

# Associate Prof. Tarv Dhanjal

## Consultant Cardiologist



I trained in all aspects of cardiac arrhythmia management. My specialist interest is ablation of complex arrhythmias especially atrial fibrillation and life-threatening ventricular tachycardia. I qualified with first class honours from Birmingham University Medical School in 2000 and was awarded a British Heart Foundation Research Fellowship in 2003 resulting in PhD from Birmingham University in 2007. I was awarded a clinical training and research position at St Thomas' Hospital, London where I completed sub-speciality training in heart rhythm treatment.

I lead the Ventricular Tachycardia Research Group which comprises 3 arms of research activity as below. These arms of activity involve close local University collaborations as well as national and international links which I have developed over the past decade of research activity.

### 1. Clinical Outcomes Research

The UHCW VT ablation service has gained national and international recognition with all patients enrolled into prospective follow-up studies. The clinical outcomes research focuses on understanding and improving electrophysiological-based outcomes and long-term clinical outcomes.

More recently the group has expanded to investigate psychosocial morbidity and well-being from various cardiac interventions.

### 2. New Technology Appraisal

The VT Research Group has close industry collaborations. A key group focus is understanding and improving high density mapping and work with Abbott Medical has highlighted both electrophysiological and long-term benefits of the HDGRID high density mapping catheter which have been reported in the OMNIMAPPING and the IMPACT-VT studies. Further work in this field with the award of the ENSITE X mapping system (August 2021) will enable research into improved algorithms and increased mapping vector capability. I am a national trainer and advisor for Abbott Medical and the UK Chief Investigator for the Medtronic DiamondTemp™ Ablation System Registry. Built with a network of industrial diamonds our group has performed the first feasibility study of DiamondTemp™ VT ablation and are performing a RCT comparing DiamondTemp™ ablation to standard ablation.

### 3. Basic Science/Translational research

I have close research ties with Warwick University, Coventry University, UCL (Institute of Cardiovascular Science, UCL Dept of Cardiology, Barts Heart Centre), Centre Hospitalier Universitaire Henri Mondor (INSERM : U955), Medtronic, Inc., Minneapolis, MN, USA and Abbott. We are involved in several translational research projects; (1) investigating the molecular signatures of myofibroblasts and their connectivity with cardiomyocytes from a swine model of post-infarct ventricular tachycardia; (2) investigating the tissue effects of DiamondTemp™ ablation; (3) investigating the mechanisms of beat to beat variability of ventricular repolarisation.

