

Comparison of the signal quality of the Schwarzer Cardiotek EP-TRACER 2 and the BARD Labsystem Pro during PFA procedures at CCB Frankfurt

Purpose: This evaluation compared how the signals of the EP-TRACER 2 behaved under real-life conditions during pulmonic vein isolation with Pulsed Field Ablation versus the signals of the Labsystem Pro.

Used systems: Labsystem Pro, FARAPULSE, EP-TRACER 2 Portable

Used catheters: FARAWAVE, CS catheter

Method: For the procedure the intracardiac ECG signals were equally split by means of a splitter cable (jumper cable) and sent to both EP systems with identical amplification.

The surface ECG was attached according to the following routings:

The surface-ECG as displayed on EP-TRACER was attached directly to the patient.

The surface-ECG as displayed on the Labsystem was routed through the ECG box of FARAPULSE.

The electrical stimulation of the CS catheter was performed via the internal electrical stimulator of the EP-TRACER. The stimulation was started before FARAPULSE ablation and was continuously kept active also during the ablation. During the time of ablation (5 times of 2sec of PFA) no signals were visible on screen as all connected systems are purposely blanked by FARAPULSE.



Parallel setup of displays next to each other; on the notebook screen the signals of EP-TRACER 2, on the 21" monitors the signals of the Labsystem Pro

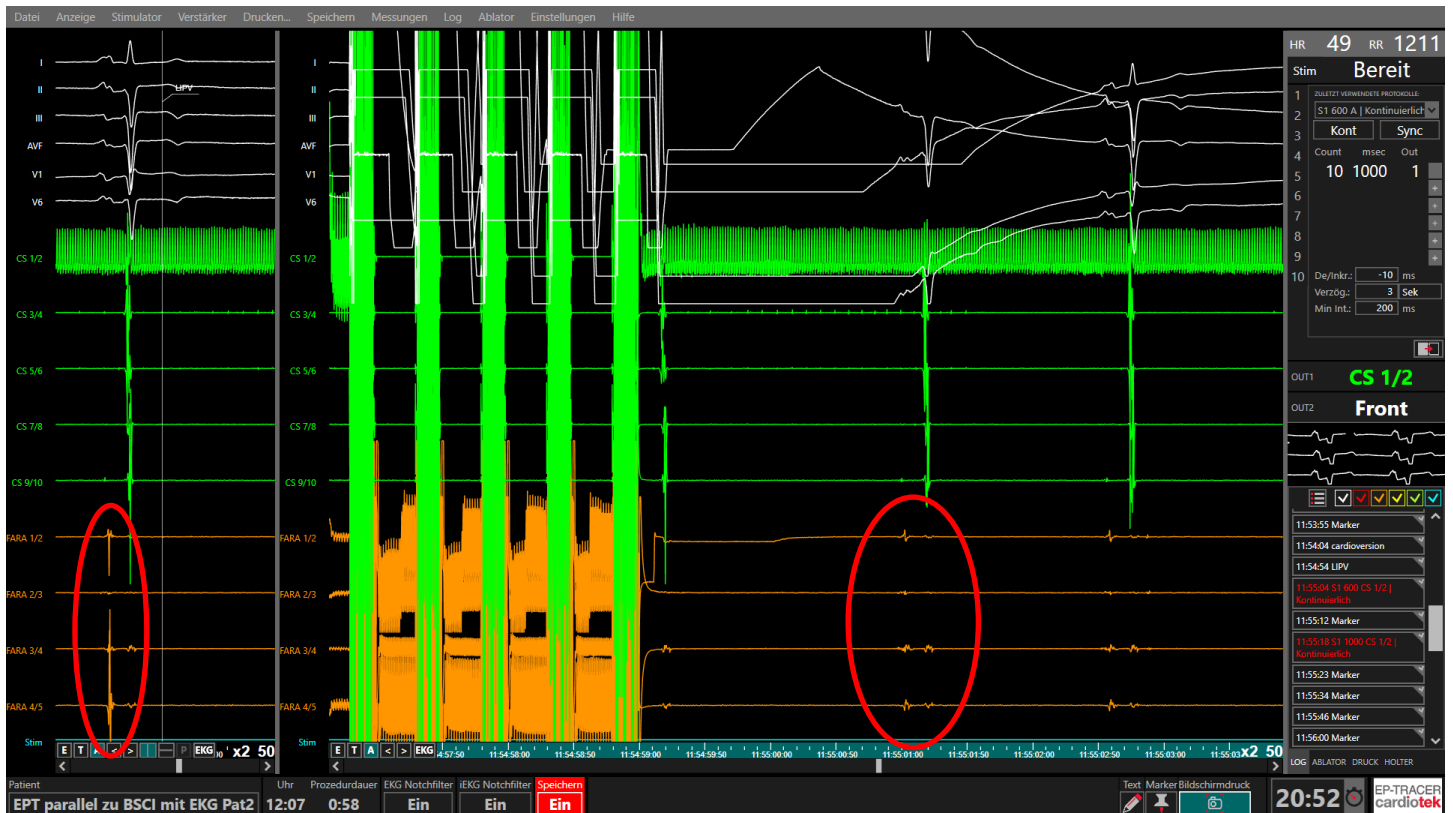
Results:

PD Dr. Boris Schmidt summarized: "The displayed signal quality was equivalent in both systems. High-frequency signals appeared to be extraordinary distinct and crisp on the EP-TRACER system.

The time period until the signals became visible again on screen after blanking by the Farapulse ablator was exactly identical in the EP-TRACER and the Labsystem Pro."

Conclusion:

"As a conclusion we can state that both EP recording systems provide comparable signal quality. The Schwarzer Cardiotek EP-TRACER system managed to display high-frequency signals with sharp peaks in a clear and distinct way. The ability to continuously stimulate with the built-in stimulator of EP-TRACER 2 is a favourable feature."



Signals before ablation (left) and isolated signals after ablation (right) in LIPV