with cardiac devices should no longer be disadvantaged and have the same access to MRI scanning in the NHS as everyone else. Addressing this will require local champions, new working practices (clinical, financial), and partnerships – especially between cardiology and radiology and medical physics departments. But there are no fundamental barriers - we as a community are capable of making this happen. We encourage you to help make this a reality in the NHS.

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