

Frequently Asked Questions

I have a pacemaker/ICD. Is it possible to undergo magnetic navigation?

Yes, but the device needs to be programmed to a special mode in order not to interfere with the low-power magnetic field.

My child is needing ablation. Can it be safely done with magnetic navigation?

Yes, children benefit specifically from the very low exposure to x-rays during the procedure.

I have an artificial joint (eg. hip replacement). Can the procedure be done with magnetic navigation?

It depends on the age, type and location of the implanted joint. Please bring details of your operation if possible.

I would like to stay awake during the ablation procedure. Is it possible?

Yes, however it is essential that you do not move during the procedure (especially when the magnets are in the navigation position).

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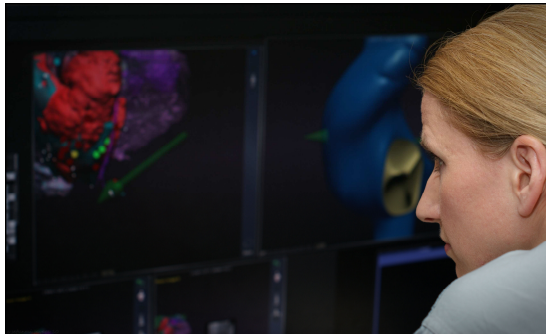
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Dr Sabine Ernst

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Patient
Information Leaflet

Magnetic
Navigation

Information

A note from Dr Sabine Ernst



This brief information leaflet will help to inform you about the technique of magnetic navigation that is used during invasive electrophysiologic (EP) study and/or catheter ablation procedures

It aims to answer frequently asked questions and concerns with regards to this novel technology.

My team and I will always strive to perform to the highest expectations. However, if you feel that you can help us to further improve our service, or have any recommendation for optimisation of our care, please do let us know.

Yours faithfully

Dr Sabine Ernst

The concept of Magnetic Navigation

How does it work?

A small outer magnetic field (0.08 Tesla) is applied to the chest area of the patient that is steerable via a computer workstation. By changing the 3D direction of this field, small magnets inside the catheter have to align in parallel to the outer field. The forward/backward movement is performed via a motor drive.

Available Catheters

Nowadays all conventional "manual" ablation catheters are also available in magnetic version, including "irrigated tip" or gold tip catheters for left-sided ablation procedures.

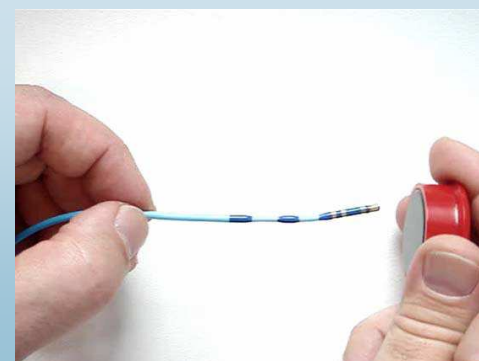
Image integration and 3D Mapping

Magnetic navigation is performed via a workstation, that specifically enhances the integration of pre-acquired images from cardiac magnetic resonance (CMR) or computer tomography (CT) scans. It can be used in conjunction with all available 3D mapping systems (eg. CARTO or NAVx).

Benefits

Since the ablation catheter is very flexible (it lacks the normally required pullwires). It can take bends and curves very easily. The softness makes it particularly safe and unlikely to perforate the heart wall.

When can it be used?



Indications

Whenever ablation of a cardiac arrhythmia is recommended, the option of magnetic navigation will be considered because it leads to significant reduction in exposure to x-rays. Specifically, patients with the following arrhythmias can be treated;

- Accessory Pathways (WPW Syndrome)
- AV Nodal Re-entrant Tachycardia
- Atrial Tachycardia
- Atrial Fibrillation
- Ventricular Tachycardia

Contraindications

Because of the nature of the magnetic field, patients under certain circumstances can not be treated with magnetic navigation, these include;

- Patients with cochlear implants
- Patients with neurostimulators
- Patients with large metallic implants
- Patients with claustrophobia (unless under general anaesthesia, GA).