
Philips Showcases New Innovations in the Treatment of Heart Rhythm Disorders at EHRA 2022



- *Integrated portfolio for atrial fibrillation offers solutions across electrophysiology, cardiac implantable electronic device (CIED) lead extraction and ECG monitoring*
- *New release of KODEX-EPD cardiac imaging and mapping system from Philips incorporates new innovations for RF and cryoballoon therapy for cardiac arrhythmias*
- *Philips reinforces its commitment to facilitating adherence to international best-practice guidelines for lead management and lead extraction*
- *Wearable ePatch Holter monitor aids diagnosis and follow-up of atrial fibrillation patients to reduce stroke risk*

Royal Philips, a global leader in health technology, is showcasing its integrated portfolio of diagnosis, guidance, and treatment solutions for atrial fibrillation at the 2022 European Heart Rhythm Association Annual Meeting ([EHRA 2022](#), April 3-5, Copenhagen, Denmark). A key highlight in the company's booth that will support the treatment of the growing number of patients with atrial fibrillation will be the launch of the latest release of the KODEX-EPD system from Philips. It offers enhanced imaging and mapping capabilities for RF ablation, including the new Tissue Engagement Viewer and support for the Medtronic DiamondTemp™ ablation system. For cryoballoon ablation, KODEX-EPD supports a new saline-based occlusion assessment workflow [1].

Other highlights include enhancements to the company's Electrophysiology Suite; the company's newest lead management tools for the safe removal of infected cardiac implantable electronic device (CIED) leads; and Philips unobtrusive wearable ePatch extended wear Holter monitoring service, which extends cardiac monitoring from the home to hospital, and from hospital to home. Providing support for confident diagnosis, enhanced electrophysiology (EP) procedure efficacy and efficiency, reduced X-ray exposure, and post-procedure therapy monitoring, these new innovations significantly elevate the physician's experience towards optimal treatment of atrial fibrillation (AF) patients.

Atrial fibrillation is the world's most common cardiac arrhythmia, with a particularly high prevalence in developed countries, partly due to lifestyle and an aging population. The condition, which also significantly increases the risk of stroke, dementia, and heart failure, already affects around 37 million people worldwide (approximately 0.5% of the world's population)[2] - a number that is predicted to double in the next 40 years.

Philips' electrophysiology and cardiac lead extraction solutions uniquely leverage imaging systems and software with specialized diagnostic and therapeutic devices designed to support the treatment of the growing number of patients with heart rhythm disorders. Running on the company's Azurion platform, [Philips Electrophysiology Suite](#) seamlessly integrates imaging, devices, software, informatics, and services. It assists at every stage of an atrial fibrillation patient's journey, providing cardiologists with greater insight and confidence in electrophysiology procedures while allowing them to meet increasing clinical demand at affordable cost.

New KODEX-EPD release with expanded compatibility

The latest release of KODEX-EPD, launched at EHRA, features a range of innovations for both RF and cryoballoon ablation therapy. Enhanced imaging and mapping capabilities support physicians with precise RF ablation procedures, including the new Tissue Engagement Viewer that provides information about catheter-tissue contact without the need for special catheters.

Philips has expanded the compatibility of the KODEX-EPD system to support the Medtronic DiamondTemp™ ablation system for real-time, temperature-controlled ablation. For cryoballoon ablation, the KODEX-EPD system features a new saline-based occlusion assessment workflow [1], which further reduces the need for X-ray imaging with iodinated contrast media, which is particularly valuable for patients with allergies to iodine or chronic kidney disease.

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Philips continues to [engage with Medtronic](#) to support physicians in ablation procedures to optimize patient outcomes and minimize exposure to X-ray and iodinated contrast media. The results of these activities will be presented during the EHRA congress at various scientific sessions and a Philips-sponsored symposium.

CIED lead extraction and lead management

Cardiac implantable electronic devices (CIEDs) such as pacemakers, implantable cardioverter defibrillators (ICDs), and cardiac resynchronization therapy (CRT) devices are life-saving devices that improve quality of life for many patients. However, 1 in 20 of these patients develop a CIED infection [3] within three years. Patients diagnosed with CIED infections are often treated with antibiotics, which is not an effective treatment option on its own. 50%-100% of patients treated solely with antibiotics will experience an infection relapse [4,5].

A large EHRA survey conducted in 2020 demonstrated that medical professionals lack awareness and experience in CIED infection management [6]. According to the latest European Heart Rhythm Association (EHRA) [International Consensus Document \[7\]](#), definite CIED infections are a Class I indication for full device extraction. Nevertheless, it is estimated that more than 75% of indicated patients do not receive Class I guideline care, which is a full system extraction, leading to negative health outcomes and higher costs. Philips is committed to supporting evidence-based medical approaches and innovating solutions to help physicians improve outcomes and decrease mortality for CIED infection.

Although adverse events during a procedure can potentially be life threatening, lead extraction is a highly successful, potentially life-saving procedure with a clinical success rate of 97.7% and a procedural safety rate of 99.72% [8]. Philips supports physicians with Lead Management solutions through a [broad portfolio of tools designed for safety and predictability](#), including both laser and mechanical lead extraction devices.

Philips ePatch

When diagnosing AF - a heart irregularity that can lead to blood clots and increase the risk of stroke - it is important to record the frequency, duration, and severity of a patient's AF. It is equally important to check that irregularities do not recur in the days and weeks after therapy. While conventional Holter monitors that perform these evaluations have been around for a long time, they typically involve the attachment of up to seven ECG electrodes to the patient's chest, linked to a belt-worn control unit. These can be cumbersome for patients to wear - which can impact the diagnostic yield - while the application process, data analysis and reporting can be labour-intensive and inefficient for clinical staff. Philips ePatch replaces this cumbersome set-up with a small unobtrusive sensor and patch adhered to the patient's sternum for up to 14 days of continuous, high-quality ECG recording for reliable diagnosis [9]. Philips ePatch is splash proof, it can be worn in the shower and enables the patient to keep an active lifestyle. Philips also provides an end-to-end service to support practices deploy ePatch, enabling efficient workflows, enhancing the patient experience and providing robust data analysis using our cloud-based AI-enabled Cardiology software.

For more information and to register for the Philips Lead Management scientific session with an expert infectiologist and cardiologist or our session on the evolution of dielectric imaging and next-generation ECG monitoring, please visit [Philips' EHRA 2022 webpages](#).

Source: [Philips](#)

Reference:

- [1] For use exclusively with Medtronic Arctic Front Advance™ cryoablation catheters.
- [2] GBD 2017 Disease and Injury Incidence and Prevalence Collaborators, Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2018; 392: 1789-1858.
- [3] Cantillon D, et al. Complications and Health Care Costs Associated With Transvenous Cardiac Pacemakers in a Nationwide Assessment. *J Am Coll Cardiol EP*. 2017 Nov, 3 (11) 1296-1305.
- [4] del Rio A, Anguera I, Miro JM, et al. Surgical treatment of pacemaker and defibrillator lead endocarditis: the impact of electrode lead extraction on outcome. *Chest* 2003;124:1451-9.
- [5] Chua, J.D., et al. (2000). Diagnosis and management of infections involving implantable electrophysiologic.
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- [7] Blomström-Lundqvist C, Traykov V, Erba PA, et al. *EP Europace*, Volume 22, Issue 4, April 2020, Pages 515-549, <https://doi.org/10.1093/europace/euz246>.
- [8] Wazni, O. et. al. Lead Extraction in the Contemporary Setting: The LEXiCon Study: A Multicenter Observational Retrospective Study of Consecutive Laser Lead Extractions. *J Am Coll Cardiol*, 55:579-586.
- [9] Patient will need to replace patch on day 5 of wear, or sooner as required.

Published on : Fri, 1 Apr 2022