



講師：莊文博

主題：

Pushing ALARA to the limit: zero or near-zero fluoroscopic cardiac EP intervention

摘要：

Since W.C. Röntgen reported the discovery of X-rays in December 1895. X ray has been used in not only in diagnosis but every aspect of patient management. Nowadays, X-ray fluoroscopy plays a major role in endovascular treatment which allows cardiologist and cardiac surgeon to treat coronary, valve and vascular diseases in minimal invasive ways. Electrophysiologist is no exception. Catheter ablation is highly effective to treat various kinds of arrhythmia, like AVNRT, accessory pathway, and atrial fibrillation. Patients with bradyarrhythmia, heart failure with ventricular dys-synchrony and those at high risk for sudden cardiac death also benefit from intracardiac devices like pacemakers, cardiac resynchronization and defibrillators which is guided by real time X-ray images. However, radiation exposure posed a significant impact not only for patients but also medical professionals. Equipment reducing exposure like lead apron also have detrimental collateral damage to orthopedic system. Various strategies including electroanatomic mapping and fusion imaging were developed to achieve more precise intervention. We can also use those novel inventions to achieve near-fluoro or zero-fluoro procedure. Thus, we can push ALARA, which stands for “as low as reasonably achievable”, to the limit and freed physician and the patients from the necessary evil of radiation exposure.