

The **EP-TRACER MobileCart** is a fully functional EP system, intended to be easily moved between laboratories as required.

The integration of ECGs, up to 84 intracardiac channels, 6 pressure channels and a 2 channel stimulator in a single system supports you through a streamlined procedural workflow.

The **EP-TRACER2** software provides an intuitive interface with fully customizable display modes (including triggered-, pressure- and splitscreen-modes) providing the perfect framework to display data from multiple sources, including commonly used RF ablators and the Medtronic CryoConsole.

- Compact design
- Customizable layouts
- One-click report generation



EP-TRACER MOBILE CART
Schwarzer Cardiotek

The **Arctic Front Advance™ Cardiac CryoAblation Catheter** is the world's leading balloon technology indicator for the treatment of patients with Atrial Fibrillation.

Cryoablation removes heat to isolate pulmonary veins with only a few applications. This anatomical approach enables EPs to target sites consistently, allowing them to treat multiple AF patients each day.

The Arctic Front Advance™ Cardiac CryoAblation System:

Does not require technically complex and expensive mapping and navigation systems²

The balloon shape achieves contact over a broad area to create durable PVI³

Cryo-adhesion provides catheter stability enabling consistent procedure times and results^{4,5}



References

1. UKSH data on file
2. Kuck et al. Cryoballoon or Radiofrequency Ablation for Atrial Fibrillation. *N Engl J Med.* 2016 Sep 15;375(11):1100-1.
3. Reddy et al. Durability of Pulmonary Vein Isolation with Cryoballoon Ablation: Results from the Sustained PV Isolation with Arctic Front Advance™ (SUPIR) Study. *J Cardiovasc Electrophysiol.* 2015 May;26(5):493-500.
4. Aryana et al. Outcomes Of Cryoballoon Ablation Of Atrial Fibrillation: A Comprehensive Review. *J Atr Fibrillation.* 2015 Aug-Sep; 8(2): 1231.
5. Providencia et al. Results from a multicentre comparison of cryoballoon vs. radiofrequency ablation for paroxysmal atrial fibrillation: is cryoablation more reproducible? *Europace.* 2017 Jan;19(1):48-57.

Indications, Safety and Warnings for Medtronic Cryoconsole

See the device manual for detailed information regarding the indications, contraindications, warnings, precautions, and potential adverse events.

For further information, contact your local Medtronic representative and/or consult the Medtronic website at www.medtronic.com.



www.medtronic.com/manuals

Consult instructions for use at this website. Manuals can be viewed using a current version of any major Internet browser. For best results, use Adobe Acrobat Reader® with the browser.

EFFICIENTLY INCREASING EP LAB CAPACITY

USING THE CRYOABLATION SYSTEM AND THE EP-TRACER MOBILE CART



Medtronic

Medtronic International Trading Sarl
Route du Molliau 31
Case postale
1131 Tolochenaz
Switzerland
Tel: +41 (0) 21 802 70 00
Fax: +41 (0) 21 802 79 00

medtronic.eu

UC201711893aEE © Medtronic. 2017.
All Rights Reserved. Printed in Europe.

Not for distribution in France.

**schwarzer
cardiotek**
SMART. PRECISE. RELIABLE.

CardioTek B.V.,
Amerikalaan 70,
6199 AE Maastricht-Airport,
The Netherlands
Phone +31 (43)365 6006
Fax +31 (43)365 6007
Email info@schwarzercardiotek.com
www.schwarzercardiotek.com

CASE STUDY MOBILE CRYO LAB

CASE STUDY

HOW THE UNIVERSITY MEDICAL CENTER SCHLESWIG HOLSTEIN INCREASED EP CAPACITY BY EXPANDING INTO AN UNDER-UTILISED PACEMAKER LAB

One of the largest European centers for medical care, the University Medical Center Schleswig-Holstein (UKSH) covers the entire spectrum of modern medical and health care in Kiel and Lübeck, Germany. In an interview with Professor Tilz, he explains one current major challenge in the treatment of heart rhythm disorders and the progress being made by the team at UKSH.

"Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia and despite significant progress in the permanent treatment of patients with AF using cardiac ablation, this arrhythmia remains one of the major causes of stroke, heart failure, sudden death, and cardiovascular morbidity in the world. We must address critical challenges in order to increase the number of patients we can treat, including reducing procedure complexity, increasing effectiveness and available EP capacity, both by training new operators and acquiring new lab space".

THE SITUATION

The advancing age profile of many developed nations, as well as increased awareness and improved surveillance of heart rhythm illness, has led to many centers reaching capacity for the number of patients they can permanently treat through catheter ablation per year. While in some centers, the limiting factor is the deficit of trained personnel to carry out ablation procedures, in other centers there is sufficient personnel but insufficient available lab space. UKSH is one such example where the existing EP lab was being used at full capacity, yet had the EP expertise to perform more procedures. Since building a new EP centre is an expensive and time consuming process, UKSH looked to optimize the usage of its existing lab spaces in order to efficiently increase EP capacity.

"Our pacemaker lab had **regular scheduling gaps**, so we looked for a solution that would allow us to **utilise the pacemaker lab for basic EP cases**".



Prof. Dr. med. univ. Roland Tilz, FHRS, FESC
Leading Physician Rhythmology, Heart Center Lübeck, UKSH

Cardiac facilities

- 3 cath labs, 1 hybrid lab, 1 EP lab and 1 pacemaker lab.
- 3 EP operators

THE CHALLENGE

Prof. Tilz explained how adapting the pacemaker lab for use as an EP lab presented a number of challenges.

"The lab space will still be primarily used as pacemaker lab, so we have to be **careful not to disrupt the established workflow**."

There is **no adjacent control room**, and very little free space within the lab, so we need a mobile solution which can easily be setup or removed as required.

Finally, since we only have a time-slot of **max. 3hrs**, the chosen procedure type **must be consistently successful** within the defined time slot, **without the support of 3D mapping**",

THE SOLUTION

UKSH and Professor Tilz decided that an effective way to fill the scheduling gaps in the pacemaker lab and increase EP capacity overall, was to form a **'MobileCryo lab'** using the EP-TRACER MobileCart and Medtronic CryoAblation system.

"**PVI using cryoablation is an easy, standardised approach.** We know how long it will take to successfully complete the procedure. That's what made it the right choice of procedure for filling the scheduling gaps in the pacemaker lab."

As for the two systems, there's **no installation time**; you just plug them in and you're ready to work",



X-RAY (FIXED INSTALLATION)



EP RECORDING SYSTEM, EP-TRACER MOBILECART



CRYOCONSOLE



A complete MobileCryo lab: X-Ray (fixed install), EP system (MobileCart) and cryoablator (CryoConsole).

CHOOSING AN EP SYSTEM

When choosing an EP system, the compact EP-TRACER MobileCart, offered distinct advantages, particularly for use during PVI cryo cases.



Screenshot of the EP-TRACER 'cryoablation display', including ECG, iECG (CS; Achieve), stimulation controls, CMAP, cryoablation data and time to effect. The lower section is split to show before (left) and after (right) successful isolation of the RSPV.

"The **EP-TRACER is ideally suited for cryo procedures**: you have surface ECGs, intracardiac channels, pressure channels, a 2 channel stimulator and the connection with the CryoConsole in a single system"

Placing a standard sterile cover over the keyboard **enables control of all critical functions directly by the physician.**

"**Now that I can control the stimulator from the bedside, I need one less experienced operator per study**"



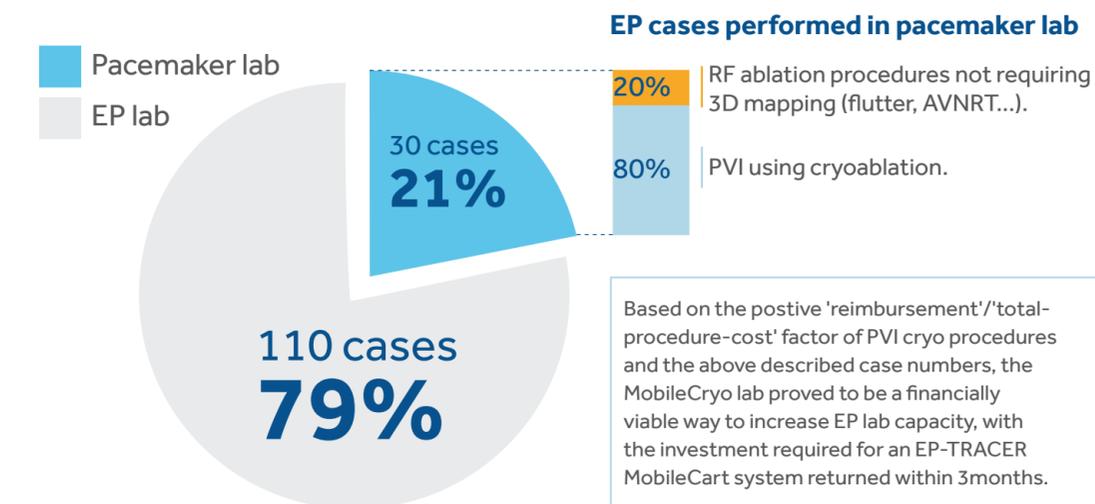
Prof. Tilz in the pacemaker lab performing a PVI isolation using the CryoConsole and EP-TRACER

THE IMPACT¹

- 0** number of new personnel
- +1** number of new devices
- +2.5** Av. number of EP cases performed in the pacemaker lab per week.
- +57** No. of EP cases performed in the pacemaker lab since installation on 18.08.2016 until 31.01.2017 (data collection period)
- >20%** increase in available capacity since MobileCryo lab setup

"**We often had scheduling gaps in the pacemaker lab, while we're waiting for blood results, or after the weekend if no non-elective patients were admitted. Now we can fill those gaps**". - Prof. Tilz.

QUARTERLY EP CASE REPORT (Q4 2016)



"**We're facing epidemic levels of atrial fibrillation. Establishing the MobileCryo lab is an important step towards our goal of dramatically increasing capacity so we can treat more patients**" - Prof. Tilz.